

**Tohoku University**  
**Graduate School of Information Sciences**  
**2019 Two-Year Master's Program Admission Guidelines**  
**(October 2019 Admissions)**

Examination dates: 27-29 August 2019

June 2019

The Graduate School of Information Sciences (GSIS) consists of four departments: Computer and Mathematical Sciences, System Information Sciences, Human-Social Information Sciences and Applied Information Sciences.

GSIS aims not only to conduct cutting-edge education and research within these various academic disciplines, but also to advance wide-ranging interdisciplinary research. Students can therefore opt to engage in areas other than their original speciality. We welcome applications from ambitious individuals aspiring to create "Information Science" for the new era.'

**Admission Policy**

To foster individuals who can contribute to GSIS's goal of creating "New Information Science," we promote the acceptance of students who aim to further develop the fruits GSIS has reaped so far, students who aspire to actively pursue research across a range of disciplines, students hoping to broaden their research area, and overseas students and mature students from diverse backgrounds.

**Assistance Program for Doctoral Students**

As of FY2006, GSIS has been operating an assistance program for doctoral students with the aim of providing economic support and a suitable learning environment for graduate students with a high level of specialization.

<For details, please contact GSIS Educational Affairs Section [Kyoumu Kakari].>

## 1. Recruiting departments and selection category

| Department                         | Number of students to be admitted |                                  |                                   |  |
|------------------------------------|-----------------------------------|----------------------------------|-----------------------------------|--|
|                                    | General selection                 | Early graduate student selection | Mature student selection (Note 1) | Selection for overseas students, etc. (Note 2) |
| Computer and Mathematical Sciences | Limited                           | Limited                          | Limited                           | Limited  |
| System Information Sciences        |                                   |                                  |                                   |  |
| Human-Social Information Sciences  |                                   |                                  |                                   |  |
| Applied Information Sciences       |                                   |                                  |                                   |  |

Note 1: The status of mature students is granted to those who have worked full time for more than 2 years in principle (see Note 3 below) as well as to those who meet one of the qualifications in “2. Application requirements 3).” (See p.5)

Note 2: Those eligible for taking the entrance exam as overseas students are current overseas students or the students who have received education in higher educational institutions abroad, who at the same time meet one of the requirements described in “2. Application requirements 3)” (hereinafter referred to as “overseas students, etc.”).

Note 3: “Mature students” are those who have experience as technically skilled workers, teachers, researchers, etc. in public offices, educational institutions and private companies, in principle. An individual can be classified as a mature student even without such previous experience. For individual cases, contact the GSIS Educational Affairs Office.

**Note 4: All overseas applicants and mature students must engage in prior consultation with their prospective supervisors to discuss their post-admission research plans, no matter what category they may select.**

## 2. Application requirements

- 1) In order to apply as applicants, prospective students must satisfy the following prerequisite:
  - (1) University graduates who are expected to graduate by September 2019.
- 2) In order to apply as an early graduate student, prospective students must satisfy the following prerequisite:
  - (1) Those using the early graduation program (permitting them to graduate after at least three but less than four years of university attendance) who are expected to graduate by September 2019.
- 3) In order to apply as mature or overseas students, applicants must satisfy one of the following prerequisites:
  - (1) University graduates, including those who are expected to graduate by September 2019.
  - (2) Those persons who have been awarded a bachelor’s degree under the provisions of National Institution for Academic Degrees and Quality Enhancement of Higher Education, including those who are expected to be awarded this degree by September 2019.
  - (3) Those persons who have completed 16 years of education in a foreign country, including those who are expected to have completed this by September 2019.
  - (4) Those persons who have completed a curriculum equivalent to 16 years of school education in a foreign country by finishing in Japan a correspondence course operated by a school in that country, including those who are expected to complete this by September 2019.
  - (5) Those persons who have completed a university course in an educational institution in Japan, which is (i) recognized under the education system of a foreign country as operating a university program (graduates must be recognized as equivalent to those completing 16 years of education in that country) and (ii) otherwise designated by the Minister of Education, Culture, Sports, Science, and Technology (MEXT Minister) of Japan, including those who are expected to complete such a course by September 2019.
  - (6) Students who have been conferred a degree equivalent to a bachelor's degree upon completion of a curriculum that has a course term of three years or longer at a university or other school (limited to schools whose overall educational and research activities have been evaluated by the relevant country's government or a government-approved individual, or are designated separately as having met this requirement by the Minister of Education) in a foreign country (including cases in which the student completed the curriculum by taking subjects conducted by said school via distance learning while the student resided in Japan, and cases in which the student has completed a curriculum at an educational facility that is positioned within that country's educational system as per the previous item). (including those who are expected to be awarded this degree by September 2019)
  - (7) Those persons who have completed a specialist program at a vocational school (restricted to those programs meeting standards prescribed by the MEXT Minister, including the condition of a study period of at least four years) that has been otherwise designated by the said Minister, where the prospective student

has completed the course since the date stipulated by the Minister, including those who are expected to complete such a course by September 2019.

- (8) Those persons designated by the MEXT Minister (please refer to Public Notice of the Ministry of Education No.5 of 1953).
- (9) Those persons who have been admitted to the graduate school of another university according to Article 102 (2) of the School Education Law, and in the opinion of GSIS, have attained a sufficient standard of achievement.
- (10) Other persons who will be at least 22 years old by September 2019 and who are expected, based on an individual GSIS screening, to have a level of scholastic attainment equivalent to or above that of a university graduate.

Note 5: The application qualifications stipulated under Article 102 (2) of the School Education Law and Article 11(8) of Tohoku University Graduate School Regulations are not applicable to “those who have studied at university for at least three years, those who have completed 15 years of school education in a foreign country, those who have completed 15 years of education in a foreign country by finishing in Japan a correspondence course operated by a school in that country, and those who have completed a university course in Japan at an educational facility, which is (i) recognized under the education system of a foreign country as operating a university program (graduates must be recognized as equivalent to completing 15 years of education in that country) and (ii) otherwise designated by the MEXT Minister, and who have been recognized by GSIS as having attained the necessary credits with outstanding results.”

Note 6: Prospective students who wish to apply as mature or overseas students under prerequisites (6), (9) or (10) will be subject to a prior documentation screening. Therefore, they should consult first with GSIS Educational Affairs Section and their prospective supervisor, and submit the documentation stipulated by GSIS by 20 June 2019.

### 3. Receipt of applications

Applications must be received between 8-18 July 2019. The reception is open from 9:00AM to 4.30PM. Where posted applications arrive later than 19 July, only those postmarked up to 18 July will be accepted.

Receipt of applications/ mailing address:

Educational Affairs Section,  
 Graduate School of Information Sciences Tohoku University  
 Aramaki-Aza Aoba 6-3-09, Aoba-ku Sendai 980-8579, JAPAN  
 Tel: 022-795-5814

### 4. Application procedure

The documents necessary for application are as follows.

| No. | Documentation                                | Details  |
|-----|--|--|
| 1   | Application form and CV                      | Use GSIS forms.  |
| 2   | Supervisor request                           | Use GSIS forms.  |
| 3   | Examination admission card and photo ID card | Use GSIS forms. (Attach to the photo ID card one photograph of yourself, head and shoulders, hatless, taken no more than three months prior to application.)   |
| 4   | Academic transcript                          | Issued by the chancellor of your former university, your faculty dean, or the head of the school you last attended, etc.   |
| 5   | TOEFL®Test or TOEIC®Test Scoresheet (Note 7) | Required for applicants for selection for overseas students, etc. of Mathematics (Group 1), and for applicants for general selection and selection for overseas students etc. of Information and Biosystems (Group 2), Machine and Intelligence (Group 3), Civil Engineering (Group 4), Languages and Media (Group 5), Psychology and Philosophy (Group 6) and Social Sciences (Group 7). TOEFL®Test and TOEIC®Test examinations must have been taken no more than two years before the first day of the entrance examination. |
| 6   | Examination fee                              | 30,000 yen (Use a postal money order*, leaving the recipient column blank)<br>Not required if the following conditions are applicable:<br>-Being supposed to be a government (MEXT)-sponsored exchange overseas student when entering GSIS.<br>-Being exempt from an entrance examination fee with the support for the Great East Japan Earthquake victims.  |

|    |  |   |
|----|--|---|
| 7  | Receipt and duplicate copy thereof             | Use GSIS form, entering your name.<br>Not required if the following conditions are applicable:<br>-Being supposed to be a government (MEXT)-sponsored exchange overseas student when entering GSIS.<br>-Being exempt from an entrance examination fee with the support for the Great East Japan Earthquake victims.   |
| 8  | Return envelope for examination admission card | Use the envelope designated by GSIS. (Clearly write name, address and postcode and attach a 372 yen stamp.)   |
| 9  | Envelope for official correspondence           | Use the envelope designated by GSIS. (Clearly write name, address and postcode and attach a 760 yen stamp.)   |
| 10 | Other  | 1) Submit papers, reports, etc., if any, that demonstrate scholastic ability.<br>2) Mature students (see Note 3 below) and overseas students (see Note 2 below) who prefer to take the general entrance examination instead should submit “a certificate (of no specified form) (a document in which research programs, etc. are confirmed),” composed by the faculty member projected to be in charge of the students. |

\* Please request this at a postal savings bank or post office savings counter, adding in both the application fee and the handling fee.

Note7: We accept a score of any of the following publicly offered standardized tests: TOEFL-iBT®Test, TOEFL-PBT®Test or TOEIC®Test. We do not, however, acknowledge scores of institutionally offered TOEFL-ITP®Test or TOEIC-IP®Tests. Scores of multiple tests may be submitted provided they are of different types.

Where a scoresheet is not submitted at the time of your application (by the final day of the period for application acceptance), your English language score will be rated at zero.

The following applicants must submit a scoresheet. For further details, please see pp. 7-16.

- Mathematics (group 1) : Applicants for selection for overseas students, etc.
- Information and Biosystems (group 2), Machine and Intelligence (group 3), Civil Engineering (group 4) , Languages and Media (Group 5), Psychology and Philosophy (Group 6), Social Science (group 7) . : Applicants for general selection and applicants for selection for overseas students, etc.

Regarding group 1, 2, 3, 5 and 6, those whose native language is English need to inquire on an individual basis.

TOEFL, TOEFL iBT, TOEFL ITP and TOEIC are registered trademarks of Educational Testing Service (ETS).

In addition to the above documentation, please submit the following as appropriate.

[General selection and early graduate student selection]

| No. | Documentation                        | Details   |
|-----|--------------------------------------|---|
| 1   | Certificate of (expected) graduation | Issued by your university chancellor or faculty dean. |

Mature student selection

| No. | Documentation  | Details   |
|-----|--|---|
| 1   | Certificate of graduation, certificate of (expected) degree conferral, or certificate of (expected) Completion | Certificate of graduation issued by your university chancellor or faculty dean, certificate of (expected) bachelor’s degree issued by the National Institution for Academic Degrees and Quality Enhancement of Higher Education, or certificate of (expected) completion issued by the head of the school you last attended |
| 2   | Written consent to take exam   | If you are currently employed, written consent to take the entrance examination (no set format, but a company seal, etc. are required) issued by the head of your division is required.   |
| 3   | Employment certificate   | An employment certificate about the employment period, content of work, and position (no set format, but a company seal, etc. are required) issued by the head of your division.  |
| 4   | Letter of acceptance   | Written by your prospective supervisor (no set format)  |
| 5   | Statement of purpose   | Areas of interest, research plan, future goals, etc. (A4 size)  |
| 6   | Graduation thesis, etc.  | Graduation thesis, research contents of your university, etc. or , job description, etc. (A4 size)  |

Selection for overseas students, etc.

| No. | Documentation  | Details  |
|-----|--|--|
| 1   | Certificate of graduation, or certificate of (expected) completion | Certificate of graduation issued by your university chancellor or faculty dean, certificate of (expected) completion issued by the head of the school you last attended  |
| 2   | Letter of acceptance   | Written by your prospective supervisor (no set format)   |
| 3   | Letter of recommendation   | Written by your previous university supervisor or a person of the same position as the supervisor (no set format). Unnecessary for those who graduated from a university in Japan or for those who are expected to graduate by September 2019. |
| 4   | Government scholarship certificate                                 | Only overseas students on Japanese government (MEXT) scholarships at other universities should submit a Japanese government (MEXT) scholarship certificate issued by their university.   |
| 5   | Written consent to take Exam                                       | If you are currently employed, written consent to take the entrance examination (no set format, but a company seal, etc. are needed) issued by the head of your division is required.  |

## 5. Selection method

Selection will in principle be based upon a combination of written examinations (in the case of mature students, short essay, etc.), an oral examination, their academic transcript and other submitted documents.

1) General selection and selection for early graduate students and overseas students, etc.

Applicants should refer to “the list of laboratories (areas)” on pp.19-22 or GSIS website

(<https://www.is.tohoku.ac.jp/jp/laboratory/>) to select their first choice in terms of laboratory (area) and sit the written and oral examinations for the specialized subject group specified by that laboratory (in that area).

Subject group codes, laboratory codes and departments are shown in Table 1.

The content of examinations for each specialized subject group is shown on pp.7-16.

Table 1

| Specialized subject group |                            | Laboratory codes                                      | Department                         |
|---------------------------|----------------------------|---|------------------------------------|
| Group code                | Name                       |   |                                    |
| 1                         | Mathematics                | A01-1, A01-2, A02-1, A02-2, A03, A04                  | Computer and Mathematical Sciences |
|                           |                            | B01-1, B01-2, B02-1, B02-2, B02-3, B03                | System Information Sciences        |
| 2                         | Information and Biosystems | A05, A07, A08, A09, A10, A11, A13, A14, A16, A17, A18 | Computer and Mathematical Sciences |
|                           |                            | B04, B05, B06, B07, B08, B11, B12, B13, B15           | System Information Sciences        |
|                           |                            | D01, D02, D04, D05, D07-1, D07-2, D08, D10, D11, D12  | Applied Information Sciences       |
| 3                         | Machine and Intelligence   | A06-1, A06-2, A12, A15-1, A15-2, A19                  | Computer and Mathematical Sciences |
|                           |                            | B09, B10-1, B10-2, B14                                | System Information Sciences        |
|                           |                            | D03-1, D03-2, D03-3, D09                              | Applied Information Sciences       |
| 4                         | Civil Engineering          | C-11, C12-1, C12-2, C13-1, C13-2                      | Human-Social Information Sciences  |
| 5                         | Languages and Media        | C01, C06, C14, C15                                    | Human-Social Information Sciences  |
| 6                         | Psychology and Philosophy  | C02, C03, C04, C05, C16                               | Human-Social Information Sciences  |
|                           |                            | D06   | Applied Information Sciences       |
| 7                         | Social Sciences            | C07, C08, C09, C10                                    | Human-Social Information Sciences  |

\* Aside from the above, the following examination methods can also be chosen.

Method 1: Taking the written examinations for another specialized subject group.

Method 2: Take the written examinations for a subject that is not in GSIS's specialized subject groups (not possible for all subjects).

Method 3: In place of the above written and oral examinations, the applicant can produce a paper concerning their background, undergo an oral examination, and sit a foreign language examination (English). (According to the outcome of the prior documentation screening, examination by such methods may not be permitted.)

**Those wishing to be examined using the above methods must consult with GSIS Educational Affairs Section and their prospective supervisor to confirm the specific examination method by 20 June, 2019.**

(1) Schedule for entrance examinations

Examinations will be held by specialized subject group over 28-30 August 2018 according to the schedule on pp.7-16.

(2) Place and time of the examination

The details including the examination venue will be notified along with the examination admission card to be sent. As for the time and the date of the examinations, refer to "Examination schedule and examination content for each specialized subject group." (p.7)

2) Mature student selection

Those applying for admission as a mature student should in principle have been employed for two or more years as technicians, teachers or researchers in public offices, schools or companies, etc. The aim is for mature students to exploit their workplace experience in their learning and research, refresh and advance their knowledge and skills, or to acquire knowledge and skills in new areas, advancing their creative abilities.

Screening will entail in principle a holistic assessment of the applicant's basic academic ability and work experience and research content as a working member of society based on a short essay, oral examination and documentation screening. Emphasis will also be placed on the relationship between the research area in which the candidate wishes to major and their work and research experience to date.

- Short essay, etc. and oral examination schedule: The examination dates and start times for the various specialized subject groups can be found on pp. 17-18. Examination venues will be the same as for general selection and selection for early graduate students and overseas students, etc., noted in (1).
- Examination content: The examination content for the various specialized subject groups can be found on pp.17-18.

## 6. Announcement of successful applicants

The examination code numbers of successful applicants will be listed on GSIS website around 5 p.m. on 6 September 2019 (<https://www.is.tohoku.ac.jp/>). Applicants will also be notified of results placed in the envelope exclusively used for official communication by mail.

## 7. Application of special cases under Article 14 of the Standards for the Establishment of Graduate Schools.

Those applicants in employment who are seeking education as special cases under Article 14 of the Standards for the Establishment of Graduate Schools (whereby class hours are set for special times or periods outside ordinary teaching times and hours in consideration of circumstances such as the working hours of students with jobs, or the necessary commuting time) should meet with their proposed supervisors as soon as their applications have been cleared to discuss their research/study plans.

## 8. Application for Long-Term Study System

GSIS can, based on the results of a review, give permission for a student to complete their study program (Note 9) systematically over a period of more than two years, which is the standard completion period, in response to circumstances such as the student's having a job (Note 8). Students to whom this system is applied are called "long-term students."

GSIS will engage in consultation in relation to this system at any point in time. Details of application methods will be contained in the documentation on admission procedures sent out after the announcement of successful applicants.

Note 8: Students eligible for the long-term student system are: (i) full-time employees at companies, etc., or those who are self-employed; (ii) those needing time away for childbirth, childcare or nursing care, etc.; and (iii) other persons deemed eligible by GSIS.

Note 9: The term of study cannot extend past four years. However, students can request that the permitted term of study be shortened. In principle, there will be no special curriculum set for long-term students.

## 9. Admission procedures

Information on admission procedures and other details will be sent out together with the notification of acceptance.

## 10. Costs

- |                                |   |
|--------------------------------|---|
| (1) Entrance fee               | 282,000 yen (subject to change)               |
| (2) Tuition fee (Per Semester) | 267,900 yen (subject to change)               |
|                                | (Annual fee: 535,800 yen) (subject to change) |

Note 10: Tuition fees while enrolled at Tohoku University should be paid to the university through an automatic debit from a bank account held at a designated bank. The above fees are provisional, and where tuition fees are revised during your period of study, the new tuition fee will apply as of the time of revision.

Note 11: Information on exemptions from entrance and/or tuition fees or permission for delayed fee payment will be provided in the documentation on admission procedures sent out after the announcement of examination results.

## 11. Notes

- (1) Application documents and the examination fee will not be returned.
- (2) Anyone who files a false declaration in the application documents, the admission may be canceled even after admission.
- (3) When submitting an application by mail, use the official application envelope and send it by express registered mail.
- (4) If you have not received an examination admission card by 10 days before the entrance examination, please contact GSIS Educational Affairs Section.
- (5) Consultation is available for those applicants with special examination or study needs. Please contact GSIS Educational Affairs Section in this regard by 20 June 2019.
- (6) When requesting application documents by mail, please enclose a self-addressed envelope (No. 2 size, or approximately 34 cm x 24cm) on which your name, address and postal code are clearly written and a 250 yen stamp attached. If you require a brochure explaining details of the school's program, clearly write your request in red ink on a request envelope and enclose a self-addressed envelope (same size as above) with a 380 yen stamp attached.
- (7) We will disclose the entrance exam results to those who took the entrance exam of Tohoku University Graduate School of Information Science. If you wish, please inquire to the academic staff about procedures, etc. Applications will be accepted only if there is a request for disclosure (prescribed application form) from the applicant himself / herself.
- (8) Handling of personal information
  - (i) Personal information gathered in the course of admission screening will be used solely for the purposes of conducting admission screening, admission procedures, providing support after admission (scholarships, tuition fee exemptions, health management, etc.), education (educational guidance, etc.), and administrative activities such as collecting tuition fees.
  - (ii) Personal information gathered in the course of admission screening will be handled strictly in compliance with "the Act on the Protection of Personal Information Held by Independent Administrative Agencies, etc." and other laws and regulations, as well as "Tohoku University Regulations on the Protection of Personal Information," and will not be disclosed or released to third parties without the consent of the person concerned.
  - (iii) It is deemed that those applying to Tohoku University Graduate School of Information Sciences have consented to the above provisions.

June 2019

Educational Affairs Section,  
Graduate School of Information Sciences, Tohoku University  
6-3-09 Aramaki-Aza Aoba, Aoba-ku, Sendai, 980-8579, JAPAN  
Tel: 022-795-5814  
<https://www.is.tohoku.ac.jp/>

## Examination schedule and examination content for each specialized subject group

October 2019

### Two-Year Master's Program: General selection

|                           |   |
|---------------------------|---|
|                           | Group 1          Mathematics  |
| Written examinations<br>* | <p>Specialized subjects          28 August 10:00-13:00</p> <p>Select four out of 10 questions on differential and integral calculus (2), linear algebra (1), applied mathematics (1), discrete mathematics (1), probability/statistics (1), complex analysis (1), differential equation (1), geometry (1), and algebra (1).</p>   |
|                           | <p>English                          28 August 14:30-15:30</p>   |
| Oral examination          | <p>28 and 29 August: Applicants will be notified of the exact date and start time.</p> <p>Applicants must speak for approximately 10 minutes on their (expected) graduation research at their previous university or the main areas of mathematics that they have studied. (PC projectors can be used.) Bring five copies of an outline of your presentation and your research goals following admission (A4 size).</p> |

|                           |   |
|---------------------------|---|
|                           | Group 2          Information and Biosystems   |
| Written examinations<br>* | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis.</p> |
|                           | <p>Basic subjects                  27 August 9:30-11:30 (Meeting time 9:00)</p> <p>Physics and informatics: Select two out of six questions on electromagnetics, electrical circuits, fundamentals of informatics 1, fundamentals of informatics 2, fundamentals of physics, and fundamentals of mathematics.</p> <p>Medicine and biology: Select two out of five questions on fundamentals of molecular biology, fundamentals of general physiology, fundamentals of neuroendocrinology, fundamentals of pathophysiology, and fundamentals of health science.</p>  |
|                           | <p>Specialized subjects          28 August 9:30-11:30 (Meeting time 9:00)</p> <p>Physics and informatics: Select two out of six questions on electrical engineering, communication engineering, electronic engineering, computers 1, computers 2, and specialized physics.</p> <p>Medicine and biology: Select two out of five questions on specialized molecular biology, specialized general physiology, specialized neuroendocrinology, specialized pathophysiology, and specialized health science.</p>   |
|                           | <p>Note: Please enter the subjects in which you hope to be examined (physics and informatics or medicine and biology) along with the subject group (information and Biosystems) in the application form. Please refer to the relevant departments in regard to the scope of each subject, or check on the website at this address:<br/><a href="http://www.ecei.tohoku.ac.jp/ecei_web/admission/exam_subject.html">http://www.ecei.tohoku.ac.jp/ecei_web/admission/exam_subject.html</a></p>  |
| Oral examination          | <p>28 or 29 August</p> <p>Applicants will be notified of the exact date and start time separately. (According to the content of your academic transcript, you may be exempted from the oral examination.)</p> <p>Applicants must speak for approximately 10 minutes on their (expected) graduation thesis and their research goals following admission, etc. (You do not need to fill in the "Presentation Title at the Oral Exam" column on the application form.) On the day of the examination, bring five copies of the materials related to the contents of your presentation (A4 size).</p>   |



October 2019

**Two-Year Master’s Program: General selection**

|                        | Group 3 Machine and Intelligence  |
|------------------------|---|
| Written examinations * | English<br>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee’s Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS’s DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis. With the exception of applicants whose native language is English, if an applicant cannot provide an original score report from the TOEIC public test, the application request will not be accepted. (However, if the applicant is submitting a scoresheet of the TOEIC public test, it can be accepted after the application period. In such a case, unless the original scoresheet is submitted by the deadline, the applicant will be classified as having “failed.”) |
|                        | Mathematics A 27 August 9:30-11:00 (Meeting time 9:00)<br>Differential and integral calculus, linear algebra, vector analysis   |
|                        | Mathematics B 28 August 13:30-15:00<br>Ordinary differential equations, Partial differential equations, Fourier series and transform, Laplace transform   |
|                        | Specialized subjects 28 August 9:00-12:00 (Meeting time 8:30)<br>Select two out of the following five subjects: thermodynamics, fluid mechanics, material dynamics, mechanical dynamics and control engineering.  |
| Oral examination       | 29 August 13:30- (Meeting time 13:00)<br>Applicants will be asked about their (expected) graduation research and their research goals following admission, etc. (You do not need to fill in the “Presentation Title at the Oral Exam” column on the application form.)  |

**Two-Year Master's Program: General selection**

|                  | Group 4 Civil Engineering  |
|------------------|--|
|                  | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.)</p>  |
|                  | <p>Short essay 27 August 9:30-11:00</p> <p>A theme on civil engineering</p>  |
|                  | <p>Specialized subjects 27 August 13:00-</p> <p>Applicants from civil engineering departments must choose seven questions out of 17 questions on 8 subjects (the test time is 3.5 hours). Other applicants must choose a total of four questions out of 17 questions on 8 subjects (the test time is 2 hours).</p> <ol style="list-style-type: none"> <li>1. Mathematics (differential and integral calculus (1 question), linear algebra (1 question), probability and statistics (1 question))</li> <li>2. Mechanics of Elastic Media and Structures (2 questions)</li> <li>3. Geotechnical and Concrete Engineering (2 questions)</li> <li>4. Hydraulics (2 questions)</li> <li>5. Water Quality and Environment (2 questions)</li> <li>6. Biological and Ecological Engineering (2 questions)</li> <li>7. Transportation Engineering and Planning (2 questions)</li> <li>8. Operations Research (2 questions)</li> </ol> |
|                  | <p>Notes</p> <p>(1) 'Civil engineering departments' in this case means departments that are focused on civil engineering, regardless of their titles. The Educational Affairs Section should be consulted as to what is regarded as a civil engineering department.</p> <p>(2) No dictionary or calculator allowed.</p> <p>(3) For the past entrance examination questions and question scope, please refer to the following website:<br/> <a href="http://www.civil.tohoku.ac.jp/inshi.html">http://www.civil.tohoku.ac.jp/inshi.html</a></p>   |
| Oral examination | <p>27 and 28 August: Applicants will be notified of the exact date and start time.</p> <p>Questions cover the education received in the previous institution, the content of the thesis (including the one in progress), the drive and motivation, and research goals following admission, etc.</p>  |

|                        | Group 5 Languages and Media   |
|------------------------|---|
| Written examinations * | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis.</p> |
|                        | <p>Specialized subjects 28 August 10:00-13:00</p> <p>Answer three questions from these areas: general linguistics, syntax, semantics,-morphology, semiotics, literary theory, literary hermeneutics, media, information literacy, cultural research, German, and French. Applicants for either languages or media should ensure that they answer at least two questions from the areas designated in the book for questions respectively.</p> <p>Note: Applicants choosing German or French can use a dictionary. Dictionaries will be supplied by the examiner.</p>  |
| Oral examination       | <p>29 August 10:00-</p> <p>Applicants must speak for approximately 15 minutes on the education they received at their previous university and their graduation thesis (including theses under production). (PC projectors can be used.) On the day of the examination, bring five copies of materials related to your presentation (presentation outline, drawings, etc.; A4 size).</p>   |

**Two-Year Master's Program: General selection**

|                        | Group 6 Psychology and Philosophy   |
|------------------------|---|
| Written examinations * | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis.</p> |
|                        | <p>Specialized subjects 28 August 10:00-13:00</p> <p>Select four of 12 questions from these areas: psychology (sensation and perception, cognition, learning and memory, personality, psychometrics) and philosophy (history of philosophy). Applicants for either psychology(cognitive psychology, human learning and memory, cognitive psychology of communication) or philosophy(philosophy of human information, philosophy of logical analysis) should ensure that they answer at least three questions from the areas designated in the book for questions respectively.</p>  |
| Oral examination       | <p>29 August 10:00-</p> <p>Applicants must speak for approximately 20 minutes on the education they received at their previous university and their graduation thesis (including theses under production). (OHP and PC projectors can be used.) On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size).</p>   |

|                        | Group 7 Social Sciences  |
|------------------------|--|
| Written examinations * | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.)</p>  |
|                        | <p>Specialized subjects 28 August 10:00-13:00</p> <p>Select one of the following categories.</p> <p>Sociology: select three out of five questions from the following areas: the history of sociology, contemporary society, sociology of local community, family sociology and social research methods.</p> <p>Politics: select three out of five questions from the following areas: political consciousness, public administration, political processes, statistics and social research methods.</p> <p>Economics: select three out of five questions from the following areas: microeconomics, macroeconomics, urban and regional economics, statistics and mathematics for economics.</p> <p>As necessary, the examiner will supply calculators.</p> <p>※ State the name of the categories in which you wish to be examined (sociology, politics, or economics) in the application, along with the name of the specific subject (Social Sciences). No change in category will be allowed after the application has been submitted.</p> |
| Oral examination       | <p>28 or 29 August Applicants will be notified of the exact date and start time separately.</p> <p>Applicants must speak for approximately 20 minutes on the education they received at their former university and their graduation thesis (including theses under production). (PC projectors can be used.) The examiners will ask questions for approximately 10 minutes. On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size).</p>   |

\* In each of the subject groups, applicants may be exempted from the written examinations according to the content of their academic transcripts. A TOEFL®Test or TOEIC®Test scoresheet must still be provided at the time of application for subject groups 2, 3, 4, 5, 6 and 7.

October 2019

**Two-Year Master's Program: Early graduate student selection**

\*Apart from the subject group below, examination times and content will be the same as for general selection.

|                      | Group 2 Information and Biosystems  |
|----------------------|---|
| Written examinations | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis.</p> |
|                      | <p>Basic subjects 27 August 9:30-11:30 (Meeting time 9:00)</p> <p>Physics and informatics: Select two out of six questions on electromagnetics, electrical circuits, fundamentals of informatics 1, fundamentals of informatics 2, fundamentals of physics and fundamentals of mathematics.</p> <p>Medicine and biology: Select two out of five questions on fundamentals of molecular biology, fundamentals of general physiology, fundamentals of neuroendocrinology, fundamentals of pathophysiology, and fundamentals of health science.</p>  |
|                      | <p>Specialized subjects 28 August 9:30-11:30 (Meeting time 9:00)</p> <p>Physics and informatics: Select two out of six questions on electrical engineering, communication engineering, electronic engineering, computers 1, computers 2, and specialized physics.</p> <p>Medicine and biology: Select two out of five questions on specialized molecular biology, specialized general physiology, specialized neuroendocrinology, specialized pathophysiology, and specialized health science.</p>  |
|                      | <p>Note 1: Please enter the subjects in which you wish to be examined (physics and informatics or medicine and biology) along with the subject group (Information and Biosystems) in the application form. Please refer to the relevant departments in regard to the scope of the various subjects, or check on the website at this address:<br/> <a href="http://www.ecei.tohoku.ac.jp/ecei_web/admission/exam_subject.html">http://www.ecei.tohoku.ac.jp/ecei_web/admission/exam_subject.html</a></p> <p>Note 2: According to the content of your academic transcript, you may be exempted from the written examination.</p>            |
| Oral examination     | <p>28 or 29 August</p> <p>Applicants will be notified of the exact date and start time.<br/>           (According to the content of your academic transcript, you may be exempted from the oral examination.)</p> <p>Applicants must speak for approximately 10 minutes on the education they received at their former university, their (expected) graduation thesis and on their research goals following admission, etc. On the day of the examination, bring five copies of the materials related to the contents of your presentation (A4 size).</p>   |

October 2019

**Two-Year Master's Program:** Early graduate student selection

\*Apart from the subject group below, examination times and content will be the same as for general selection.

|                      | Group 3 Machine and Intelligence  |
|----------------------|---|
| Written examinations | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL® Test or TOEIC® Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL® Test, and the Official Score Certificate in the case of TOEIC® Test. When submitting the TOEFL® Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis. With the exception of applicants whose native language is English, if an applicant cannot provide an original score report from the TOEIC public test, the application request will not be accepted. (However, if the applicant is submitting a scoresheet of the TOEIC public test, it can be accepted after the application period. In such a case, unless the original scoresheet is submitted by the deadline, the applicant will be classified as having "failed.")</p> |
|                      | <p>Mathematics A 27 August 9:30-11:00 (Meeting time 9:00)</p> <p>Differential and integral calculus, linear algebra, vector analysis</p>  |
|                      | <p>Mathematics B 27 August 13:30-15:00</p> <p>Ordinary differential equations, Partial differential equations, Fourier series and transform, Laplace transform</p>  |
|                      | <p>Specialized subjects 28 August 9:00-12:00 (Meeting time 8:30)</p> <p>Select two out of the following five subjects: thermodynamics, fluid mechanics, material dynamics, mechanical dynamics and control engineering.</p>   |
|                      | <p>Notes: Some applicants are exempted from the written examinations depending on academic transcripts.</p>   |
| Oral examination     | <p>29 August 13:30- (Meeting time 13:00)</p> <p>Applicants will be asked about their (expected) graduation research and their research goals following admission, etc. (You do not need to fill in the 'Presentation Title at the Oral Exam' column on the application form.)</p>   |

**Two-Year Master's Program: Overseas student selection**

|                        | Group 1 Mathematics  |
|------------------------|--|
| Written examinations * | Specialized subjects 28 August 10:00-13:00<br>Select four out of 10 questions on differential and integral calculus (2), linear algebra (1), applied mathematics (1), discrete mathematics (1), probability/statistics (1), complex analysis (1), differential equation (1), geometry (1), and algebra (1).  |
|                        | English<br>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis. |
| Oral examination       | 28 and 29 August: Applicants will be notified of the exact date and start time.<br>Applicants must speak for approximately 10 minutes on their (expected) graduation research at their former university or the main areas of mathematics that they have studied. (PC projectors can be used.) On the day of the examination, bring five copies of an outline of your presentation and your research goals following admission (A4 size).  |

|                        | Group 2 Information and Biosystems   |
|------------------------|--|
| Written examinations * | Basic subjects 27 August 9:30-11:30 (Meeting time 9:00)<br>Physics and informatics: Select two out of six questions on electromagnetics, electrical circuits, fundamentals of informatics 1, fundamentals of informatics 2, fundamentals of physics, and fundamentals of mathematics.<br>Medicine and biology: Select two out of five questions on fundamentals of molecular biology, fundamentals of general physiology, fundamentals of neuroendocrinology, fundamentals of pathophysiology, and fundamentals of health science.   |
|                        | English<br>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis. |
|                        | Specialized subjects 28 August 9:30-11:30 (Meeting time 9:00)<br>Physics and informatics: Select two out of six questions on electrical engineering, communication engineering, electronic engineering, computers 1, computers 2, and specialized physics.<br>Medicine and biology: Select two out of five questions on specialized molecular biology, specialized general physiology, specialized neuroendocrinology, specialized pathophysiology, and specialized health science.  |
|                        | Note: Please enter the subjects in which you wish to be examined (physics and informatics or medicine and biology) along with the subject group (Information and Biosystems) in the application form. Please refer to the relevant departments in regard to the scope of the various subjects, or check on the website at this address:<br><a href="http://www.ecei.tohoku.ac.jp/ecei_web/admission/exam_subject.html">http://www.ecei.tohoku.ac.jp/ecei_web/admission/exam_subject.html</a>   |
| Oral examination       | 28 or 29 August<br>Applicants will be notified of the exact date and start time separately.<br>Applicants must speak for approximately 10 minutes on the education they received at their former university, their (expected) graduation thesis and their research goals following admission, etc. On the day of the examination, bring five copies of the materials related to the contents of your presentation (A4 size). (Overseas students who undertook their undergraduate studies at Tohoku University may in some cases be exempted from giving this presentation.)   |

**Two-Year Master's Program: Overseas student selection**

|                           | Group 3      Machine and Intelligence   |
|---------------------------|---|
| Written examinations<br>* | English<br>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis. With the exception of applicants whose native language is English, if an applicant cannot provide an original score report from the TOEIC public test, the application request will not be accepted. (However, if the applicant is submitting a scoresheet of the TOEIC public test, it can be accepted after the application period. In such a case, unless the original scoresheet is submitted by the deadline, the applicant will be classified as having "failed.") |
|                           | Mathematics A    27 August 9:30-11:00 (Meeting time 9:00)<br>Differential and integral calculus, linear algebra, vector analysis  |
|                           | Mathematics B    27 August 13:30-15:00<br>Ordinary differential equations, Partial differential equations, Fourier series and transform, Laplace transform  |
|                           | Specialized subjects    28 August 9:00-12:00 (Meeting time 8:30)<br>Select two from the following five subjects: thermodynamics, fluid mechanics, material dynamics, mechanical dynamics and control engineering  |
| Oral examination          | 29 August      Applicants will be notified of the meeting time separately.<br>Only those who have passed the written examination or who were exempt from that examination will be eligible for the oral examination. Applicants must speak for approximately 10 minutes on the education they received at their former university or their graduation thesis (including theses under production). (PC projectors can be used.) On the day of the examination, bring 13 copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). Overseas students who undertook their undergraduate studies at Tohoku University do not need to give a presentation, but they will be asked about their (expected) graduation research and their research goals after admission, etc.  |

**Two-Year Master's Program: Overseas student selection**

|                        | Group 4 Civil Engineering   |
|------------------------|---|
| Written examinations * | English<br>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.)  |
|                        | Specialized subjects 27 August 13:00-15:00<br>Applicants must choose four questions out of 17 questions on 8 subjects.<br>1. Mathematics (differential and integral calculus (1 question), linear algebra (1 question), probability and statistics (1 question))<br>2. Mechanics of Elastic Media and Structures (2 questions)<br>3. Geotechnical and Concrete Engineering (2 questions)<br>4. Hydraulics (2 questions)<br>5. Water Quality and Environment (2 questions)<br>6. Biological and Ecological Engineering (2 questions)<br>7. Transportation Engineering and Planning (2 questions)<br>8. Operations Research (2 questions) |
|                        | Notes<br>(1) No dictionary or calculator allowed.<br>(2) For past entrance examination questions and question scope, please refer to the following website:<br><a href="http://www.civil.tohoku.ac.jp/inshi.html">http://www.civil.tohoku.ac.jp/inshi.html</a>  |
| Oral Examination       | 27 and 28 August: Applicants will be notified of the exact date and start time separately. Questions cover the education received in the previous institution, the content of the thesis (including the one in progress), the drive and motivation, and research goals following admission, etc. The Japanese language proficiency of the applicants is also judged.  |

|                        | Group 5 Languages and Media  |
|------------------------|--|
| Written examinations * | English<br>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis. |
|                        | Specialized subjects 28 August 10:00-13:00<br>Answer two questions from these areas: general linguistics, syntax, semantics, morphology, semiotics, literary theory, literary hermeneutics, media, information literacy, cultural research, German, and French. Applicants for either languages or media should ensure that they answer questions from the area designated in the book for questions respectively.<br>Note: Applicants choosing German or French can use a dictionary. Dictionaries will be supplied by the examiner.  |
| Oral examination       | 29 August 10:00-<br>Applicants must speak for approximately 15 minutes on the education they received at their former university and their graduation thesis (including theses under production). (PC projectors can be used.) On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size).   |



**Two-Year Master's Program: Overseas student selection**

|                        | Group 6 Psychology and Philosophy   |
|------------------------|---|
| Written examinations * | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.) Applicants whose native language is English should contact GSIS on an individual basis.</p> |
|                        | <p>Specialized subjects 28 August 10:00-13:00</p> <p>Select three of 12 questions from these areas: psychology (sensation and perception, cognition, learning and memory, personality, psychometrics) and philosophy (history of philosophy).</p> <p>Applicants for either psychology(cognitive psychology, human learning and memory, cognitive psychology of communication) or philosophy(philosophy of human information, philosophy of logical analysis) should ensure that they answer questions from the area designated in the book for questions respectively.</p>  |
| Oral examination       | <p>29 August 10:00-</p> <p>Applicants must speak for approximately 20 minutes on the education they received at their former university and their graduation thesis (including theses under production). (PC projectors can be used.) On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size).</p>   |

|                        | Group 7 Social Sciences   |
|------------------------|---|
| Written examinations * | <p>English</p> <p>Applicants must provide at the time of application their original TOEFL®Test or TOEIC®Test scoresheet from an examination taken no more than two years before the first day of the entrance examinations. The scoresheet is the Examinee's Score Record in the case of TOEFL®Test, and the Official Score Certificate in the case of TOEIC®Test. When submitting the TOEFL®Test Official Score Report, please ensure that U.S. ETS sends it to GSIS by the final day of application. (For mailing, GSIS's DI code is 2149.)</p>   |
|                        | <p>Specialized subjects 28 August 10:00-13:00</p> <p>Select one of the following categories.</p> <p>Sociology : select three out of five questions from the following areas: the history of sociology, contemporary society, urban sociology, rural sociology and family sociology</p> <p>Politics : select three out of five questions from the following areas: political consciousness, modern political thought, public administration, political processes, political systems and comparative politics</p> <p>Economics : select three out of five questions from the following areas: microeconomics, macroeconomics, urban economics, regional economics, statistics, econometrics and mathematics for economics</p> <p>Questions may be answered in English. Where necessary, the examiner will supply calculators.<br/>* State the name of the categories in which you wish to be examined (sociology, politics, or economics) in the application, along with the name of the specific subject (Social Sciences). No change in category will be allowed after the application has been submitted</p> |
| Oral examination       | <p>28 or 29 August Applicants will be notified of the exact date and start time separately.</p> <p>Applicants must speak for approximately 20 minutes on the education they received at their former university and their graduation thesis (including theses under production). (PC projectors can be used.) The examiners will ask questions for approximately 10 minutes. On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). Presentations can be given in English.</p>   |

\* In each of the subject groups, applicants may be exempted from the written examinations according to the content of their academic transcripts. A TOEFL®Test or TOEIC®Test scoresheet must still be provided at the time of application.

October 2019

**Two-Year Master's Program: Mature student selection**

|                  |   |
|------------------|---|
|                  | <b>Group 1 Mathematics</b>  |
| Short essay      | 28 August 10:00-11:30<br>Includes questions testing your understanding of basic mathematical concepts and terminology.  |
| Oral examination | 28 and 29 August: Applicants will be notified of the exact date and start time. Applicants must speak for approximately 20 minutes on their main area of mathematical research either at their workplace or on a personal basis. (OHP and PC projectors can be used.) On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). |

|                  |   |
|------------------|---|
|                  | <b>Group 2 Information and Biosystems</b>   |
| Oral examination | 28 or 29 August: Applicants will be notified as to the exact date and start time separately. Applicants must speak for approximately 10 minutes on their research (work) to date and their research goals following admission, etc. On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). |

|                      |  |
|----------------------|--|
|                      | <b>Group 3 Machine and Intelligence</b>  |
| Written examinations | Choose two from 10 subjects from Mathematics A, Mathematics B and specialized subjects. (Notify GSIS of these in advance.) The time at which the written examination finishes for specialized subjects will vary according to the subject chosen.  |
|                      | Mathematics A 27 August 9:30-11:00 (Meeting time 9:00)<br>Differential and integral calculus, linear algebra, vector analysis  |
|                      | Mathematics B 27 August 13:30-15:00<br>Ordinary differential equations, Partial differential equations, Fourier series and transform, Laplace transform  |
|                      | Specialized subjects 28 August 9:00-12:00 (Meeting time 8:30)<br>Thermodynamics, fluid mechanics, material dynamics, mechanical dynamics and control engineering   |
| Oral examination     | 29 August Applicants will be notified of the meeting time separately. Only those who have passed the written examination or who were exempt from that examination will be eligible for the oral examination. Applicants must speak for approximately 10 minutes on their research to date and their research goals after admission. (PC projectors can be used.) On the day of the examination, bring 13 copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). Your English ability may also be subject to evaluation. |
|                      | Note: Some applicants may be exempted from the written examinations as a result of prior screening of their documentation. For details, please contact Machine and Intelligence educational affairs section.<br>Contact point: Machine and Intelligence educational affairs officer<br>Tel: 022-795-7030   |

|                  |   |
|------------------|---|
|                  | <b>Group 4 Civil Engineering</b>  |
| Short essay      | 27 August 9:30-11:00<br>A theme on civil engineering  |
| Oral examination | 27 and 28 August: Applicants will be notified of the exact date and start time separately. Applicants must speak for approximately 10 minutes on their research or work at their workplace. (PC projectors can be used. If you wish to use a PC projector, please contact the Educational Affairs Section beforehand.) The examiners will ask questions concerning your presentation, drive and motivation, and research goals following admission, etc. On the day of the examination, bring eight copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). |

October 2019

**Two-Year Master's Program: Mature student selection**

|                  |   |
|------------------|---|
|                  | <b>Group 5            Languages and Media</b>   |
| Short essay      | 28 August 10:00-11:30<br>The applicant must answer the essay question given on the examination day  |
| Oral examination | 29 August 10:00-<br>Applicants will be notified as to the time of the examination separately.<br>Applicants must speak for approximately 15 minutes on their research or work at their workplace, and their future research plans after admission. (PC projectors can be used.) On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). |

|                  |  |
|------------------|--|
|                  | <b>Group 6            Psychology and Philosophy</b>  |
| Short essay      | 28 August 10:00-11:30<br>Theme to be indicated on the examination day.   |
| Oral examination | 29 August 10:00-<br>Applicants must speak for approximately 20 minutes on their research or work at their workplace and their research plans after admission. (PC projectors can be used.) On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). |

|                  |  |
|------------------|--|
|                  | <b>Group 7            Social Sciences</b>  |
| Short essay      | 28 August 10:00-13:00<br>Select one of the themes indicated at the time of the examination and write an essay. Themes will relate to proposed research areas across sociology, politics and economics.   |
| Oral examination | 28 or 29 August    Applicants will be notified of the exact date and start time separately.<br>Applicants will be notified of the time of the examination separately.<br>Applicants must speak for approximately 20 minutes on their research or work at their workplace. (PC projectors can be used.) The examiners will ask questions for around 10 minutes. On the day of the examination, bring five copies of materials related to your presentation (presentation outline, diagrams, etc.; A4 size). |

**List of laboratories (areas) within Tohoku University Graduate School of Information Sciences 2020**

\* For details on the research, etc., at these laboratories (areas), please see GSIS's website at:

<https://www.is.tohoku.ac.jp/jp/laboratory/>

| Group code                       | Group                      | Division                        | Laboratory (Area)                                     | Lab. code | Staff  | Department                         |
|----------------------------------|----------------------------|---------------------------------|---|-----------|--|------------------------------------|
| 1                                | Mathematics                | Mathematical Structures         | Mathematical Structures I                             | A01-1     | Prof. Akihiro MUNEMASA   | Computer and Mathematical Sciences |
|                                  |                            |                                 |   | A01-2     | Assoc. Prof. Hiroki SHIMAKURA  |                                    |
|                                  |                            |                                 | Mathematical Structures II                            | A02-1     | Prof. Toshiyuki SUGAWA   |                                    |
|                                  |                            |                                 |   | A02-2     | Assoc. Prof. Hajime TANAKA   |                                    |
|                                  |                            |                                 | Mathematical Structures III                           | A03       | Prof. Hitoshi MURAKAMI   |                                    |
|                                  |                            |                                 | Mathematical Structures IV                            | A04       | Prof. Hiromi SENO  |                                    |
|                                  |                            | Mathematical System Analysis    | Mathematical System Analysis I                        | B01-1     | Prof. Masaaki HARADA   | System Information Sciences        |
|                                  |                            |                                 |   | B01-2     | Assoc. Prof. Kei FUNANO  |                                    |
|                                  |                            |                                 | Mathematical System Analysis II                       | B02-1     | Prof. Nobuaki OBATA  |                                    |
|                                  |                            |                                 |   | B02-2     | Assoc. Prof. Reika FUKUIZUMI   |                                    |
| Mathematical System Analysis III | B03                        | Prof. Shigeru SAKAGUCHI**       |   |           |  |                                    |
| 2                                | Information and Biosystems | Applied Mathematical Science    | Statistical Physics                                   | A05       | (Currently vacant)   | Computer and Mathematical Sciences |
|                                  |                            | Computation Science and Systems | Computation Science and Systems<br>Computation Theory | A07       | (Currently vacant)   |                                    |
|                                  |                            |                                 | Computer Structures                                   | A08       | Prof. Takafumi AOKI<br>Assoc. Prof. Koichi ITO                               |                                    |
|                                  |                            |                                 | Intelligent Integrated Systems                        | A09       | Prof. Masanori HARIYAMA  |                                    |
|                                  |                            | Software Science and Systems    | Firmware Science                                      | A10       | (Currently vacant)   |                                    |
|                                  |                            |                                 | Foundations of Software Science                       | A11       | Prof. Eijiro SUMII<br>Assoc. Prof. Kazutaka MATSUDA                          |                                    |
|                                  |                            | Logic for Information Science   | Logic for Information Science                         | A13       | Prof. Keisuke NAKANO   |                                    |
|                                  |                            | Communication Theory            | Communication Theory                                  | A14       | Assoc. Prof. Gen KITAGATA  |                                    |
|                                  |                            | Information Security            | Information Security                                  | A16       | Prof. Hiroki SHIZUYA<br>Assoc. Prof. Masao SAKAI<br>Assoc. Prof. Shuji ISOBE |                                    |
|                                  |                            | Environmental Informatics       | Environmental Informatics                             | A17       | Prof. Jun-ichi KUDOH*  |                                    |

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|----------------------------|---|--|-------------------------------|--|--|------------------------------|
| Information and Biosystems | Fundamental Data Informatics                    | Fundamental Data Informatics               | A18                           | Prof. Yoshinori HAYAKAWA<br>Assoc. Prof. Takashi MITSUISHI                           | System Information Sciences  |                              |
|                            | Intelligent Information Science                 | Algorithm Theory                           | B04                           | Prof. Xiao. ZHOU<br>Assoc. Prof. Takehiro ITO  |  |                              |
|                            |   | Intelligent Systems Science                | B05                           | Prof. Ayumi SHINOHARA<br>Assoc. Prof. Ryo YOSHINAKA                                  |  |                              |
|                            |   | Natural Language Processing                | B06                           | Prof. Kentaro INUI<br>Assoc. Prof. Jun SUZUKI  |  |                              |
|                            | Biosystem Information Sciences                  | Information Biology                        | B07                           | Assoc. Prof. Tatsuya SATO  |  |                              |
|                            |   | Design and Analysis of Information Systems | B08                           | Assoc. Prof. Jinhee CHUN   |  |                              |
|                            | Acoustic Information                            | Acoustic Information                       | B11                           | Assoc. Prof. Shuichi SAKAMOTO  |  |                              |
|                            | Visual Cognition and Systems                    | Visual Cognition and Systems               | B12                           | Prof. Satoshi SHIOIRI<br>Assoc. Prof. Ichiro KURIKI<br>Assoc. Prof. Chia-Huei Tseng  |  |                              |
|                            | Information Contents                            | Information Contents                       | B13                           | Prof. Yoshifumi KITAMURA<br>Assoc. Prof. Kazuki TAKASHIMA                            |  |                              |
|                            | Software Construction                           | Software Construction                      | B15                           | Prof. Atsushi OHORI**<br>Assoc. Prof. Katsuhiro UENO                                 |  |                              |
|                            | Applied Informatics for Human and Life Sciences | Information and Applied Technology         | Physical Fluctuomatics        | D01  | Prof. Kazuyuki TANAKA<br>Prof. Hidetoshi NISHIMORI<br>Assoc. Prof. Masayuki OHZEKI | Applied Information Sciences |
|                            |   |  | Information Technology        | D02  | Prof. Nei KATO   |                              |
|                            |   | Systems Bioinformatics                     | D04                           | Prof. Kengo KINOSHITA<br>Assoc. Prof. Takeshi OOBAYASHI<br>Assoc. Prof. Hafumi NISHI |  |                              |
|                            |   |  | Biomodeling                   | D05  | Prof. Mitsuyuki NAKAO**<br>Assoc. Prof. Norihiro KATAYAMA                          |                              |
|                            |   | Applied Intelligence Software              | Applied Intelligence Software | D07-1  | Prof. Takuo SUGANUMA<br>Assoc. Prof. Toru ABE                                      |                              |
| D07-2                      | Assoc. Prof. Hideaki GOTO                       |  |                               |  |  |                              |

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|                                    |                          | Information Network Systems             | Information Network Systems                       | D08                          | Prof. Hideaki SONE*<br>Assoc. Prof. Takaaki MIZUKI   | Applied Information Sciences       |                             |
|                                    |                          | Brain Function Integration              | Brain Function Integration                        | D10                          | Prof. Yoshihiko HORIO  |                                    |                             |
|                                    |                          | Health Informatics                      | Health Informatics                                | D11                          | Prof. Yoshitaka KINOCHI<br>Prof. Chihiro ITO<br>Assoc. Prof. Shin OGAWA<br>Assoc. Prof. Kimio SATO |                                    |                             |
|                                    |                          | Statistical Science for Complex systems | Statistical Science for Complex systems           | D12                          | Prof. Atsushi YOSHIMOTO<br>Assoc. Prof. Fumikazu MIWAKEICHI<br>Assoc. Prof. Shinsuke KOYAMA        |                                    |                             |
| 3                                  | Machine and Intelligence | Applied Mathematical Science            | Mathematical Modeling and Computation             | A06-1                        | Prof. Satoru YAMAMOTO  | Computer and Mathematical Sciences |                             |
|                                    |                          |   |   | A06-2                        | Assoc. Prof. Takashi FURUSAWA  |                                    |                             |
|                                    |                          | Software Science and Systems            | Computer Architecture                             | A12                          | Prof. Hiroaki KOBAYASHI  |                                    |                             |
|                                    |                          | High Performance Computing              | High Performance Computing                        | A15-1                        | Prof. Hiroyuki TAKIZAWA  |                                    |                             |
|                                    |                          |   |   | A15-2                        | Assoc. Prof. Ryusuke EGAWA   |                                    |                             |
|                                    |                          | Advanced Computing Systems              | Advanced Computing Systems                        | A19                          | Prof. Kentaro SANO<br>Assoc. Prof. Hiroya MATSUBA  |                                    |                             |
|                                    |                          | Intelligent Robotics                    | Image Analysis                                    | B09                          | Prof. Takayuki OKATANI   |                                    | System Information Sciences |
|                                    |                          |   | Intelligent Control Systems                       | B10-1                        | Prof. Koichi HASHIMOTO   |                                    |                             |
|                                    |                          |   |   | B10-2                        | Assoc. Prof. Shingo KAGAMI   |                                    |                             |
|                                    |                          | Integrated Fluid Informatics            | Integrated Fluid Informatics                      | B14                          | Assoc. Prof. Jun ISHIMOTO  |                                    |                             |
| Information and Applied Technology | Human-Robot Informatics  | D03-1                                   | Prof. Satoshi TADOKORO                            | Applied Information Sciences |  |                                    |                             |
|                                    |                          | D03-2                                   | Assoc. Prof. Masashi KONYO                        |                              |  |                                    |                             |
|                                    |                          | D03-3                                   | Assoc. Prof. Kenjiro TADAKUMA                     |                              |  |                                    |                             |
| Flow System Informatics            | Flow System Informatics  | D09                                     | Prof. Yuji HATTORI                                |                              |  |                                    |                             |
| 4                                  | Civil Engineering        | Infrastructure Planning                 | Transportation and Geographic Information Science | C11                          | Assoc. Prof. Ryo INOUE   | Human-Social Information Sciences  |                             |
|                                    |                          |   | Regional and Urban Planning                       | C12-1                        | Prof. Tatsuhito KONO   |                                    |                             |
|                                    |                          |   |   | C12-2                        | Assoc. Prof. Junya FUKUMOTO  |                                    |                             |
|                                    |                          | Road Transportation and Traffic         | C13-1   | Prof. Takashi AKAMATSU       |  |                                    |                             |
|                                    |                          |   |   | C13-2                        | Assoc. Prof. Shunsuke HAYASHI  |                                    |                             |

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| 5 | Languages and Media       | Human Information Science                       | Language and Information Science        | C01 | Assoc. Prof. Akira KIKUCHI**                                       | Human-Social Information Sciences |
|   |                           |   | Verbal Text Analysis                    | C06 | Prof. Yoshiki OGAWA<br>Assoc. Prof. Akiko NAGANO                   |                                   |
|   |                           | Media and Information Science                   | Media and Culture                       | C14 | Prof. Tatsuya HORITA<br>Senior Assis. Prof. Kuniko SAKATA          |                                   |
|   |                           |   | Media and Semiotics                     | C15 | Assoc. Prof. Shunichi KUBO*<br>Assoc. Prof. Naoko MORITA           |                                   |
| 6 | Psychology and Philosophy | Human Information Science                       | Human Learning and Memory               | C02 | (Currently vacant)   | Human-Social Information Sciences |
|   |                           |   | Cognitive Psychology                    | C03 | Prof. Kazumichi MATSUMIYA<br>Assoc. Prof. Yuichi WADA              |                                   |
|   |                           |   | Philosophy of Human Information         | C04 | Prof. Ichiro MORI  |                                   |
|   |                           |   | Philosophy of Logical Analysis          | C05 | Prof. Kazuhisa SINOZAWA*   |                                   |
|   |                           | Cognitive Psychology of Communication           | Cognitive Psychology of Communication   | C16 | Prof. Toshiaki MURAMOTO  |                                   |
|   |                           | Applied Informatics for Human and Life Sciences | Cognitive Psychology                    | D06 | Prof. Kazumichi MATSUMIYA  | Applied Information Sciences      |
| 7 | Social Sciences           | Socio-Politico Information Science              | Theory of Social Structure and Change   | C07 | Prof. Naohito TOKUGAWA<br>Assoc. Prof. Aya OKADA                   | Human-Social Information Sciences |
|   |                           |   | Political Informatics                   | C08 | Assoc. Prof. Kazunori KAWAMURA<br>Assoc. Prof. Masaaki HIGASHIJIMA |                                   |
|   |                           | Socio-Economic Information Science              | Socio-Economic Analysis of Urban System | C09 | Prof. Dao-Zhi ZENG<br>Assoc. Prof. Ryo ITOH                        |                                   |
|   |                           |   | Econometric System Analysis             | C10 | Assoc. Prof. Naoya FUJIWARA  |                                   |

\* Teaching staff due to retire in March, 2021.

\*\* Teaching staff due to retire in March, 2022.