



Future Global Leadership (FGL)

2025 Academic Year

(October 2025 Enrollment)

Application Guidelines for International Graduate Programs in Engineering

International Materials Science and Engineering Course (IMSE)

Master's Degree Program

TOHOKU
UNIVERSITY

October 2024
Graduate School of Engineering
Tohoku University

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1. Admissions Policy

● Master's Course

The Tohoku University Graduate School of Engineering aims to develop researchers who think for themselves and carry out research with ethical standards and courage to realize a safe, secure, and prosperous society, and who can play a role in developing and innovating future science and technology with abundant creativity and research capability, based on profound knowledge and broad perspectives on nature and human beings. It also aims to develop professional engineers who can contribute to the sustainable development of society with not only highly specialized knowledge but also long-term perspectives and an international outlook. Specifically, we welcome students with the following academic abilities and skills, and who aspire to be creative, highly proficient researchers and professional engineers who contribute to the sustainable development of society:

1. Basic academic skills needed to learn engineering;
2. Logical thinking ability required to solve problems; and
3. Language proficiency sufficient to adapt to the global educational and research environment and to succeed in the world.

For this reason, the Graduate School of Engineering conducts Regular Selection, Special Selection for Working Adults, Special Selection for Foreign Students, Special Selection Program for Recommended Students, Selection for Students Expected to Graduate in September/Graduated, Special Selection for Early Graduate Students, and Selection for International Degree Courses Offering Education in English, to select students with an emphasis on the abilities and qualities necessary to carry out research in line with the educational policies.

Applicants for Regular Selection, Special Selection for Foreign Students, Selection for Students Expected to Graduate in September/Graduated, Special Selection for Early Graduate Students, and Selection for International Degree Courses Offering Education in English will be selected by each department through appropriate procedures by combining the methods: a written examination etc. to evaluate basic knowledge and specialized knowledge in engineering, an oral interview to assess their aptitude, and the evaluation of language proficiency. The selection will be made by a comprehensive assessment.

Applicants for the Special Selection Program for Recommended Students will be selected by each department through appropriate procedures by combining the methods: an essay to evaluate their logical thinking ability and writing skills, an oral interview to evaluate their research plan and research motivation etc. If necessary, language proficiency will be also considered for the selection.

Applicants for the Selection for Working Adults will be selected by each department based on an oral interview to evaluate their research plan, research motivation, etc. If necessary, the score of written examinations, such as the Regular Selection and language proficiency test, will be considered.

All new students are expected to have basic knowledge to understand advanced studies in the related fields and undertake research.

○ Educational Objectives and Goals

Staying true to the Tohoku University's traditional spirit of "Research First," "Open Doors," and "Practice-Oriented Research and Education," the Graduate School of Engineering is committed to achieving its educational objectives. One of these objectives is to develop researchers who act based on profound knowledge and broad perspective about nature and human beings, perform their research in an ethical, purposeful, and self-directed way to build safe, secure, and affluent society, and possess abundant creativity and high research skills that enable them to play a leading role in the future development and innovation of scientific technologies. Another educational objective of the School is to produce core technical experts who are equipped with not only a high-level of technical expertise but also a long-term vision and global viewpoint, and capable of making contributions to the sustainable development of our society.

Specifically, the educational goal of the Master's Degree Program is to endow students with a broad range of basic academic and language skills that are needed for the performance of research, as well as abilities to develop their research subjects by using unique ideas and present research theses at a public occasion. They are also expected to have basic skills and advanced techniques to perform a research or provide a research and technical guidance in their field of expertise.

○ Diploma Policy

The Tohoku University Graduate School of Engineering will award a master's degree in engineering to students who pass a review of their master's thesis or research results on a particular subject as well as a final examination. Students are also required to remain enrolled for a specific period of time, study a set of subjects that are offered in accordance with the School's educational objectives and goals, earn a specified number of credits, and demonstrate a high-level of ethical awareness and sense of responsibility, in addition to the following knowledge and skills:

1. A broad range of basic knowledge and academic skills that help students understand and explore the essence of their research subjects;
2. Profound knowledge about their fields of expertise;
3. Interdisciplinary knowledge relating to their fields of expertise;
4. System design skills obtained through the integration of knowledge outside their fields of expertise;
5. Ability to determine research subjects and problem-solving skills;
6. Advanced ability to perform, apply, and develop their research;
7. Language proficiency sufficient to perform their research; and
8. Basic ability to provide research or technical guidance.

○ Curriculum Policy

The Tohoku University Graduate School of Engineering provides education according to the

following policy to ensure that students can acquire knowledge and skills required under the diploma policy:

1. Help students acquire the broad range of knowledge, advanced technical expertise, and interdisciplinary knowledge relating to their fields of expertise that are necessary to understand the essence of their research subjects and perform their research;
2. Enable students to acquire advanced skills to work on their research subjects and develop these subjects with unique ideas; and
3. Provide students with the language proficiency necessary to perform their research and make presentations of the research results.

In order to execute the above policies, the Graduate School of Engineering offers Common Subjects, and each department offers Major Basic Subjects, Major General Subjects, and Related Subjects. The overall educational curriculum is presented in the curriculum map. The Major Basic Subjects are mainly provided in lecture-based courses. The Major General Subjects include lectures, seminars, and the Master Course Seminar etc. The subjects in lecture-based courses are provided for the purpose of acquiring a wide range of basic knowledge and advanced specialized knowledge in each major. A syllabus is prepared for each subject to clearly state the educational content, achievement methods, guidelines for self-study, etc. Seminar courses are provided to develop the students' ability to understand the research field from a diversified viewpoint, and research skills through presentations and discussions on the latest technologies or their own research results. The Master Course Seminar is provided to foster the ability to conduct and develop advanced research and language skills through individual research and writing a master thesis.

In the subjects provided in lecture-based courses, the faculty members in charge of the lecture will assess the student's basic knowledge, basic academic skill, specialized knowledge, etc. with regular examinations, reports, etc. Details of the grading method are described in the syllabus for each subject. In the seminars, department faculty members assess the student's ability to understand academic papers and technical materials through presentations and discussions. In the Master Course Seminar, the academic advisor will assess the student through their ability to develop and conduct their own research with original ideas, present and discuss research content at academic conferences, present in a foreign language, provide technical guidance, write academic reports, etc., based on research activities in the laboratory, give presentations at domestic and international conferences, and through their master thesis and its defense.

2. Outline of IMSE

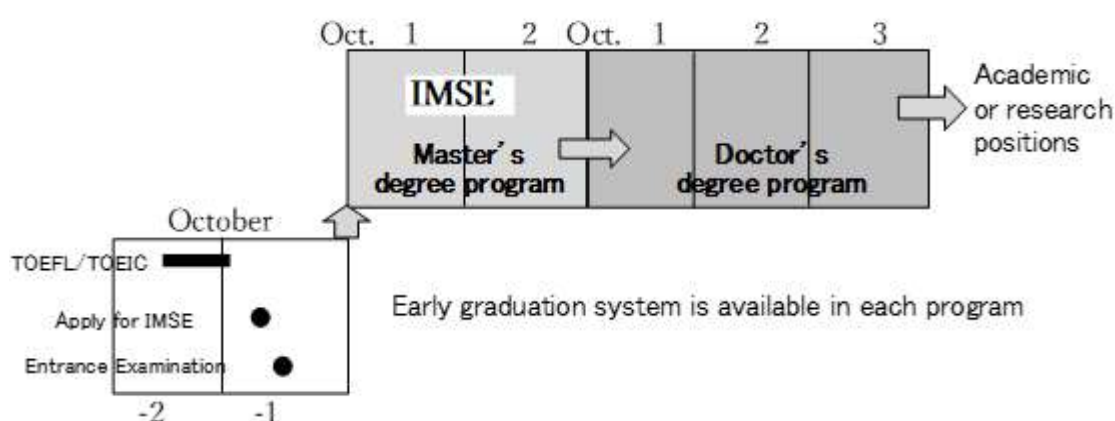
The IMSE graduate programs were supported by the "Global 30" project. "Global 30" was a Ministry of Education, Culture, Sports, Science and Technology (MEXT) program to further promote the internationalization of core Japanese higher education institutions and to turn them into world-class international education and research centers. As one of the selected institutions of the Global

30 program, Tohoku University launched its Future Global Leadership (FGL) project in fall, 2009.

IMSE is one of the FGL programs aimed at enthusiastic global-minded international students who aspire to pursue key international leadership roles in the future. All lectures in this IMSE program can be taken in English.

The schematic career-path of IMSE is shown in the figure “IMSE Program Career-path”. The academic calendar of IMSE starts in October. Students are screened by the entrance examination held in February or in March of the enrollment year. The examination can be taken online.

Since IMSE master’s program directly connects to the doctoral program, students will have the opportunity to go further to pursue the cutting-edge research throughout both Master’s and Doctor’s degree programs.



IMSE Program Career-path

The following three departments are participating in IMSE. Candidates will choose one department to enroll from the following departments:

- ☐ Metallurgy
- ☐ Materials Science
- ☐ Materials Processing

Details of scientific activities:

(<http://www.material.tohoku.ac.jp/english/index.html>)

Note: Approximate total of the annually accepted students are 10.

3. Qualifications for Application

- Those who have received a university education in Japan as international students or in an overseas university are eligible to apply for the International Graduate Programs in Engineering.
- Applicants for the **Master's Degree Program** must fulfill one of the following requirements.

The applicant must:

- (1) Have graduated from Japanese university or expect to graduate by September 2025.
- (2) Have received a bachelor's degree under Article 104 Paragraph 4 of the School Education Law of Japan, or expect to receive such a degree by September 2025.

- (3) Have completed a 16-year curriculum of school education overseas, or expect to complete such education by September 2025.
- (4) Have completed a 16-year curriculum of school education in Japan by taking correspondence courses offered by schools outside Japan, or expect to complete such education by September 2025.
- (5) Have completed a university education by taking courses designated by the Minister of Education, Culture, Sports, Science and Technology in an educational institution in Japan recognized as adopting the educational system of a foreign country and having the curriculum of that country (only when the person completing that education is regarded as having completed 16 years of that country's education), or expect to complete such education by September 2025.
- (6) 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).
- (7) Have completed a specialized course of a special training school designated by the Minister of Education, Culture, Sports, Science and Technology (only when the schooling is at least four years in length and other criteria stipulated by the Minister are met), on or after the date stipulated by the Minister, or expect to complete such a course by September 2025.
- (8) Have been designated as eligible by the Minister of Education, Culture, Sports, Science and Technology under ministerial ordinance No. 5 of 1953.
- (9) Have been admitted to the graduate school of another university in accord with Article 102 Paragraph 2 of the School Education Law and be recognized by this Graduate School as having suitable academic ability for study in this program.
- (10) Be aged 22 or above and, through individual admission qualification screening, be recognized by this Graduate School as having achieved at least the equivalent academic abilities of a university graduate.

Note 1: Applicants who are employed by Tohoku University should contact the Graduate Academic Affairs Section, Graduate School of Engineering in advance.

Note 2: Applicants should contact the (head of the) department in which they expect to major in

advance regarding their research plans after enrollment.

Note 3: Applicants applying under qualification (6) should contact the Graduate Academic Affairs Section, Graduate School of Engineering in advance.

Note 4: Applicants applying under qualifications (9) to (10) will need to undergo admission qualification screening. Please contact the Educational Affairs Section, Department of Materials Science and Engineering in advance (See Remarks in the Appendix).

Note 5: The Graduate School of Engineering does not apply the qualification for admission regarding to “A person who was enrolled in a university for at least three years, and furthermore who is found, by the Tohoku University Graduate Schools, to have achieved excellent results in acquiring the prescribed credits;”

4. Submission of Applications

Applicants should use The Admissions Office (hereinafter referred to as **TAO**), the designated online application system, to complete the following application procedures within the below application period.

The Application Period: 9:00 on January 6 to 16:00 on January 14, 2025 (Japan time)

[Registration Methods]

1. Access the following URL and click the Member Registration button. The account creation screen will appear, so fill in the necessary information and create an account.

<https://admissions-office.net/portal>

2. After creating your account, enter your e-mail address and password to log in from the above URL. Use the Application Schemes menu to search for “Tohoku University / Graduate School of Engineering / IMSE” then follow the TAO system’s directions and the directions below to apply.

3. Please submit the following documents as PDF files by uploading them to your application forms.

In principle, the certificates to be submitted should be in Japanese or English. In the case of certificates in other languages, a Japanese or English translation, corroborated by the issuer of each certificate, should be attached.

If it is not possible to handle certificates in the way listed above, contact Graduate Academic Affairs Section, Graduate School of Engineering in advance.

4. Please be sure that the submission of application is completed on TAO system as below.

Complete my application


[Note]

All data will become uneditable after the completion of application.
Please check again if all entries are completed.

☒ Apply after you review the above

Cancel
Yes

→



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Application status	Application ID	Admission Scheme	Application Deadline
☆ Application completed	28574	Tohoku University / Graduate School of Engineering / All Departments (Master's Programs) / 一般選抜	

- *Once application documents have been submitted, we will not accept any replacements.
- *Withdrawal will not be accepted after an application has been received.
- *Those who have made false declarations in their application documents may have their entrance approval cancelled, even after enrollment. If false declarations are discovered after the degree has been conferred, the degree already conferred may be revoked. In either case, the entrance and tuition fees paid will not be refunded.

[IMPORTANT] Those who pass the entrance examination and are admitted to the Graduate School of Engineering must submit original documents of their transcripts, graduation (or completion) certificates and English Score Sheet at the time of enrollment procedures.

In addition, those who have applied under the qualification for admission (2) (e.g., those who have completed (or expect to complete) an advanced course at a college of technology or junior college, etc.) are also required to submit a "certificate of degree conferment." Your admission to the Graduate School may be cancelled if there are any discrepancies between the documents uploaded to the online application system and the original documents submitted at the time of admission procedures, or if you are unable to submit the original certificates.

5. Application Documents

- Applicants applying for the Master's Degree Program should prepare the following documents in English or in Japanese and submit them by the above deadline.

Required documents	Notes
Application for admission	Fill in the application form for admission in the online application system.
CV	Download the prescribed CV file from the following URL. https://www.material.tohoku.ac.jp/imse/
Letter of Recommendation (推薦書)	Prepared by the expected supervisor, using an official form for this Graduate School. The official form can be downloaded from the website: https://www.material.tohoku.ac.jp/imse/
Undergraduate transcript	Issued by the dean of the university from which the applicant has graduated. (Not required if already enrolled in the School of Engineering, Tohoku University.)
TOEFL® or TOEIC® score sheet Valid tests: TOEFL-iBT®, TOEIC® Public Test	Scores are valid only within two years before the date of the Entrance Examination. English-native applicants should contact the Educational Affairs Section, Department of Materials Science and Engineering. (e-mail: kyomu.material@grp.tohoku.ac.jp) * TOEFL iBT's "My Best™ Score" will not be used for preliminary screening at Graduate School of Engineering. <i>*TOEFL, TOEFL iBT, TOEFL ITP, and TOEIC are registered trademarks of Educational Testing Service (ETS).</i>
Certificate of (expected) completion and/or of degree conferral	Issued by the dean of the university from which the applicant has graduated or by the NIAD (National Institution for Academic Degrees and University Evaluation, <u>Japan</u>).
Residence Record	Should be submitted by foreign applicants residing in Japan whose period of stay is over 90 days. (The residence record should be issued within 3 months and indicates residence status without Individual Number.)
Examination admission ticket and photo ID form	Download the prescribed examination admission ticket and photo ID form file from the following URL. https://www.material.tohoku.ac.jp/imse/ The photo ID form should include an image file of a photograph showing the upper body of the applicant, facing forward with no

	hat, and have been taken within three months of application.
Examination fee Please pay 30,000 yen by January 13, and submit attached "Payment Confirmation of Examination Fees"	<p>(1) Payment should be proceeded by ATM or Internet Banking Transaction:</p> <ul style="list-style-type: none"> * Sender's name should be the applicant's name in Katakana. * Copy of ATM transaction statement or evidence of Internet Banking Transaction should be affixed to the "Payment Confirmation of Examination Fees". * Bank transfer fee should be paid by the applicant. * Only domestic banking transfer is accepted. <p>Amount (金額) : 30,000 yen Payment Deadline (納入期限) : January 13, 2025 Bank (銀行) : Mitsubishi UFJ Bank (三菱 UFJ 銀行) Bank Code: 0005 Branch (支店) : Wakatake-shiten (わかたけ支店) Branch Code: 809 Account Type (預金種別) : Futsuu (普通) Account Number (口座番号) : 2259225 Account Holder (口座名義) : Kokuritsu Daigaku-houjin Tohokudaigaku (国立大学法人東北大学) Account Holder in Kana (カナ) : ダイ トホクダ イグク</p> <p>(2) MEXT scholarship recipients do not need to pay this fee.</p> <p>(3) If you wish to apply for examination fee waiver due to the domestic disasters, please see the following website: https://www.eng.tohoku.ac.jp/admission/grad/disaster.html</p> <p>(4) <u>This banking information is only valid within Japan. If you live overseas, credit card payment is available. Please contact the Graduate Academic Affairs Section in advance for further information.</u></p>
Written recommendation from the applicant's university	Prepared by a supervising faculty member or equivalent from the applicant's university.
Address label	Fill in the necessary information on the address label in the online application system.
Other reference materials, if any	Academic publications demonstrating academic ability.

6. Examination and Selection

Examination dates: Tuesday, March 4 to Thursday, March 6, 2025

Examination Venues: Online

(Details about examination will be informed directly to each applicant from the Educational Affairs Section, Department of Materials Science and Engineering)

Applicants to the International Graduate Programs in Engineering will be selected based on overall consideration of a written examination, oral interview examination, language proficiency, and the submitted documents.

7. Announcement of Results

Results are scheduled to be posted around 5:00 p.m. on Wednesday, March 12, 2025, on the website (<https://www.material.tohoku.ac.jp/imse/>).

Notification of results will also be sent to applicants who pass the entrance examination. Please note that results cannot be given in response to telephone inquiries.

8. Enrollment Procedures, etc.

(1) Details of the enrollment procedures will be announced by email in early September, 2025.

(2) Fees to be paid at the time of enrollment

(a) Admission fee: 282,000 yen (provisional)

(b) Tuition (first semester): 267,900 yen (annual 535,800 yen) (provisional)

(3) Original documents of transcripts, graduation (or completion) certificates (not required for graduates of the School of Engineering, Tohoku University), and English Score Sheet must be submitted.

Note 1: (a) and (b) are provisional. Should admission or tuition fees be revised, the new fees will become applicable from the time of change.

Note 2: Information on the waiving of admission or tuition fees, or permission to defer payment to a later date, will be provided in the enrollment procedure documents sent after notification of results.

9. Eligibility for Long Term Study Program

Some applicants, due to the need to continue with employment or other special circumstances (Note 1), may request permission to follow a planned course of study longer than the normal period of two years in order to receive their master's degree (Note 2). This Graduate School offers such an option, called a "Long Term Study Program", to those who qualify in an advance screening exam. Long term master's students pay the same amount over the length of their studies as those

enrolled in the standard two-year program. Inquiries about this program can be accepted at any time before enrollment. Please contact the Graduate Academic Affairs Section, Graduate School of Engineering.

Applicants hoping to be considered for this program need to apply at the enrollment procedures. It is also possible to apply for this program in the middle of the enrollment, but not if less than one year remained in the standard period of study. In such a case, the length of the Long Term Study period is limited to twice the remaining period of study within the standard period of study.

Note 1: To be eligible for this program, the applicant who (1) is employed by a company or be self-employed, (2) needs maternity leave, or is engaged in child or family care, or (3) is otherwise determined by this Graduate School to be suitable for the program (excluding financial reasons).

Note 2: The period of study may not be extended beyond four years, but it is possible to request that the period be shortened. In principle, no special curriculum will be prepared for students in the long term study program.

10. Handling of Personal Information

- (1) All personal information gathered by Tohoku University shall be treated with due care in compliance with the relevant university regulations, such as the Act on the Protection of Personal Information (2003, Act No. 57), and the National University Corporation Tohoku University Policy on the Protection of Personal Information, and security measures will be taken to protect it.
- (2) Personal information, such as examination scores, used to screen applicants will be used exclusively for educational purposes, such as selecting applicants, enrollment procedures, pre-enrollment instruction, follow-up surveys, post-enrollment student support (scholarships, tuition waivers and health management etc.) and academic advising, or in connection with tuition collection etc., or surveys/research (surveys/analysis related to entrance examination improvements and reasons for applying; including analysis using the enrollees' personal information after enrollment).
- (3) Tasks related to entrance examinations and academic affairs may be outsourced by Tohoku University to third-party contractors (hereafter, "contractors"). If personal information is provided in whole or in part to contractors, necessary measures will be taken to ensure it is handled appropriately in accordance with the relevant university regulations, such as the National University Corporation Tohoku University Policy on the Protection of Personal Information.

11. Educational Data Usage

Tohoku University strives to use Educational Data including personal information stored in the information system in education and learning activities, effectively and appropriately in compliance

with our "Statement on Educational Data Usage," "Policy on Educational Data Usage," and "Tohoku University's 8 Principles of Educational Data Acquisition" while paying attention to the protection of personal information.

After being admitted to the university, students' personal information, such as entrance exam scores etc., is merged with the university's Educational Data.

URL : <https://www.tohoku.ac.jp/japanese/studentinfo/education/08/education0801/>

12. Important Notes

- (1) Candidates should locate a prospective research advisor at Tohoku University and contact him/her before submitting the application documents.
- (2) Submitted application documents and examination fees cannot be returned.
- (3) If you do not receive your examination admission ticket by ten days prior to the examination date, please contact the Educational Affairs Section, Department of Materials Science and Engineering in advance (See Remarks in the Appendix).
- (4) All other inquiries regarding application for admission should be made to the Graduate Academic Affairs Section, Graduate School of Engineering.
- (5) Applicants desiring consultation regarding the need for assistance or other considerations in taking the examination or conducting their studies should create a written application indicating the items listed below (no special format). Be assured that such a request will in no way prejudice the outcome of the selection process, as all applicants will be treated fairly.
 - * Deadline for consultation: As a rule, no later than November 29, 2024.
 - * Information to be indicated in creating the application:
 - A) Name, address and phone number of applicant
 - B) University, etc. from which the applicant has graduated
 - C) Any consideration desired regarding taking the examination
 - D) Any consideration desired in the study environment
 - E) Nature of any consideration provided up to now
 - F) Other relevant information about daily life circumstances
 - G) Reference materials (if currently receiving medical treatment, enclose a medical certificate issued by the applicant's physician)
- (6) We have established Tohoku University Security Export Control Rules based on the Foreign Exchange and Foreign Trade Act, and screen each submitted application when we accept international students in our university. In the event that their research plans apply to the regulatory concerns, above mentioned students may not be able to receive desired education and their research themes may be limited.

13. Contact Information

Graduate Academic Affairs Section, Graduate School of Engineering, Tohoku University

6-6-04 Aramaki Aza Aoba, Aoba-ku, Sendai, Miyagi 980-8579, Japan

e-mail: eng-in@grp.tohoku.ac.jp

<https://www.material.tohoku.ac.jp/imse/>