

Global 30: Future Global Leadership (FGL)

2022 Academic Year (October 2022 Enrollment)

Application Guidelines for RictA: Robotics × ict × Architecture Program in International Mechanical and Aerospace Engineering Course (IMAC-G)

> Master's Degree Program Doctoral Degree Program

TOHOKU UNIVERSITY

December 2021 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.

O 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;

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- 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.

O 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.

Doctoral 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. A broad range of basic engineering knowledge, advanced expertise on their own research fields, and the ability to develop them in a flexible manner; and

2. The ability to logically present and discuss the significance and outcome of their research.

For this reason, the Graduate School of Engineering conduct Regular Selection, Special Selection for Working Adults, Special Selection for Foreign 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 our educational philosophies and goals.

Applicants for Regular Selection, Special Selection for Foreign 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, language proficiency, and an oral interview to assess their aptitude. The selection will be made with an emphasis on the results of the written examination.

For Special Selection for Working Adults, the applicants will be selected by each department based on an oral interview to evaluate their research plan, research motivation, etc. If necessary, basic and specialized knowledge in engineering and an evaluation of their essay will also be considered in the selection process.

All new students are expected to have research experiences and basic knowledge to conduct independent 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.

The educational goal of the doctoral program is to nurture human resources performing not only subjective research in the relevant specialized field but also self-enlightenment to active worldwide as a leader in the future.

They are also expected to have a bird's eye view based on social and international demands, having the ability to develop research project with their own ideas to summarize international level papers and to discuss and present at international conferences etc.

O Diploma Policy

The Tohoku University Graduate School of Engineering will award a doctoral degree in engineering to students who pass a review of their doctoral thesis and the 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. Ability to embark on new research subjects and perform research from a panoramic perspective that takes social needs into account;

2. Ability to solve issues with unique ideas;

3. Thinking skills that have interdisciplinary application;

4. Language proficiency as well as research paper writing, debating and communication skills that are sufficient to make presentations at international academic conferences, etc.;

5. Ability to provide research guidance; and

6. Basic ability to manage research or projects.

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O 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. Enable students to acquire skills to explore research subjects and perform research from a panoramic perspective that takes social and international needs into account, skills to develop such research subjects by using unique ideas and compile the results into a world-class research paper, and thinking skills that allow for interdisciplinary applications;

2. Provide students with language proficiency as well as debating and communication skills that are sufficient to make presentations and participate in discussions at international academic conferences, etc.; and

3. Equip students with skills that allow them to provide research guidance in their fields of expertise.

In order to execute the above policies, the Graduate School of Engineering offers Common Subjects, and each department offers Interdisciplinary Basic Subjects, Major General Subjects, and Related Subjects. The overall educational curriculum of the master's and doctoral program is presented in the curriculum map. The Interdisciplinary Basic Subjects are mainly provided in lecture-based courses, and the Major General Subjects consists of special lectures, special seminars, doctor course seminars, 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. The Doctor Course Seminar is provided to foster the ability to conduct and develop advanced research, and acquire a wide perspective, language skill and debating skill.

In the lecture-based subjects, the faculty member in charge of the lecture will assess the student's basic knowledge, basic academic skill, specialized knowledge, etc. by using regular examinations, reports, etc. Details of the grade evaluation method are described in the syllabus for each subject. In the Doctor Course Seminar, the academic advisor will evaluate the following abilities based on research activity in the laboratory, presentation at domestic and international conferences, the doctor thesis and its defense.

- 1) Ability to design and conduct research or projects
- 2) Ability to investigate and analyze academic papers and technical materials
- 3) Basic academic skills necessary to write academic papers to meet international standards
- 4) Ability to evaluate research in related fields

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5) Presentation and communication skills sufficient to present research results at international conferences

6) Ability to advise and guide research for undergraduate and master's course students

• RictA: Robotics × ict × Architecture Program

The RictA: Robotics x ict x Architecture Program starts from October 2022, aiming to develop leaders who can design intelligent living and urban spaces that can quickly adapt to social changes, based on robotics and information science and technology. Students participating in the RictA will learn in the International Mechanical and Aerospace Engineering Course (IMAC–G). In addition, the program is also supported by professors of Department of Architecture and Building Science. The IMAC–G established in October 2009 is one of the courses offered under the Global 30 program at Tohoku University, and is organized by the Graduate School of Engineering. The main aim of IMAC–G is to cultivate global–minded engineers and leaders who can take up active roles in the development of cutting–edge technologies based on mechanical engineering.

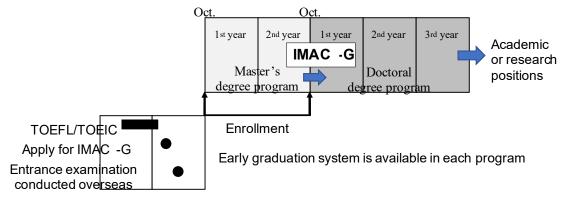
2. Outline of IMAC-G

The IMAC-G is one of the Future Global Leadership (FGL) Programs that were launched in fall, 2009, with the support of the "Global 30" project that 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.

The IMAC-G is aiming at enthusiastic global-minded international students who aspire to assume key international leadership roles in the future. All lectures in the IMAC-G program are conducted in English.

The schematic career-path in IMAC-G is shown in the figure below. The academic calendar of IMAC-G starts in October. Candidates applying for the RictA are screened via an entrance examination held in March in the enrollment year. The examination is held by on-line connection. This makes the application procedure more accessible for students outside of Japan.

Students can enroll in the IMAC-G master's or doctoral program. As the master's program directly connects to the doctoral program in IMAC-G, students have the opportunity to conduct cutting-edge research throughout both graduate programs.



IMAC-G Program Career-path

Candidates will choose one department to enroll in from the following five departments or department to which aspired laboratory participating in RictA*¹ belongs:

- OMechanical Systems Engineering
- OFinemechanics
- ORobotics
- OAerospace Engineering
- OArchitecture and Building Science

*¹ RictA: Robotics x ict x Architecture Program

List of laboratories of department of Architecture and Building Science can be found at https://www.archi.tohoku.ac.jp/media/files/Lab_List_202104%20.pdf

RictA cooperative laboratories in Graduate School of Information Sciences: [Dept. Applied Mathematical Science] Yamamoto Lab., Furusawa Lab., [Dept. Software Science & Systems] Kobayashi Lab. Sato Lab., [Dept. Intelligent Robotics] Okatani Lab., Hashimoto Lab. Kagami Lab., [Dept. Information & Applied Technology] Tadokoro Lab., Konyo Lab., Tadakuma Lab., [High Performance Computing] Takizawa Lab., [Integrated Fluid Informatics] Ishimoto Lab., [Flow System Informatics] Hattori Lab., Hirota Lab.

The total number of annually accepted students is 16 via the entrance examination.

In the RictA, students in master's program need to acquire ten credits from specified subjects related to RictA. Students in doctoral program need to acquire four credits from specified subjects related to RictA. The MEXT will award a scholarship to 8 successful candidates who are particularly excellent in the entrance examination (see 10. Financial Support).

3. Qualifications for Admission

- Those who have received a university education in Japan as international students or in an overseas university are eligible to apply for the RictA.
- Applicants for the <u>Master's Degree Program</u> must fulfill one of the following requirements. The applicant must:
 - (1) Have graduated from Japanese university or expect to graduate by September 2022.
 - (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 2022.
 - (3) Have completed a 16-year curriculum of school education overseas, or expect to complete such education by September 2022.
 - (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 2022.
 - (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 2022.
 - (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 2022.
 - (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 Mechanical Engineering Academic Affairs Section (See Remarks in the Appendix) in advance.

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;"

 Applicants applying for the <u>Doctoral Degree Program</u> must meet either one of the following requirements and currently live in Japan.

The applicant must:

- Have earned a master's degree or professional degree, or expect to earn such a degree by September 2022.
- (2) Have earned a degree equivalent to a master's degree or professional degree, or expect to earn such a degree by September 2022, in the graduate school of a foreign university.
- (3) Have earned a degree equivalent to a master's degree or professional degree, or expect to earn such a degree by September 2022, by taking correspondence courses in Japan offered by schools outside Japan.
- (4) Have earned a degree equivalent to a master's degree or professional degree, or expect to earn such a degree by September 2022, by completing a course 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 a graduate school in that country.
- (5) Have earned a degree equivalent to a master's degree or professional degree, or expect to earn such a degree by September 2022, by graduating a program of the United Nations

University.

- (6) Have been recognized as having achieved at least the academic equivalent of a master's degree through an educational program offered at following institutions (a) to (c), and have passed the equivalency examination and screening process as stipulated in Clause 2, Article 16 of the Standards for the Establishment of a Graduate School (Act No. 28, 1974).
 - (a) Foreign schools
 - (b) Educational institutions which have the curriculum of a graduate program
 - (c) The United Nations University
- (7) Meet either of the following criteria for eligibility specified by the Minister of Education, Culture, Sports, Science and Technology:
 - (a) Have carried out research in a university or research institute, etc. for two or more years after graduating from university, and be recognized by this Graduate School as having achieved at least the equivalent academic abilities of someone with a master's degree on the basis of those research accomplishments.
 - (b) Have carried out research in a university or research institute, etc. for two or more years after completing 16 years of course studies overseas, or after completing, in Japan, 16 years of foreign school course studies by means of correspondence courses conducted by foreign schools, and be recognized by this Graduate School as having achieved at least the equivalent academic abilities of someone with a master's degree on the basis of those research accomplishments.
- (8) Be aged 24 or above and, through individual admission qualification screening, be recognized by this Graduate School as having achieved at least the equivalent academic abilities of someone with a master's degree or professional degree.

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 (7) should contact the head of the department in which they expect to major in advance regarding their qualifications to apply. The following documents will be needed for the procedure.

Required documents	Notes
Certification of research or work experience	Issued by the head of the place of work or research, certifying two or more years of engagement as engineer, instructor, researcher, etc. (any format; with official letterhead, signature, seal, etc.).
Summary of research or work	Research/work carried out during time spent working as an engineer, instructor, researcher, etc. (approximately 2 A4-size pages).
Academic transcript	Issued by the dean of the school from which the applicant graduated.
Other reference materials	Copies of technical papers, patent announcements, etc.

Note 4: Applicants applying under qualification (8) will need to undergo admission qualification screening. Please contact the Mechanical Engineering Academic Affairs Section (See Remarks in the Appendix) in advance.

4. Requirements for Admission

All applicants must satisfy the following two requirements:

(1) Applicants for both the Master's Degree and Doctoral Degree Program must have taken one of the following: TOEFL iBT, TOEFL PBT, TOEIC or IELTS (Academic Module). Scores are valid only within two years before the date of the Entrance Examination. By the time of their application, applicants must have obtained a score equal to or greater than that required by the school of engineering as shown below.

	iBT	79 or higher
TOEFL	iBT Special Home Edition	79 or higher
	PBT	550 or higher
TOEIC		730 or higher
IELTS		6.0 or higher

Applicants whose native language is English must contact the Graduate Academic Affairs Section (see 13. Contact Information) in advance if they want to omit submission of English proficiency test scores. Evidence that the applicants received formal education in English may be required to apply.

* TOEFL iBT's "My BestTM Score" will not be used for preliminary screening at Graduate School of Engineering.

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

(2) Applicants must have earned 2.30 or more evaluation point as calculated from their coursework grades in their latest submitted transcripts, as shown below.

Scale			Grade		
		A	В	С	F
4-grade Scale	100)-80	79–70	69-60	59-
	S	А	В	С	F
5-grade Scale	А	В	С	D	F
	100-90	89-80	79–70	69-60	59-
Points	3	3	2	1	0
Total Credits	N4	N3	N2	N1	NO

Evaluation Point = $\frac{(N4 + N3) \times 3 + N2 \times 2 + N1 \times 1 + N0 \times 0}{N4 + N3 + N2 + N1}$

Note:

1. Applicants for the Master's Degree Program

Evaluation points are calculated based on the undergraduate transcript.

2. Applicants for the Doctoral Degree Program

Evaluation points are calculated based on graduate school (Master's course) transcripts.

5. Period for Submission of Applications

Applicants should follow the steps below in order to apply for the RictA.

Send all the required documents by registered express mail

Postal submission period: January 11 – January 20, 2022

All the required documents must reach the following address by the deadline. Otherwise, you will not be allowed to take the examination. Formal application for admission is considered complete if the required documents arrive at the office by the deadline. We will not accept any overdue applications via postal submission.

Mailing Address:

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

6-6-04 Aramaki Aza Aoba, Aoba-ku, Sendai, Miyagi 980-8579, Japan tel. +81-22-795-5820 (for mail and delivery service only)

*We do not accept any application after the above deadline.

6. Application Documents

- Applicants for **the Master's Degree Program** should prepare the following documents in English or Japanese. Please send all the required documents via post by the above deadline.
 - * Submit original certification documents. Photo copies, digital files, or printouts of digital files are not considered to be original documents.
 - * If any false description would be found in application documents, entrance approval may be cancelled even after enrollment.
 - <u>* If your home institution does not issue certificates in English, you should contact our office</u> (see 13. Contact Information) before the application period starts.

Required documents	Notes
Application for admission (Application Form 1~3)	Use an official application form for the International Graduate Programs in Engineering. Attach an ID photo (5cm high x 4cm wide) to application Form 1.
Letter of acceptance (Form 4)	Obtain a letter of acceptance from an expected supervisor.
Examination admission ticket, and address labels (Application Form 5~6)	Please fill in necessary information.
Undergraduate transcript	Issued by the dean of the university from which the applicant has graduated. Grading system must be shown on the transcript or be provided on another document issued by the university.
Original TOEFL, TOEIC or IELTS score sheets Valid tests:	Submitted original TOEFL, TOEIC and IELTS score sheets will not be returned. The TOEFL "Test Taker Score Report" can be returned on the day of the entrance examination if requested at the time of application.
TOEFL PBT, TOEFL iBT, TOEFL iBT Special Home Edition, TOEIC	Scores are valid only within two years before the date of the Entrance Examination.
Public Test, IELTS-Academic Module	The applicants whose native tongue is considered to be English must make a contact with Graduate Academic Affairs Section (see 13. Contact Information) in advance, if they want to omit the submission of English proficiency test score. The evidence that

	the applicants have received formal education in English may be required for the application.
	* TOEFL iBT's "My Best TM Score" will not be used for preliminary
	screening at Graduate School of Engineering.
	*TOEFL, TOEFL iBT, TOEFL iBT Special Home Edition, TOEFL ITP, and TOEIC are registered trademarks of Educational Testing Service (ETS).
Certificate of (expected) completion or degree conferral	Issued by the dean of the university from which the applicant has graduated
Duplicate of graduation thesis	If the applicant has written one. A research summary (approximately 2,000 characters, 2 A4-size pages) is acceptable.
Copy of 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 fee	This must be paid at the time of enrollment. (See 9. Enrollment Procedures, etc.)
Written recommendation	Prepared by the president or dean of the last university attended with an official seal, stamp or signature, and addressed to the president of Tohoku University. Later submission is allowed in case of difficulty in obtaining it by the deadline, but please ask the admissions office in advance. This can be prepared by a supervising faculty member or equivalent from the applicant's university if the applicant will not apply for the MEXT scholarship.
Copy of passport, census register, or other proof of citizenship	Issued in English.
Other reference materials (optional)	Academic publications demonstrating academic ability.

- Applicants for **the Doctoral Degree Program** should prepare the following documents in English or Japanese. Please send all the required documents via post by the above deadline.
 - * Submit original certification documents. Photo copies, digital files, or printouts of digital files are not considered to be original documents.

*If any false description would be found in application documents, entrance approval may be cancelled even after enrollment.

<u>*If your home institution does not issue certificates in English, you should contact our office</u> (see 13. Contact Information) before the application period starts.

Required documents	Notes
Application for admission (Application Form 1~3)	Use an official application form for the International Graduate Programs in Engineering. Attach an ID photo (5cm high x 4cm wide) to application Form 1.
Letter of acceptance (Form 4)	Obtain a letter of acceptance from an expected supervisor.
Examination admission ticket, and address labels (Application Form 5~6)	Please fill in necessary information.
Graduate school transcript	Issued by the dean of the graduate school from which the applicant has graduated. Grading system must be shown on the transcript or be provided on another document issued by the university.
Original TOEFL, TOEIC	Submitted original TOEFL, TOEIC and IELTS score sheets will not be returned. The TOEFL "Test Taker Score Report" can be returned on the day of the entrance examination if requested at the time of application. Scores are valid only within two years before the date of the Entrance Examination.
or IELTS score sheets Valid tests: TOEFL PBT, TOEFL-iBT, TOEFL iBT Special Home Edition, TOEIC Public Test, IELTS-Academic	The applicants whose native tongue is considered to be English must make a contact with Graduate Academic Affairs Section (see 13. Contact Information) in advance, if they want to omit the submission of English proficiency test score. The evidence that the applicants have received formal education in English may be required for the application.
module	* TOEFL iBT's "My Best [™] Score" will not be used for preliminary screening at Graduate School of Engineering.
	*TOEFL, TOEFL iBT, TOEFL iBT Special Home Edition, TOEFL ITP, and TOEIC are registered trademarks of Educational Testing Service (ETS).

Certificate of (expected) completion or degree conferral	Issued by the dean of the university from which the applicant has graduated
Undergraduate transcript	Issued by the dean of the university from which the applicant has graduated. Grading system must be shown on the transcript or provided on another document issued by the university.
Duplicate of master's thesis	If the thesis cannot be submitted, a research summary (approximately 2,000 characters, 2 A4-size pages) is acceptable.
Copy of 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 fee	This must be paid at the time of enrollment. (See 9. Enrollment Procedures, etc.)
Written recommendation	Prepared by the president or dean of the last university attended with an official seal, stamp or signature, and addressed to the president of Tohoku University. Later submission is allowed in case of difficulty in obtaining it by the deadline, but please ask the admissions office in advance. This can be prepared by a supervising faculty member or equivalent from the applicant's university if the applicant will not apply for the MEXT scholarship
Copy of passport, census register, or other proof of citizenship	Issued in English.
Other reference materials (optional)	Academic publications demonstrating academic ability.

Applicants who wish to apply for MEXT scholarship, please check the box about the MEXT scholarship in the Application Form 3. Necessary forms for MEXT will be provided after you complete the submission of application documents.

7. Examination and Selection

Examination dates: One day during the week of March 7, 2022

Examination Venues: Online (Details will be sent directly to each applicant.)

Selection Method:

Preliminary screening will be based the submitted documents and applicants will be notified of the

results prior to the technical presentation and written examination (see Appendix). Only those who have passed the preliminary screening are eligible to make the presentation and take the written examination. Successful applicants will be selected based on their overall scores in the technical presentation and the written examination, language proficiency, and the submitted documents.

Details about examination will be informed directly to each applicant from the Mechanical Engineering Academic Affairs Section (See Remarks in the Appendix).

8. Announcement of Results

Results are scheduled to be posted around 5:00 p.m. on Friday, March 18, 2022, on the website (<u>http://www.imac.mech.tohoku.ac.jp/</u>)

Notifications of results will also be mailed to applicants on the above date. Please note that results cannot be given over the telephone.

9. Enrollment Procedures, etc.

- (1) Details of the enrollment procedures will be announced by your prospective laboratory in September, 2022. If you have any questions concerning enrollment procedures, please contact the laboratory staff.
- (2) Fees to be paid at the time of enrollment
 - (a) Examination fee: 30,000 yen
 - (b) Admission fee: 282,000 yen (provisional)
 - (c) Tuition (first semester): 267,900 yen (annual 535,800 yen) (provisional)

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

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

10. Financial Support

MEXT scholarship

Since the RictA are supported by MEXT, there is a quota for MEXT scholarships offered to IMAC-G students participating in the RictA. Tohoku University will recommend 5 doctoral students and 3 master students, who achieved particularly excellent entrance examination results for the MEXT scholarship.

If selected for this scholarship, they will receive 146,000 (147,000) yen monthly for the master's (doctoral) program. (This stipend may change each fiscal year.) Candidates from the master's (doctoral) program will be supported for two years (three years) as long as they maintain a certain

evaluation point average during the program. They will also receive an economy-class air ticket from the international airport closest to their residence to Narita International Airport after enrolling, and another ticket upon graduation (for the return trip). They will not have to pay the entrance fee and tuition.

Only international students who live outside of Japan at the time of application and were born on or after April 2, 1987 are eligible.

Employment as a research assistant (RA) or teaching assistant (TA)

There are opportunities for non-MEXT-scholarship students in the doctoral program to be employed as RAs, and for those in the master's program to be employed as TAs. The details will be announced after enrollment.

11. Handling of Personal Information

- (1) The Tohoku University Graduate School of Engineering handles personal information in strict compliance with regulations stipulated in the "Act on the Protection of Personal Information Held by Incorporated Administrative Agencies" and the "National University Corporation Tohoku University – Policy on the Protection of Personal Information", and takes every precaution to protect personal information.
- (2) Examination results and other personal information obtained in the application process will be used for the selection of students for admission, enrollment procedures, follow-up surveys, and student support after enrollment (e.g., scholarships, tuition waiver, and health care), student guidance and other academic purposes, as well as in collection of tuition fees, etc.
- (3) After enrollment, the Graduate School may outsource administrative work in educational affairs to third-party companies and provide them, depending on needs, with some or all of the student's personal information in compliance with the "National University Corporation Tohoku University – Policy on the Protection of Personal Information".

12. Important Notes

- (1) Applications by post are to be sent via means whereby you can retain a record of sending (From Japan: Registered Express Mail, from overseas: FedEx, EMS, UPS, DHL etc.).
- (2) Notification of the receipt of the application will not be provided automatically. Those desiring notification of receipt of their application should make the appropriate request to the office via e-mail.
- (3) Submitted application documents and examination fees cannot be returned.
- (4) If you do not receive your examination admission ticket by ten days prior to the examination date,

please contact the Mechanical Engineering Academic Affairs Section (See Remarks in the Appendix).

- (5) All other inquiries regarding application for admission should be made to the Graduate Academic Affairs Section, Graduate School of Engineering.
- (6) Applicants desiring consultation regarding the need for special 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 Wednesday, December 22, 2022.
 - * 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 special considerations desired regarding taking the examination
 - D) Any special considerations desired in the study environment
 - E) Nature of any special considerations 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 your physician)
- (7) 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

Homepage: http://www.imac.mech.tohoku.ac.jp/

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