





2018 Recruitment of students for the Program for Leading Graduate Schools

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Application period :

22 January 2018 (Mon) – 2 February 2018 (Fri) (09:00 ~ 17:00 *)

*Applications will not be accepted after 12:00 noon on 2 February.
Applications sent by post must reach the Office by 2 February (Fri).



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version

Tohoku University

Program for Leading Graduate Schools, MEXT
Multidisciplinary Field of Safety and Security

Inter-Graduate School Doctoral Degree Program on
Science for Global Safety

Application Guidelines

Academic Year 2018

Division for Leading Graduate School Programs,
Tohoku University Institute for Promoting Graduate Degree Programs
Center for Education and Research on Global Safety
6-6, Aramaki Aza Aoba Aoba-ku, Sendai, Miyagi

Inter-Graduate School Doctoral Degree Program on Science for Global Safety
(Admissions Policy)

More than six years have passed since the Great East Japan Earthquake struck and caused extensive damage to the Tohoku region, but the social and industrial infrastructure of the damaged areas have not yet fully recovered. Furthermore, the situation has compelled Japan to enter into discussions on making a major shift in energy policy, including the issue of restarting nuclear power plants. It would not be an exaggeration to say that we are approaching a crucial turning point that may determine the future of Japan. As a university located in the disaster region, Tohoku University shoulders a significant part of the responsibility in taking the lead to rebuild the Tohoku region, and carries a deep sense of mission toward realizing the safe and secure society that society strongly demands. We recognize that the university's mission is to foster leaders who are able to contribute to the development of a safe and secure society.

The Great East Japan Earthquake served as a cautionary lesson that highlighted the limitations of dependence on scientific technology in disaster prevention, as well as the importance of mitigating disasters from the perspective of social science. Hence, utilization of technology, as well as contributions from the humanities and social sciences in order to incorporate this utilization into the social system with human beings as the focal point, are of great importance in order to recover from major disasters and minimize any damage that may be caused by the various risks forecasted to materialize in the future.

The objectives of human resource development in this program are **to foster top leaders in the field of global safety capable of understanding what generates the diverse risks confronting Japan and the world, including natural disasters such as major earthquakes and tsunamis, climate change, and energy security; who are able to purposefully integrate multiple scientific disciplines; and who can design engineering and social science systems aimed at preventing and mitigating disasters.** To this end, we will foster leaders from the three perspectives of **“understanding safety and security,” “creating safety and security,” and “living in safety and security,”** through a program bringing together researchers in science, technology, and humanities and social science through collaboration.

This program is a continuous five-year education program from the Master's program through to the Doctoral program. The program is comprised of three academic core areas that focus on natural science, including Earth and planetary science and environmental science; engineering, including civil engineering, urban engineering, architecture, and mechanical engineering; as well as philosophy, psychology, ethics, and public policy; and the integrated fields of these focus areas. Through studies in these fields, the program aims to develop human resources who can contribute to playing leadership roles in the reconstruction of Tohoku from the perspective of building a safe and secure society, contribute to the

sustainability of human society, and at the same time contribute to building a safe and secure society through the development of an industrial and social system.

The following three courses have been established in this program, corresponding to the three units of “understanding,” “creating,” and “living in” safety and security.

- **Natural Disaster Science Course**
- **Safety and Security Engineering Course**
- **Human Science Course**



Figure 1 : “ Hexagonal (Confeito)-type ”
human resources

These courses aim to develop human resources who will be equipped with the following capabilities (“ hexagonal (Confeito)-type ” human resources).

- Human resources with professional capability demonstrated through sophisticated research (core), and the applied skills to solve a wide variety of issues (shell)
- Human resources with the capability to establish logical systems for problem-setting and problem-solving, research and development, project development, and grand design in an independent manner, and to apply these systems
- Human resources with the ability to take a bird’s-eye view of phenomena, organize the information, and to communicate their own thoughts accurately to others
- Human resources able to take on leadership roles on the global stage
- Human resources with a sense of ethics and responsibility in their roles as leaders

The following careers await leaders who possess the abovementioned qualities and capabilities:

- **Global business leaders**: Leaders equipped with global perspectives who are able to provide accurate assessments of various risks, including natural disasters and economic risks; take the appropriate countermeasures, and manage business continuity
- **Academic leaders**: World-class researchers in their core disciplines, as well as leaders able to impart knowledge from a broad perspective
- **National/Regional leaders in disaster prevention**: Leaders able to take the lead in formulating disaster prevention policies at the national or regional level, in administrative organizations, research institutes, disaster prevention centers, and other organizations

- **Global risk management leaders:** Leaders able to carry out crisis management for diverse risks from global perspectives, at international and other organizations



Figure 2: Career paths after graduation

I. Enrollment quota and application eligibility

I-1. Enrollment quota for the Program for Leading Graduate Schools

Approximately 10 graduate students will be newly enrolled as freshmen in the Program for Leading Graduate Schools (hereafter, “students of the Program”) for Academic year 2018.

Applicants who submit their application forms will undergo a document screening and an interview selection, and about 10 students will be selected as students of the Program for the following April.

I-2. Application eligibility

- Those who are enrolled in the first year of the Master’s program for the graduate schools/specializations in **Table 1** as of Academic Year 2017.
- Those who will advance to the Doctoral program for the graduate schools/specializations in **Table 1** in April 2018. *
- Those who will transfer to the Doctoral program for the graduate schools/specializations in **Table 1** from other schools in Academic Year 2018. *

* However, applications will also be accepted for those whose results of acceptance into the respective graduate schools are announced after the application deadline.

Note : Since the MEXT-funding period for this program will expire in March 2019, the scholarships may not be guaranteed throughout the enrollment period. The financial supports during the following years are under consideration.

Table 1: Graduate schools/specializations that are part of the Inter-Graduate School Doctoral Degree Program on Science for Global Safety

Arts and Letters	Humane Studies, Human Sciences, Historical Studies
Law	Legal and Political Studies
Economics and Management	Economics and Management
Science	Astronomy, Geophysics, Earth Science
Engineering	Mechanical Systems Engineering, Finemechanics, Robotics, Aerospace Engineering, Quantum Science and Energy Engineering, Electrical Engineering, Chemical Engineering, Civil and Environmental Engineering, Architecture and Building Science, Management Science and Technology
Information Sciences	Human-Social Information Sciences , Applied Information Sciences
Environmental Studies	Environmental Studies for Advanced Society, Frontier Sciencies for Advanced Environment
Biomedical Engineering	Biomedical Engineering

II. Recruitment of students for the Program for Leading Graduate Schools

II-1. Application forms

Please obtain (1) and (2) below from the website for this Program.

- (1) Application forms (one set)
- (2) Application requirements (one set)

URL <http://g-safety.tohoku.ac.jp/>

Period available: 5 January 2018 (Fri) ~ 2 February 2018 (Fri)

II-2. Application procedures

Please submit a full set of the application forms within the application period to the Office of the Center for Education and Research on Global Safety, Tohoku University Organization for Promotion of Leading Graduate Schools.

Please address the applications to:

Office of the Center for Education and Research on Global Safety,
Tohoku University Organization for Promotion of Leading Graduate Schools
9F Engineering Laboratory Complex Building
6-6-11 Aramaki Aza Aoba, Aoba-ku, Sendai, Miyagi, Japan 980-8579

If you are submitting the application in person, please check the location through the following URL:

<http://g-safety.tohoku.ac.jp/access/>

Application period: 22 January 2018 (Mon) ~ 2 February 2018 (Fri) (09:00 ~ 17:00)

(Applications will not be accepted after 12:00 noon on 2 February.)

* Applications sent by post must reach the Office by 2 February (Fri).

Applicants will be notified of their examinee number through e-mail at a later date.

II-3. Selection process for the Program for Leading Graduate Schools

A document screening will be carried out based on the reasons for applying for this program, application form, recommendation letter from the supervising faculty, and other documents submitted by the applicant. An interview will also be conducted, to be held on 27 February (Tue) 2018. Applicants will be notified of the details separately.

II-4. Announcement of selection results for the Program for Leading Graduate Schools

Selection results for the Inter-Graduate School Doctoral Degree Program on Science for Global Safety will be announced through the Program's website after mid-March 2018.

URL <http://g-safety.tohoku.ac.jp>

III. Scholarships

Scholarships are awarded until March, 2019 as stipends to support outstanding graduate students selected for this program, with the aim of gaining outstanding students from Japan and overseas, and fostering global leaders able to take a proactive stance in planning and executing original research.

The value of the scholarships will be decided based on the results of the selection.

IV. Assessment of Basic Research Skills for Doctoral Dissertation

Upon enrollment, an assessment (Qualifying Examination to Assess Basic Research Skills for Doctoral Dissertation) will be carried out for a fixed period of time on areas such as academic results, earned academic credits, and English proficiency. Students who fail the assessment will lose their place as a student of this Program. Hence, please submit your application only upon a thorough understanding of the graduation criteria of the respective graduate schools.

V. Sequence of events leading to the enrollment of a student of this Program

Based on the procedures outlined above, the following is the sequence of events leading to the enrollment of a student of this Program.

Period	Procedures
5 January 2018~	Distribution of application forms and application requirements (Website of the Center for Education and Research on Global Safety)
22 January ~2 February	Submission of application forms (Office of the Center for Education and Research on Global Safety)
27 February	Selection of students for this Program (Interview selection)
Mid-March ~	Announcement of results of the selection for students of this Program (Website of the Center for Education and Research on Global Safety)
April	Start of program for students enrolled in Academic Year 2018

VI. Guide to Studying for Third year (D1) Transfer Students

You must take the following subjects from the 1st and 2nd year courses, in addition to the mandatory subjects from the 3rd, 4th and 5th year courses.

【Core Subjects】two credits or more including more than 1 credit from “Fundamental on Global Safety” and /or “Global Safety ”

【Multidisciplinary Subjects】 two credits or more from the following subjects ;

“International Lecture of Global Disaster Mitigation I, II”

“Action-oriented Disaster Mitigation I- VIII”

【Training Subjects】

- Two credits or more from “Convergence-Lab (C-Lab) Training”
- Two credits from the “Global Communication Skills Training I”

VII. Others

Students who are successfully selected for this program are required to apply for “Research Fellowship for Young Scientists” of The Japan Society for the Promotion of Science.

Academic Year 2018
Application Forms for the Inter-Graduate School
Doctoral Degree Program on Science for Global Safety

**Application deadline for the Inter-Graduate School Doctoral Degree Program
on Science for Global Safety:**

2 February 2018 (Friday), 12:00 noon

(applications sent out by post must arrive by 2 February)

Forms	Points to note:
Course Application (Form 1) * Handwritten forms will not be accepted	Please complete the stipulated form (handwritten forms will not be accepted). When filling in your English Proficiency Test results, <u>please attach copies of documents as proof of your scores.</u>
Reasons for Applying to This Program (Form 2)	Please read the Admissions Policy carefully before completing the stipulated form.
Letter of Recommendation (Form 3)	The faculty member who will be the supervising faculty for the applicant at the graduate school is required to complete the stipulated form, <u>seal it</u> , and submit the letter. (Self-recommendations will not be accepted.)
Academic Transcripts (from undergraduate program or specialized vocational college)	Please submit transcripts issued by the Dean of the University where you had completed your undergraduate studies, or the Principal of your specialized vocational college. If you are enrolled in a specialized vocational college and transferred to an undergraduate program at Tohoku University, you are also required to submit transcripts of results from both your undergraduate program and specialized vocational college.
Copy of student identification card	【Only for those enrolled in a graduate program at Tohoku University as of Academic Year 2017】 Please submit a copy of your student identification card as proof of enrollment in a graduate program at Tohoku University.

*Examinee Number: _____

Please attach a
3×4cm photograph.
(Please write your
name on the back
of the photograph)

**Inter-Graduate School Doctoral Degree Program
on Science for Global Safety Academic Year 2018
Application Form (Handwritten forms will not be accepted)**

Date: 2018

Furigana Name		(Nationality:)		M F
Date of birth		Year	Month	Day (years old)
Affiliation (current)		University: Faculty/Graduate School: Specialization:		
Affiliation (after April 2018)		Tohoku University Graduate School: Specialization: Research Laboratory:		
Student identification number				
Name of supervising faculty		Tohoku University Graduate School: Specialization:		
Contact details (current)		Tel. (Research lab: -) E-mail		
Contact details (after April 2018)		Tel. (Research lab: -) E-mail		
Emergency contact	Name		Relationship	
	Address			
	Tel (landline):			
	Tel (mobile):			
Recipient of scholarship/other bursaries (including TA/RA) Please circle the relevant item.		1. Yes 2. No For those who selected 1. Yes, please give the name of the scholarship, period of disbursement, and value of the scholarship.		
Foreign language proficiency Note 1. TOEFL TOEIC Score: (as of year month)		Please include any special remarks about other language proficiency if applicable.		
Plans to advance to Doctoral program Please circle the relevant item		1. Yes (Accepted Plan to apply) 2. No		
Application for this Program Please circle the relevant item	1. Applied last year 2.No previous application	Selected as TA/RA for this Program Please circle the relevant item	1. Yes 2. No	

*Examinee Number: _____

Are you also applying for the Interdepartmental Doctoral Degree Program for Multi-Dimensional Materials Science Leaders? Please circle the relevant item	1. Yes 2. No
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Note 1: Please fill in this field only if you have sat for an English Proficiency Test (TOEFL, TOEIC), and **provide a copy of documents that can serve as proof of your score.**

Note 2: Please do not fill in the * field.

Education (Please provide information up to enrolment in this Program)		
Month and year	High school (graduated/passed equivalent of high school examination)	
Month and year	Entered university (faculty and specialization)	
Month and year	Graduated from university (faculty and specialization)	
Month and year	Entered (scheduled to enter) Master's program (graduate school, specialization)	
Month and year	Completed (scheduled to complete) Master's program (graduate school, specialization)	
Month and year	Advanced to (scheduled to advance to) Doctoral program (graduate school, specialization)	
Work		
Month and year		
Month and year		
Month and year		
Community Activities (Social contribution activities such as contribution to disaster recovery)		
Month and year		
Month and year		
Month and year		
Study Abroad		
Period	Place of study (Name of institution, country)	Contents (Study abroad, short-term training, internship, etc.)
(Month and year) ~ (Month and year)		
(Month and year) ~ (Month and year)		

*Examinee Number: _____

Research achievements to date (Please fill in items 1 – 4 as applicable.)

1. Publication of academic papers/thesis: Author (underline first author), title of paper, journal, publication date and issue, etc.

2. Presentation at international conference: Name of conference, title of presentation, format of presentation (verbal, poster), date of presentation, etc.

3. Presentation at domestic conference: Name of conference, title of presentation, format of presentation (verbal, poster), date of presentation, etc.

4. Awards received: Name of award, awarding organization, date that award was received, etc.

Please expand the fields as necessary.

Form 2

Examinee number	*
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*Please do not fill in this field

Reasons for Applying to This Program

Furigana Name	
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Please read the Admissions Policy for the Inter-Graduate School Doctoral Degree Program on Science for Global Safety carefully before completing this form. Write down in detail your thoughts and ideas in an easy-to-understand manner for (1) to (6) below. For (7), please list your research achievements to date, if applicable. When completing the form, please keep your answers within the frame space provided for each section. (For reference, please use 10.5 font size and stay within about 400 characters for Japanese or 200 words for English.)

(1) What type of leaders do you think society calls for?

(2) What are your expectations in enrolling in this Program, and what do you wish to learn?

(3) What are your future aspirations after completing this Program?

(4) From what perspective do you think that interaction and exchange with researchers in different fields can contribute to the development of a safe and secure society?

(5) What are your strengths and weaknesses?

(6) How have you overcome any difficulties that you faced outside of your research work?

(7) Please list your research achievements to date, if applicable.

Date:

To: The Program Coordinator of the Inter-Graduate School Doctoral Degree Program on Science for Global Safety

In accordance with the objectives of this Program for Leading Graduate Schools, I hereby recommend this student, based on an understanding that he or she will be involved in various activities outside of his/her affiliated research laboratory.

(Name of recommending faculty) _____ (Seal)
 Signature or seal
 (Affiliation) _____ (Graduate School) _____ (Specialization)

Letter of Recommendation

Graduate School and Specialization accepted into	Graduate School Specialization	Name of applicant	
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This form is to be completed by the faculty who will be the supervising faculty for the student at the graduate school (current supervising faculty for students who are currently enrolled in graduate school). Please include an assessment of the student's attitude toward confronting challenges, brainstorming ability as well as communication skills, future course to be taken, and future potential as a leader in diverse fields. However, for applicants joining Tohoku University from other universities, please provide an overall assessment based on their entrance examination results and interview results. Please circle the relevant item with regard to the student's future course.

Student's future course (Advancement to Doctoral program)	<ol style="list-style-type: none"> 1. Will definitely advance to Doctoral program 2. Is highly likely to advance to Doctoral program 3. Will probably not advance to Doctoral program 4. Currently engaged in job-hunting activities 5. Scheduled to sit for civil service examinations