

NIFS 2025

Application Guideline

[Last updated: November 21, 2024]

Introduction

We have conducted an international graduate program “Development of Human Resource of Data Science and AI Promoting Digital Transformation (AIQDS)” in the period between 2021 and 2023 in order to achieve accelerations of digital transformation involving those changes in rapid improvement of AI technology and its commoditization. From this year, we proceed next international graduate program “Fostering Human Resources in New Interdisciplinary Fields in the Society 5.0 Era (NIFS)”. The NIFS program utilizes knowledge from information science, which combines knowledge from different specialized fields, to focus especially on the five key axes: materials science, aging society, artificial intelligence, innovation and entrepreneurship, and sustainability. The purpose of this program is to develop international human resources with comprehensive problem-solving skills for the Society 5.0 era, who provides solutions for sustainable economic development has the ability to collaboratively solve real-world challenges through practical projects and industry-academia collaboration to shape the future by combining knowledge from different disciplines.

NIFS fosters interdisciplinary human resources with comprehensive problem-solving and innovation skills across different academic disciplines. It offers attractive programs that provide a foundation for research in economics, psychology, philosophy, and other fields in order to use innovation and entrepreneurship to solve problems - materials science, aging society, artificial intelligence (AI), medical sciences, and more.

Graduate School of Information Sciences (GSIS) plays a managing role of NIFS at Tohoku University. The students take their expertise course in GSIS, and learn most of the subjects/trainings related to data science, social sciences and PBL in GSIS. The courses related to the program are mostly taught in English. In addition to learning of the expertise and data science as well as comprehensive problem-solving skills, NIFS expects the students to get familiar with Japanese language and culture, and to build various human networks.

Program

The NIFS is a graduate program that combines a two-year master's course with a three-year doctoral course. A student in NIFS must be enrolled in the Graduate School of Information Sciences (GSIS). The student's learning and research are supervised by a primary mentor in the student's graduate school.

Master's course

- (1) Course work
 - I. Expertise course offered by our graduate school
 - II. Existing fundamental data science course
 - III. Innovation & Entrepreneurship course: innovation, entrepreneurship, materials science, ageing, AI, sustainability, economics, psychology, philosophy, etc.
- (2) Practical training and internship
 - I. Entrepreneurship training camps
 - II. Internship in private companies (elective subject)
- (3) Research work for the master degree in the student's graduate school

Doctor's course

- (1) Innovation & Entrepreneurship project-based learning of real-world problem solving
- (2) Advanced Entrepreneurship seminars: The program assigns international conference, symposium, and/or workshop as advanced entrepreneurship seminar
- (3) Research work for the PhD in the student's graduate school

Financial Support

Japanese government (Ministry of Education, Culture, Sports, Science and Technology; MEXT) scholarship will be available for excellent students who intend to be actively engaged in the NIFS program and contribute to its objectives. A monthly stipend is available; the detail and other information are listed below. Awardees of the scholarship will be selected from the candidates who are successful in the NIFS screening. The MEXT scholarship scheme applies only to those who live outside of Japan at the time of application and were born on or after **April 2, 1990**.

- (a) Exemption from Application, Admission and Tuition fees
- (b) Monthly stipend: **146,000 JPY** for 2 years in Master's course.
- (c) Flight tickets between the applicant's country of nationality and Japan

* Self-financed students are also encouraged to participate in NIFS.

For Master and Doctor: 5 years course

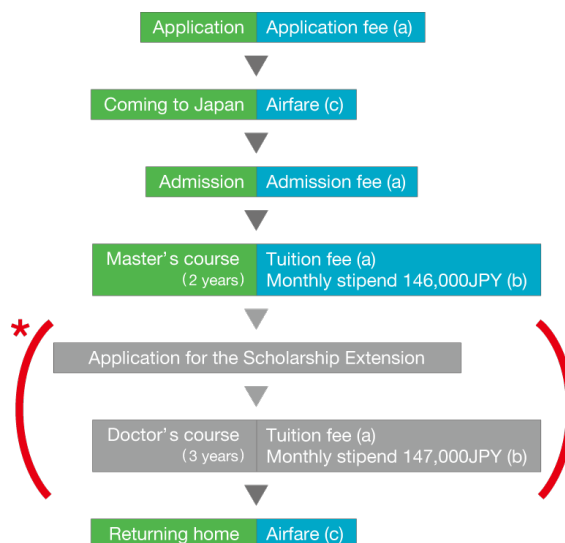
Number of recipient as the candidate of MEXT scholarship: 4 students

Term of the scholarship: 2-years in Master's course.

* Please contact NIFS Admissions Office to see what kind of support can be considered when you go onto your Doctor's course.

For Doctor: 3 years course

Please contact NIFS Admissions Office to see what kind of support can be considered.



The above 5 years course is the combination program of the master and the doctor course. All the applicants for the above 5 years course in the NIFS program should hope to go on to the doctor course when they first apply to the NIFS program. It should be remarked that the MEXT scholarship for three years doctoral course starting from October 2027 has not been guaranteed yet by the MEXT, because the MEXT has not yet approved the doctoral part of the budget to Tohoku University.

Eligibility

The eligibility criteria for NIFS are those of MEXT scholarship:

https://www.mext.go.jp/content/20241115-mxt_kotokoku01-000038802_2.pdf

together with the following.

- Most of the applicants should have been an excellent student newly coming from abroad to study as a graduate-level foreign student. From the viewpoint of attracting the best international students, it is possible to nominate international students presently residing in Japan for priority placement.
- Applicants must have earned over 2.3 evaluation point average of their latest or current degree program based on the specialized calculation (see note [1]).
- Language proficiency: Applicants must satisfy any one of the following conditions to prove that they have sufficient English language ability. Applicants must pass or achieve scores in English language proficiency tests that correspond to B2 or higher level in the Common European Framework of Reference for Languages (CEFR) at the time of application.

- NIFS admission office strongly recommends that applicants should leave for and arrive in Japan by the beginning of **October, 2025**.
- Applicants for NIFS need to satisfy one of the following conditions:

Applicants who hope to attend only the NIFS program as self-financed students without the MEXT scholarship should contact the NIFS admission office.

For 5 years Master’s and Doctor’s Course Applicant

- i) Those who have graduated, or will graduate, from a university, that is, completion of a total of **16** years of school education by **September 30, 2025** (see note [2]).
- ii) Those who have reached **22** years of age by **September 30, 2025** and can be recognized to have an academic ability equivalent or superior to those who have graduated from a university based on individual qualification examinations.

For 3 years Doctor’s Course Applicant

- i) Those who have earned, or will earn, Master’s degree by **September 30, 2025**.
- ii) Those who have engaged in research activities for at least **2** years at an educational or research institution after graduation from a university and can be recognized to have an academic ability equivalent or superior to those who have earned Master’s degree on the basis of their research performance.
- iii) Those who have reached **24** years of age by **September 30, 2025** and can be recognized to have scholastic ability equivalent or superior to those who have earned Master’s degree based on individual qualification examinations.

Notes

[1] The calculation procedure of the evaluate point average

Scale	Grade				
	A		B	C	F
4-scale evaluation	100-80		79-70	69-60	59-
5-scale evaluation	S	A	B	C	D
	A	B	C	D	F
	100-90	89-80	79-70	69-60	59-
Evaluation Point	3	3	2	1	0
Number of your total credit	N4	N3	N2	N1	N0

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

[2] The term “graduated from a university” means a total of **16** years of educational programs,

which consists of **12** years of school education and a **4** years undergraduate (bachelor) program.

e.g. Educational programs in Japan:

Elementary (primary) school.....	6 years	} 12 years	} total 16 years
Junior high (secondary) school.....	3 years		
Senior high (higher secondary) school....	3 years		
University (undergraduate)	4 years	-----	

Schedule

- Application period: November 25, 2024 - December 6, 2024
- The NIFS selection consists of the documents screening and the Zoom interview.
Applicants will be informed the detail from the examining committee via e-mail after the application deadline. Interview will be organized in the middle of December, 2024.
- Notification of acceptance for the NIFS program as self-financed students and the MEXT scholarship candidates who are selected by the NIFS admission office will be informed in the second half of December, 2024 or the beginning of January, 2025.
- The final decision of the MEXT scholarship will be decided by the MEXT and will be announced around July, 2025.
- Program begins on October 1, 2025 (Fall semester, 2025)

Application

How to Apply

Step 1: Find the candidate of your prospective supervisor among the faculty member in the field of your interest.

Application will not be accepted without the consent of acceptance by your prospective supervisor. Note that the supervisor in the NIFS program must be a professor or an associate professor in Appendix of this application guideline.

Step 2: Contact directly to the candidate of your prospective supervisor via e-mail and request the consent of acceptance. Note that the supervisor in the NIFS program must be a professor or an associate professor in Appendix of this application guideline. First you have to request and get the letter of acceptance that the professor or the associate professor is agree to be your supervisor in the Graduate School of Information Sciences, Tohoku

University, Japan, on the condition that you pass the examination by the selection committee of the international graduate program NIFS. The letter of acceptance should include the signature and the date by the prospective supervisor. The letter of acceptance should be used the Form A.

To contact the faculty member, it is strongly advisable to:

- Gather information about the faculty member and their field of research by looking at their publications, research papers, and personal website.
- Provide your academic background and application information.
- Inform the name of your current or the latest supervisor as a reference.

Step 3: Fill out the online application form and upload all of the following required documents via online system “Application” in NIFS Admissions Office by December 6, 2024.

*The online system “Application” will be open on **November 25, 2024.**

Please check the NIFS website when the period starts.

<Required documents>

- 1) Letter of acceptance as a supervisor from one of professors and associate professors in the Graduate School of Information Sciences, Tohoku University, Japan: **Form A**
- 2) Official recommendation letter from the dean or higher position of your last institute: **Form B**
- 3) Application for Japanese government (MEXT) scholarship: **Form C**
 - * Paste the ID photo of the applicant in the designated place in the Form C. This application should include the ID photo data of the applicant with clear image quality and 5MB or less for the data size in either jpg, png or gif format.
 - * The applicant should submit the Form C in an editable state.
- 4) Field of Study and Research Plan: **Form D**
- 6) Official academic transcript(s)
 - Doctor’s course applicant:** official academic transcripts of undergraduate and master’s course
 - Master’s + Doctor’s course applicant:** official academic transcript of undergraduate
- 7) Certificate(s) of graduation
 - Doctor’s course applicant:** one of the followings is necessary to submit.
 - Photocopy of master’s diploma

- Certificate of graduation of master's course
 - Certificate of enrollment of master's course with expecting date of graduation
- Master's + Doctor's course applicant:** one of the followings is necessary to submit.
- Photocopy of bachelor's diploma
 - Certificate of graduation of undergraduate
 - Certificate of enrollment of undergraduate course with expecting date of graduation

8) Photocopy of a valid score report of designated English test as below

- TOEFL (iBT or PBT)
- IELTS
- TOEIC (both L&R and S&W)

* We do not accept TOEFL-ITP

* Unnecessary for native English speakers and those who have completed their education with English as the primary language

* The TOEFL iBT Home Edition score report must be accompanied by a screenshot/PDF of the official ETS website for your country, stating that it can be treated as equivalent to a regular score.

9) Photocopy of your passport or other identification documents

10) Abstracts of thesis of undergraduate and master's course (if applicable)

11) Other supporting materials

12) Extra ID photo data of the applicant with clear image quality and 5MB or less of the data size in either jpg, png or gif format

* The file name should include your name, for example [First Name]_[Family Name].jpg.

13) Memorandum of understanding by application for approval by the applicant to allow Tohoku University to confirm enrollment and inquire about the authenticity of the reference institution for the purpose of confirming the authenticity of "all the documents submitted by the applicant." The memorandum should include the signature of applicant and its exact signature date by oneself: **Form E**

* The forms can be found on the website.

[Attention]

– Do not alter the prescribed format of the download files. Attach an additional sheet if necessary.

– Forms should be typed in English. Attach an English translation of the documents written in a language other than English.

– **Any of the application documents will not be returned to the applicant.**

- All the applicants who are accepted in the present NIFS selection will be requested to submit the original transcript and English score sheet submitted during the online application, after the notification of acceptance will be received. If there is a discrepancy between the documents uploaded to the web application system and the originals submitted during the admission procedure, or if the originals of various certificates cannot be submitted, the acceptance notification may be canceled and the admission may not be granted due to the insufficient documentation.

Contact Information

NIFS Admissions Office

Graduate School of Information Sciences, Tohoku University
Aramaki-aza-Aoba 6-3-09, Aoba-ku, Sendai, 980-8579 JAPAN
E-mail: ilo@is.tohoku.ac.jp Tel: +81-22-795-4691

*Those who are inquiring by e-mail, please: Include “NIFS” in the subject line.

Related Websites

Tohoku University

- Website of graduate schools participating in NIFS

Graduate School of Information Sciences <<http://www.is.tohoku.ac.jp/index-e.html>>

- Fee Waivers and Deferment of Payments <<http://www2.he.tohoku.ac.jp/menjo/>>

Supports for international students

- Tohoku University International Support Office (TU Support)

<http://sup.bureau.tohoku.ac.jp/index_en.html>

- Global Learning Center, Tohoku University

<<https://www.insc.tohoku.ac.jp/english/>>

- Tohoku University Guide for Prospective International Students

<https://www.tohoku.ac.jp/en/admissions/admission_undergraduate.html>

- Pocket guide for Procedures International Students

<<http://sup.bureau.tohoku.ac.jp/images/PocketGuide.pdf>>

Other Related Website

- Ministry of Education, Culture, Sports, Science and Technology (MEXT)

<<http://www.mext.go.jp/english/>>

Appendix

List of professors and associate professors who are candidates for supervisors in NIFS.

* For details about their research, please see the GSIS's website at:

http://www.is.tohoku.ac.jp/en/laboratory/list_dept/

We remark that acceptance letters for the laboratories of Information and Biosystems Group (Group Code 2) should be limited to only ones by full professors. Acceptance Letters by associate professors for the laboratories of Information and Biosystems Group (Group Code 2) cannot be accepted as the NIFS application document.

Colaborative Laboratories and Promotion Office in the above website should not be included as your prospective laboratory.

Group code	Group	Division	Laboratory (Area)	Staff	Department
1	Mathematics	Mathematical Structures	Mathematical Structures I	Prof. Akihiro MUNEMASA*	Computer and Mathematical Sciences
				Assoc. Prof. Yuanyuan BAO	
			Mathematical Structures II	Prof. Toshiyuki SUGAWA	
			Mathematical Structures III	Prof. Hajime TANAKA	
		Mathematical Structures IV	Prof. Hiromi SENO*		
		Mathematical System Analysis	Mathematical System Analysis I	Prof. Masaaki HARADA	
				Assoc. Prof. Kei FUNANO	
			Mathematical System Analysis II	Prof. Kanta NAITO	
				Assoc. Prof. Takako NEMOTO	
		Statistical Mathematics	Prof. Yuko ARAKI		
2	Information and Biosystems	Applied Mathematical Science	Mathematical Informatics	Prof. Masayuki OHZEKI	Computer and Mathematical Sciences
		Computation Science and Systems	Computer Structures	Prof. Takafumi AOKI	
			Intelligent Integrated Systems	Prof. Masanori HARIYAMA	
		Software Science and	Firmware Science	Yuichi KAWAMOTO	

		Systems	Foundations of Software Science	Prof. Eijiro SUMII	
		Logic for Information Science	Logic for Information Science	Prof. Keisuke NAKANO	
		Communication Theory	Communication Theory	Prof. Go HASEGAWA	
		Information Security	Information Security	Prof. Minoru KURIBAYASHI	
		Fundamental Data Informatics	Fundamental Data Informatics	Prof. Yoshinori HAYAKAWA*	
		Intelligent Information Science	Algorithm Theory	Prof. Xiao. ZHOU	System Information Sciences
			Intelligent Systems Science	Prof. Ayumi SHINOHARA	
		Biosystem Information Sciences	Information Biology	Prof. Takeshi OBAYASHI	
			Design and Analysis of Information Systems	Prof. Takehiro ITO	
		Acoustic Information	Acoustic Information	Prof. Shuichi SAKAMOTO	
		Information Contents	Information Contents	Prof. Yoshifumi KITAMURA	
		Software Construction	Software Construction	Prof. Hiroshi UNNO	
		Fundamental Artificial Intelligence	Fundamental Artificial Intelligence	Prof. Jun SUZUKI	
Information and Biosystems		Information and Applied Technology	Physical Fluctuodynamics	Prof. Kazuyuki TANAKA**	
			Information Technology	Prof. Nei KATO	
		Applied Informatics for Human	Systems Bioinformatics	Prof. Kengo KINOSHITA	Applied Information Sciences

		and Life Sciences				
		Applied Intelligence Software	Applied Intelligence Software	Prof. Takaki NAKAMURA		
		Information Network Systems	Information Network Systems	Prof. Takuo SUGANUMA		
		Health Informatics	Health Informatics	Prof. Chihiro ITO		
		Advanced Applied Data Science	Advanced Applied Data Science	Prof. Motoki SHIGA		
				Prof. Kazunori YAMADA		
Cryptographic Protocols	Cryptographic Protocols	Prof. Takaaki MIZUKI				
3	Machine and Intelligence	Applied Mathematical Science	Mathematical Modeling and Computation	Prof. Satoru YAMAMOTO*	Computer and Mathematical Sciences	
				Assoc. Prof. Takashi FURUSAWA		
		Software Science and Systems	Computer Architecture	Prof. Hiroaki KOBAYASHI*		
				Assoc. Prof. Masayuki SATO		
		High Performance Computing	High Performance Computing	Prof. Hiroyuki TAKIZAWA		
		Intelligent Robotics	Image Analysis	Prof. Takayuki OKATANI		System Information Sciences
			Intelligent Control Systems	Prof. Koichi HASHIMOTO		
		Integrated Fluid Informatics	Integrated Fluid Informatics	Prof. Jun ISHIMOTO		
		Information and Applied Technology	Embodied Intelligence and Robotics Laboratory	Prof. Masashi KONYO		Applied Information Sciences
Flow System Informatics	Flow System Informatics			Prof. Yuji HATTORI		

				Assoc. Prof. Makoto HIROTA				
		Tough Cyberphysical AI	Tough Cyberphysical AI	Prof. Kazunori Ono Assoc. Prof. Yoshito OKADA				
4	Civil Engineering	Infrastructure Planning	Transportation and Geographic Information Science	Prof. Takamasa IRYO	Human-Social Information Sciences			
				Assoc. Prof. Ryo INOUE				
			Regional and Urban Planning	Prof. Tatsuhito KONO				
				Assoc. Prof. Junya FUKUMOTO				
			Road Transportation and Traffic	Prof. Takashi AKAMATSU				
				Assoc. Prof. Yusuke HARA				
5	Languages and Media	Human Information Science	Language and Information Science	Assoc. Prof. Itsumi SAITO	Human-Social Information Sciences			
			Verbal Text Analysis	Prof. Yoshiki OGAWA				
		Media and Information Science	Media and Culture	Assis. Prof. Kuniko SAKATA				
			Media and Information Literacy	Assoc. Prof. Toru NAGAHAMA				
		6	Psychology and Philosophy	Human Information Science		Human Learning and Memory	Assoc. Prof. Chihiro HOSODA	Human-Social Information Sciences
						Cognitive Psychology	Prof. Kazumichi MATSUMIYA Assoc. Prof. Yuichi WADA	
Philosophy of Human Information	Prof. Ichiro MORI							
Philosophy of Logical Analysis	Assoc. Prof. Hitoshi OMORI							

		Cognitive Psychology of Communication	Cognitive Psychology of Communication	Prof. Toshiaki MURAMOTO**	
		Applied Informatics for Human and Life Sciences	Cognitive Psychology	Prof. Kazumichi MATSUMIYA	Applied Information Sciences
7	Social Sciences	Socio-Political Information Science	Theory of Social Structure and Change	Prof. Naohito TOKUGAWA** Prof. Aya OKADA	Human-Social Information Sciences
			Political Informatics	Assoc. Prof. Masataka HARADA	
		Socio-Economic Information Science	Socio-Economic Analysis of Urban System	Prof. Dao-Zhi ZENG Assoc. Prof. Ryo ITOH	
			Econometric System Analysis	Assoc. Prof. Naoya FUJIWARA	

* Teaching staff due to retire in March, 2026.

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