New Student Orientation - Fall 2025
Graduate Major in Science and Technology for Health Care and Medicine
Document released on Sep. 29, 2025

The orientation material

1. Study Guide of STM 2025 Fall

日本語の学修案内は，大学Webサイトで確認してください。
The Japanese version can be found on the Science Tokyo website.
https://www.titech.ac.jp/guide/guide_2025/graduate/

2. STM Research Planning

3. Course Schedule (3Q, 4Q, 3-4Q) - STM

1Q～2Q授業に関する案内は，2025年4月のオリエンテーション資料を参考にしてください。
For information on classes from 1Q to 2Q, please check the "April 2025 Student Orientation Materials"

4. STM Internship - International Presentation

5-1. Lecture Information_STM.C406 (Japanese lectures)

「人間医療科学技術特別講義第一」
ー生命がもつ遺伝子とゲノムの理解と制御、そして疾病の発症ー

5-2. Lecture Information_STM.C407 (Japanese lectures)

「人間医療科学技術特別講義第二」
ー生体反応の情報を用いた認知行動評価ー

6. STM Research Ethics Education

The requirements listed in this document include the contents of the ethics to be possessed as a Science Tokyo student.
Please make sure to study these items and acquire the necessary understanding of ethics as soon as possible after enrollment.

7. Entrepreneurship Courses Orientation Info

8-1. Takuetsu Programs and Others Info

8-2. 卓越教育院コース等ガイダンス資料

9-1. Introduction to Science Tokyo Library

9-2. 図書館の利用と学術情報の入手

10. Taking 600-level courses in the Master's degree program/ STM修博一貫プログラム案内

11-1. Financial support for doctoral students

11-2. 大学院課程学生への経済的支援

12-1. Security Export Control

12-2. 安全保障輸出管理

Graduate Major in Science and Technology for Health Care and Medicine

Recent years have seen striking advances in engineering and technology related to human health, medicine, and environments across the various fields of science and engineering. However, it is almost always the case today that people are educated separately in each specialty; there are few instances of multidisciplinary educational systems. At the same time, issues related to human medicine, health, and environments are becoming more complex and diverse. Addressing these issues demands comprehensive and innovative knowledge and skills beyond conventional frameworks. Integrated learning of advanced and multidisciplinary expertise in the field of science and technology, based on deep understanding of humans and society, is essential.

In this course, areas of specialization including science and engineering, medical and dental science, nursing, medical technology, and health science are functionally integrated in education and research on science and technology for health care and medicine. The aim is to educate individuals to have a deep understanding of people and society, high-level expertise in science and technology, a broad outlook, an ability to think deeply, comprehensive decision-making abilities, a sense of ethics, and a global perspective and international mindset. We also aim to train individuals who have the creativity and leadership to pioneer new fields beyond existing areas of specialization, and can act globally. By promoting exchanges between different fields of specialization, we can also expect to bring new perspectives to each field as well as to create new academic disciplines that look to the future.

【Master's Degree Program】

1. Outline

In addition to expertise in the various fields of science and engineering, the course aims to cultivate multidisciplinary expertise in human science, medical and health science, bioethics, related to environments where people are involved, and the ability to understand other fields, as well as issue-solving skills, problem-solving abilities in society, and communication and leadership abilities. Specifically, through lectures on specialized subjects and cutting-edge technologies related to science and technology for health care and medicine, the course develops researchers and engineers in Science and Technology for Health Care and Medicine who have the necessary knowledge and skills.

In the Master's program, students acquire expertise in Medical and Dental Science and Health Sciences in addition to specialty subjects in science and engineering—Mechanical Engineering, Systems and Control Engineering, Electrical and Electronic Engineering, Information and Communications Engineering, Materials Science and Engineering, Chemical Science and Engineering, Computer Science, Life Science and Technology. The program cultivates people with high intelligence and refinement, a broad outlook, the ability to think deeply, comprehensive decision-making abilities, a strong sense of ethics and technology, and an international mindset. These people will have the ability to identify issues and advanced abilities to solve them, both in the development of cutting-edge technology and in academic research.

Specifically, students will:

1. Systematically learn professional knowledge and skills necessary for advanced research and development in the Science and Technology for Health Care and Medicine field based on professional knowledge of a disciplinary field, which students learned in the undergraduate course.
2. Learn professional knowledge and skills by developing the advanced knowledge and skills that students acquired in their undergraduate.
3. Deepen one's professional ability and creativity through lab seminar, research planning for master's thesis subjects, and master's thesis research.

2. Competencies Developed

In this course, in order to achieve the above objectives, the goal of study is to acquire the following knowledge and abilities:

- Knowledge essential for science and technology for health care and medicine such as human science, medical & health science, bioethics, and the environment in which humans are involved.
- Advanced knowledge and skills of science and technology for health care and medicine in each specialized field.
- Basic learning ability to understand expertise in different fields.
- Ability to challenge the development of new areas through integration of issues and problem solving methods in each area.
- Ability to set issues in relation to society and solve problems by making use of their own technology and creativity.
- Leadership and communication skills that can communicate their thoughts and skills correctly and collaborate to address issues.

3. Learning Goals

To acquire the skills listed in “Competencies Developed”, students in this program will have the following training.

A) Acquiring fundamental expertise in the field of “Science and Technology for Health Care and Medicine”.

Acquiring fundamental expertise in the research field of “Science and Technology for Health Care and Medicine” through required courses and restricted elective courses in Major Courses.

B) Acquiring advanced expertise in the field of “Science and Technology for Health Care and Medicine”.

Acquiring advanced professional knowledge and skills through various science and engineering courses in Major Courses of “Science and Technology for Health Care and Medicine”.

C) Acquiring research-executing skills, problem-solving.

Acquiring research-executing skills and problem-solving skills through Research Seminars, Research-Related Courses as well as performing research in the lab by using obtained expertise.

D) Acquiring experience in relation to engineering ethics and society.

According to lectures by teachers working in industries, learning ethical and social values relevant to society and research and understanding engineering ethics.

E) Acquiring communication skills.

Learning advanced communication skills required as international professionals through discussion with researchers in the country and overseas.

F) Cultivating sophistication in relation to liberal arts and humanities.

Learning liberal arts and humanities required as researchers through Humanities and Social Science Courses, Entrepreneurship Courses.

4. IGP Completion Requirements

The following requirements must be met to complete the Master's Degree Program of this major.

1. Attain a total of 30 credits or more from 400- and 500-level courses.

2. From the courses specified in the Graduate Major in Science and Technology for Health Care and Medicine standard curriculum, you must meet the following requirements (see Table M1 below).

- You have acquired at least 19 credits from Major courses;
- You have acquired 8 credits from Research Seminars;
- You have acquired 2 credits from Research-related Courses;
- Must acquire 2 credits from required Major Courses and 3 credits from restricted elective Major Courses;
- Must acquire a minimum of 5 credits from Liberal Arts and Basic Science Courses (3 credits from Humanities and Social Science Courses of which 2 credits must be from 400-level courses and 1 credit from 500-level courses, and 2 credits from Entrepreneurship Courses).

3. Pass the master's thesis review and defense.

Table M1 shows course categories and the number of credits required to complete the Master's Degree Program of this major. It also shows the required minimum credits in each course category and points to be noted when selecting the required courses and electives.

The learning goals to be obtained by students through courses are listed as “associated learning goals”. Prior to registering courses, students need to fully understand the course goals.

Table M1. Graduate Major in Science and Technology for Health Care and Medicine Completion Requirements

Course category		**<Required courses> Required credits**	**<Electives> Minimum credits required**	**Minimum credits required**	**Associated learning goals**	**Comments**
Liberal arts and basic science courses	**Humanities and social science courses**		•2 credits from 400-level •1 credit from 500-level	5 credits	D, F	
	Entrepreneurship Courses		2 credits		D, F	All Graduate Attributes (GA) should be acquired. (Refer to Section 7 for the definition of GA.)
	Other courses					

Core courses	**Research seminars**	STM Seminar S1 STM Seminar F1 STM Seminar S2 STM Seminar F2 A total of 8 credits, 2 credits each from the above courses.		19 credits	C, E	
	Research-related courses	Research Planning for Master Thesis I of STM Research Planning for Master Thesis II of STM A total of 2 credits			C, E	
	Major courses	Interdisciplinary Research Training of STM A total of 2 credits	3 credits from restricted electives		A, B, D, E	
	Major courses and Research-related courses <u>outside</u> the <u>Science and Technology for Health Care and Medicine</u> standard curriculum					
Total required credits		**A minimum of 30 credits including those attained according to the above conditions**				
Note		**・Japanese Language and Culture Courses offered to international students can be recognized as equivalent to the Humanities and Social Science Courses of the corresponding course level.** **・For details of the Liberal Arts and Basic Science Courses, please refer to the relevant sections.**				

5. IGP Courses

Table M2 shows the Core Courses of the Master's Degree Program in this major. Graduate Majors listed in the Comments column offer core courses that are recognized as equivalent to the corresponding Major Courses or Research-related Courses in the standard curriculum of this major.

Table M2. Core Courses of the Graduate Major in Science and Technology for Health Care and Medicine

Course category		Course number	Course title			Credits	Competencies	Learning goals	Comments
Research seminars	400 level	STM.Z491.R	◎	★	STM Seminar S1	0-2-0	1,3,5	C,E	
		STM.Z492.R	◎	★	STM Seminar F1	0-2-0	1,3,5	C,E	
	500 level	STM.Z591.R	◎	★	STM Seminar S2	0-2-0	1,3,5	C,E	
		STM.Z592.R	◎	★	STM Seminar F2	0-2-0	1,3,5	C,E	
Research-related courses	400 level	STM.B471.R	◎	★	Research Planning for Master Thesis I of STM	0-1-0	1,3,5	C,E	
	500 level	STM.B571.R	◎	★	Research Planning for Master Thesis II of STM	0-1-0	1,3,5	C,E	
Major courses	400 level	STM.A401.L		★ O	Introduction to Biomedical Instrumentation	1-0-0	1,2	B	
		STM.A402.L		★ E	Introduction to Neural Engineering	1-0-0	1	B	
		STM.A404.L		★	From Data Analytics to Machine Learning	1-0-0	1,2,5	A	
		STM.C401.R	◎	★	Interdisciplinary Research Training of STM	0-0-2	3,4,5	A,C	
		STM.C402.A	○	★	Interdisciplinary Research Fundamentals I of STM	1-0-0	1,5	A	
		STM.C403.A	○	★	Interdisciplinary Research Fundamentals II of STM	1-0-0	1,5	A	
		STM.C404.A	○	★	Outline of Science and Technology for Health Care and Medicine I	1-0-0	1,5	A	
		STM.C405.A	○	★	Outline of Science and Technology for Health Care and Medicine II	1-0-0	1,2	A	
		STM.C431.A	○		Off Campus Training I of STM	0-0-1	1,3,4,5	D	Offered in English as needed
		STM.C441.A	○	★	Presentation for Science and Engineering I	1-0-0	2,3	E	
		STM.C442.A	○	★	Presentation for Science and Engineering II	1-0-0	2,3	E	
		STM.E402.L		★	Modeling of Bio-Systems I	1-0-0	1,5		【Systems and Control Engineering】（SCE.M402）
		STM.E412.L		★	Fluid Robotics	1-0-0	1,5		【Systems and Control Engineering】（SCE.S402）

		STM.E434.L		★	Robot Audition and Scene Analysis	1-0-0	1,4,5		【Systems and Control Engineering】（SCE.I434）
		STM.E435.L		★	Visual and Knowledge Information Processing	1-0-0	1,4,5		【Systems and Control Engineering】（SCE.I435）
		STM.F431.L		★	Fundamentals of Light and Matter I	2-0-0	1	A	【Electrical and Electronic Engineering】（EEE.D431）
		STM.F451.L		★	Plasma Engineering	2-0-0	1	A	【Electrical and Electronic Engineering】（EEE.P451）
		STM.G409.L		★	Optics in Information Processing	1-0-0	1	B	【Information and Communications Engineering】（ICT.H409）
		STM.G411.L		★	Basic Sensation Informatics	1-0-0	1,5	B	【Information and Communications Engineering】（ICT.H411）
		STM.G422.L		★	Computational Brain	1-0-0	1	B	【Information and Communications Engineering】（ICT.H422）
		STM.H402.L		★ E	Characterization of Nanomaterials	2-0-0	1	B	【Materials Science and Engineering】（MAT.M402） a 4Q course, E, b 1-2Q (Offered in English every year at Tsinghua Univ.)
		STM.H403.L		★	Soft Materials Physics	1-0-0	1,2	B	【Materials Science and Engineering】（MAT.P403）
		STM.H404.L		★	Soft Materials Functional Physics	1-0-0	1,3	B	【Materials Science and Engineering】（MAT.P404）
		STM.H407.L		★ E	Advanced Course of Nano- Bionics I	1-0-0	1,2,3,5	B	【Materials Science and Engineering】（MAT.C407）
		STM.H412.L		★ E	Reliability and Durability of Metals and Alloys	2-0-0	1,4,5	B	【Materials Science and Engineering】（MAT.M412）
		STM.H413.L		★	Soft Materials Functional Chemistry	1-0-0	1,5	B	【Materials Science and Engineering】（MAT.P413）
		STM.H417.L		★	Medical Polymers	1-0-0	1,5	B	【Materials Science and Engineering】（MAT.P417）

		STM.H419.L		★	Biodegradable Polymers	1-0-0	1,5		【Materials Science and Engineering】（MAT.P419）
		STM.H421.L		★	Biomaterial Functions	1-0-0	1,4,5		【Materials Science and Engineering】（MAT.C421）
		STM.H422.L		★	Biomaterials and Biointerfaces	1-0-0	1,4,5		【Materials Science and Engineering】（MAT.C422）
		STM.H424.L		★ E	Organic Materials Design	1-0-0	1,5	B	【Materials Science and Engineering】（MAT.P422）
		STM.H426.L		★	Thermal Properties of Materials	1-0-0	1,5	B	【Materials Science and Engineering】（MAT.P426）
		STM.I416.L		★	Catalysis for the Environmental Issues	1-0-0	1	B	【Chemical Science and Engineering】（CAP.I416）
		STM.I425.L		★	Advanced Biofunctional Chemistry I	1-0-0	1,4,5	B	【Chemical Science and Engineering】（CAP.A425）
		STM.I426.L		★	Advanced Biofunctional Chemistry II	1-0-0	1,4,5	B	【Chemical Science and Engineering】（CAP.A426）
		STM.I435.L		★	Advanced Bioprocess Engineering	1-0-0	1,4,5		【Chemical Science and Engineering】（CAP.C425）
		STM.J455.L		★ O	Modeling of Discrete Systems	1-1-0	1,5	B	【Artificial Intelligence】（ART.T455）
		STM.J456.L		★	Non-linear Dynamical Systems	2-0-0	1	B	【Artificial Intelligence】（ART.T456）
		STM.J462.L		★	Complex Networks	2-0-0	1	B	【Artificial Intelligence】（ART.T462）
		STM.K401.L		★	Molecular and Cellular Biology	2-0-0	1,4	B	【Life Science and Technology】（LST.A401）
		STM.K404.L		★	International Career Development Basics	1-1-0	2,3,4,5	A,B,C,D, E	【Life Science and Technology】（LST.B404）
		STM.K405.L		★	Design of Bioactive Molecules	2-0-0	1	B	【Life Science and Technology】（LST.A405）

		STM.K407.L		★	Science of Metabolism	2-0-0	1,4,5	B	【Life Science and Technology】（LST.A407）
		STM.K410.L		★	Advanced Neuroscience	2-0-0	1,5	B	【Life Science and Technology】（LST.A410）
		STM.K411.L		★	Biomolecular Engineering	2-0-0	1,2,5	B	【Life Science and Technology】（LST.A411）
		STM.K412.L		★	Biomaterial Science and Engineering	2-0-0	1,2,4,5	B	【Life Science and Technology】（LST.A412）
		STM.K417.A	○	★	Advanced Biological Science and Engineering (Tsinghua University)	2-0-0	1,2,4,5	B	【Life Science and Technology】（LST.A417）(Intended for Tsinghua Univ. PG students)
		STM.K421.L		★	Functional Life Science	2-0-0	1,2	B，D	【Life Science and Technology】（LST.A421）
		STM.N402.L		★	Materials simulation	2-0-0	1,4,5	B	【Materials and Chemical Technology】（TCM.A402）
		STM.N404.L		★	Materials Informatics	2-0-0	1,4,5	B	【Materials and Chemical Technology】（TCM.A404）
		STM.P407.L		★	Soft Materials Design	1-0-0	1,5	B	【Energy Science and Informatics】（ESI.J407）
		STM.V403.L		★	Functional Organization of the Human Body	1-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V404.L		★	Pathology	1-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V405.L		★	Oral Health Engineering	2-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V408.L		★	Immunology	2-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V410.L		★	Molecular Cell Biology	1-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V411.L		★	Introduction to Medical Neurosciences	2-0-0	1		【Health Sciences and Biomedical Engineering】

		STM.V415.L		★	Disease OMICS Informatics	1-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V416.L		★	Introduction to Chemistry and Biology of Biofunctional Molecules	2-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V417.L		★	Chemical Biology	2-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V418.L		★	Special Lectures on Molecular Structures	2-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V419.L		★	Advanced Biomaterials Science	2-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V420.L		★	Applied Biomaterials	2-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V422.L		★	Biomedical System Science and Engineering I	1-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.V424.L		★	Basic Human Pathology for Graduate Students	1-0-0	1		【Health Sciences and Biomedical Engineering】
		STM.W402.L		★	Mental Health and Psychiatric Nursing Lecture I	2-0-0	1		【Nursing Innovation Science】
		STM.W404.L		★	International Nursing Development Lecture I	2-0-0	4		【Nursing Innovation Science】
		STM.W405.L		★	International Nursing Development Seminar I	0-2-0	2		【Nursing Innovation Science】
		STM.W409.L		★	International Nursing Research Methodology	2-0-0	3		【Nursing Innovation Science】
	500 level	STM.A501.L		★	Nanobio Materials and Devices	2-0-0	1,2	B	
		STM.C501.A	○	★	Advanced Science and Technology for Health Care and Medicine I	1-0-0	1,2,5	A	
		STM.C502.A	○	★	Advanced Science and Technology for Health Care and Medicine II	1-0-0	1,4,5	A	
		STM.C504.L		★	Special Lecture Series IV of STM	1-0-0	1,2,4,5	D	
		STM.C531.A	○		Off Campus Training II of STM	0-0-2	1,3,4,5	D	Offered in English as needed
		STM.C532.A	○		Off Campus Training III of STM	0-0-4	1,3,4,5	D	Offered in English as needed
		STM.C541.A	○	★	International Writing	1-0-0	2,3,4,5	E	
		STM.C542.A	○	★	International Presentation I of STM	0-1-0	1,2,3.4,5	E	
		STM.C543.A	○	★	International Presentation II of STM	0-1-0	1,2,3,4,5	E	

		STM.D531.L		★	Micro and Nano Systems	2-0-0	1	B	【Mechanical Engineering】（MEC.J531）
		STM.E502.L		★	Modeling of Bio-Systems II	1-0-0	1,5		【Systems and Control Engineering】（SCE.M502）
		STM.E504.L		★	Advanced Course of Computational Mechanics	1-0-0	1		【Systems and Control Engineering】（SCE.A504）
		STM.F533.L		★	Fundamentals of Light and Matter IIc	1-0-0	1	B	【Electrical and Electronic Engineering】（EEE.D533）
		STM.G504.L		★	Medical Image Engineering	2-0-0	1,5	B	【Information and Communications Engineering】(ICT.H504) Students who have already taken "Medical Image Processing" (old course name) cannot take this course.
		STM.G514.L		★	Mechanisms of Visual Perception	1-0-0	1,5	B	【Information and Communications Engineering】（ICT.H514）
		STM.H504.L		★	Functional Devices	2-0-0	1,2	B	【Materials Science and Engineering】（MAT.C504）
		STM.I532.L		★	Advanced Catalytic Reactions	1-0-0	1	B	【Chemical Science and Engineering】（CAP.T532）
		STM.J545.L		★	Molecular Simulation	1-1-0	1,2	B	【Artificial Intelligence】(ART.T545)
		STM.J553.L		★	Medical and Health Informatics	2-0-0	1	B	【Artificial Intelligence】(ART.T553)
		STM.K501.L		★	Biomolecular Analysis	2-0-0	1,5	B	【Life Science and Technology】（LST.A501）
		STM.K502.L		★	Science of Biological Resources	2-0-0	1,5	B	【Life Science and Technology】（LST.A502）
		STM.K504.L		★	Medical Biotechnology	2-0-0	1,2,5	B	【Life Science and Technology】（LST.A504）

	outside the Graduate Major in Science and Technology for Health Care and Medicine standard curriculum	STM.C412		△	Field Works for Creative Design	1-1-0	3,4,5	D,E	
		STM.C423		★	Industrial design	1-1-0	2,3,4,5	C,E,F	
		STM.C511		△	Practical Creative Design	1-2-0	3,4,5	C,D,E	
		STM.C512		△	Management for Business Creation	0.6-0-0.4	1,2,3,4,5	D,E	

Note：

• ◎：Required course，○：Restricted elective，★: Course given in English，O：Odd academic years，E：Even academic years

• △：Progressive graduate minor of "Practical-Based Entrepreneurship Education Course".

• Competencies: 1 = Specialist skills, 2 = Liberal arts skills, 3 = Communication skills, 4 = Applied skills (inquisitive thinking and/or problem-finding skills), 5 = Applied skills (practical and/or problem-solving skills)

•【 】Course offered by another graduate major

• The character preceding the three digits in the course number denotes the course's subdiscipline (i.e., "D" represents the subdiscipline code in the course number ABC.D400.R):

A:Major Courses, B:Research-related, C:Common Major Courses, D:Mechanical Engineering, E:Systems and Control Engineering, F:Electrical and Electronic Engineering, G:Information and Communications Engineering, H:Materials Science and Engineering, I:Chemical Science and Engineering, J:Artificial Intelligence, K:Life Science and Technology, L:Technology and Innovation Management, M:Engineering Sciences and Design, N:Materials and Chemical Technology, O:Academy for Super Smart Society, P:Energy Science and Informatics, R:Recurrent Program, T:Medical and Dental Sciences, U:Biomedical Sciences and Engineering, V:Health Sciences and Biomedical Engineering, W:Nursing Innovation Science, Z:Research seminars

6. IGP Courses That Can Be Counted as Humanities and Social Science Courses

None

7. IGP Entrepreneurship Courses and IGP Courses That Can Be Counted as Entrepreneurship Courses

In order to fulfill the completion requirements for the master's degree program, students must attain at least two credits in Entrepreneurship Courses, and should satisfy all of the Graduate Attributes (GAs) specified in Table M-1 of the "Entrepreneurship Courses" listed as "Liberal Arts and Basic Science Courses" in the Guide to Graduate Education and International Graduate Program, as well as shown below. Students will be evaluated in regards to GA achievements at the time of their degree completion. For courses with two GAs, both GAs stipulated for the courses are considered to be acquired if students attain the corresponding credits for those courses.

Entrepreneurship Courses and Major Courses that enable students to acquire GAs and are recognized as equivalent to Entrepreneurship Courses, offered by the Graduate Major, are listed in Table M3 below. Students can also acquire GAs and credits by taking the Entrepreneurship Courses offered by the Center for Entrepreneurship Education (CEE) listed as "Liberal Arts and Basic Science Courses" in the Guide to Graduate Education and International Graduate Program.

It must be noted that credits attained from courses that are recognized as equivalent to Entrepreneurship Courses can be counted towards the completion requirements of the master's degree program, either for Major Courses or for Entrepreneurship

Courses (not for both). Nevertheless, even in cases where credits pertaining to courses that are not considered as Entrepreneurship Courses are attained, the associated GAs may be considered by the Graduate Major to have been acquired.

For Graduate Attributes, refer to the Guide to Entrepreneurship Courses.
The Graduate Attributes of the Master's Degree Program are listed in Table M-1 as follows:

GA0M: You can clearly plan your own career and recognize the abilities necessary for realizing it while considering ethics and relevance to societal problems.

GA1M: You can acquire the knowledge, skills, ethics and entrepreneurship necessary for realizing your planned career and contribute to societal problem-solving while collaborating with other experts

Table M3. Courses of the Graduate Major in Science and Technology for Health Care and Medicine recognized as equivalent to Entrepreneurship Courses, and Entrepreneurship Courses

Course category	Course number	Course title			Credits	GA*	Learning goals	Comments
Courses that can be counted as Entrepreneurship Courses	STM.C411	○	△	Fundamentals of Creative Design	1-1-0	GA0M/ GA1M	A,C	
	STM.C412		△	Field Works for Creative Design	1-1-0	GA0M/ GA1M	D,E	outside the Graduate Major in Science and Technology for Health Care and Medicine standard curriculum
	STM.C431	○		Off Campus Training I of STM	0-0-1	GA1M	D	Offered in English as needed
	STM.C511		△	Practical Creative Design	1-2-0	GA0M/ GA1M	C,D,E	outside the Graduate Major in Science and Technology for Health Care and Medicine standard curriculum
	STM.C512		△	Management for Business Creation	0.6-0-0.4	GA0M/ GA1M	D,E	outside the Graduate Major in Science and Technology for Health Care and Medicine standard curriculum

	STM.C531	○		Off Campus Training II of STM	0-0-2	GA1M	D	Offered in English as needed
	STM.C532	○		Off Campus Training III of STM	0-0-4	GA1M	D	Offered in English as needed
	CAP.E422			Presentation Practice	0-1-0	GA1M	E	【Chemical Science and Engineering】
	CAP.E521			Researcher Ethics and Engineer Ethics	1-0-0	GA0M	D	【Chemical Science and Engineering】
	ENR.J409			Introduction to Intellectual Property System	2-0-0	GA0M/ GA1M	B,C	【Energy Science and Informatics】
	LST.A413			Career Development Seminars	2-0-0	GA0M/ GA1M	B,D,E	【Life Science and Technology】
	LST.B404		★	International Career Development Basics	1-1-0	GA0M/ GA1M	A,B,C,D,E	【Life Science and Technology】
	LST.C401		★	Institutional Training	0-2-0	GA0M/ GA1M	A,B,D,E	【Life Science and Technology】 (Intended for IGP students)
	LST.C501			MS Internship 1	0-1-0	GA1M	D,E	【Life Science and Technology】 Offered in English as needed
	LST.C502			MS Internship 2	0-2-0	GA1M	D,E	【Life Science and Technology】 Offered in English as needed
	LST.C503			MS Internship 3	0-4-0	GA1M	C,D,E	【Life Science and Technology】 Offered in English as needed
	LST.C504			MS Internship 4	0-6-0	GA1M	C,D,E	【Life Science and Technology】 Offered in English as needed
	LST.C506		★	Overseas Research Training 1 (Tsinghua University)	0-1-0	GA0M	B,E	【Life Science and Technology】 (Intended for Tsinghua Univ. PG students)
	LST.C507		★	Overseas Research Training 2 (Tsinghua University)	0-1-0	GA1M	B,E	【Life Science and Technology】 (Intended for Tsinghua Univ. PG students)

Entrepreneurship Courses	STM.R401			Masters' Recurrent Program 1-1 of STM	0-0-1	GA0M/ GA1M	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)
	STM.R402			Masters' Recurrent Program 1-2 of STM	0-0-1	GA0M/ GA1M	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)
	STM.R501			Masters' Recurrent Program 2 of STM	0-0-2	GA0M/ GA1M	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)

○: course from this major, ★: course given in English

Credits in Entrepreneurship Courses must be attained from among the above-listed courses and those listed as such in the Liberal Arts and Basic Science Courses Guide.

＊GA: Graduate Attributes

8. Research Related to the Completion of Master’s Theses

In the Master's thesis research, students experience the research process and aim to improve problem-setting abilities, problem-solving abilities and communication skills. An example of the flow of the Master's thesis research for this is shown below. The evaluation of the academic outcome is carried out as appropriate. Students also consider the course plan as related to direction of their thesis research.

・Presentation of Research Plan and Interim Presentation

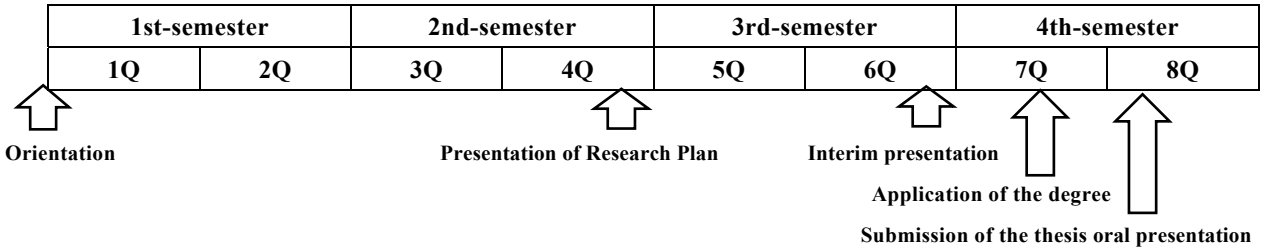
It is important to conduct research systematically and check the progress to produce research results. Students conduct "Presentation of Research Plan" (Research Planning for Master Thesis I) in 4Q and "Interim presentation" (Research Planning for Master Thesis II) in 6Q to understand their research background and purpose clearly.

・Master's Thesis Review Criteria

The Master's thesis and its overview must be a self-authored thesis written in English. The thesis must include the student's original consideration, and also include new findings in the Science and Technology for Health Care and Medicine field or useful research that contributes to the development of the Science and Technology for Health Care and Medicine field.

・Master's Thesis Review Procedure

After preliminary review by the examiner, oral presentations will be made for final review and evaluation. The oral presentations must be given in English.



9. Seamless Transition between Degree Programs

In the Science and Technology for Health Care and Medicine course, we cultivate people who have the basic academic skills to deeply understand people and society and high-level, multidisciplinary expertise in science and technology, a broad outlook and ability to think deeply, comprehensive decision-making abilities, a strong sense of ethics and technology, and a global perspective and international mindset. These people will be able to advance original and challenging cutting-edge research and development, and will have the creativity and leadership to pioneer new fields beyond existing areas of specialization and the ability to act globally. The learning objectives for this are to acquire the following abilities:

- Basic expertise to be able to integrate a wide range of specialty fields and understand specialties in other academic disciplines as needed for a multidisciplinary understanding of science and technology for health care and medicine.
- The ability to address complex problems, uncover and identify issues, and develop research plans.
- The communication and leadership abilities needed to advance international research.

In the curriculum for the doctoral course, in the 600 series, Research Planning for Doctoral Thesis I of STM, Research Planning for Doctoral Thesis II of STM, STM Seminar S1~F5, Teaching methods for Science and Technology for Health Care and Medicine, STM International Internship, International Presentation III & IV of STM, Research Working in Company of STM, STM off-campus advanced training I & II have been established, not only for improvement of expertise through cutting-edge research based on the curriculum from the 400 series. It is an organic curriculum that can effectively improve communication skills and leadership skills.

【Doctoral Degree Program】

1. Outline

With the expertise in science, engineering and dental/medical fields, and the multidisciplinary expertise that is essential to research and development in science and technology for health care and medicine that was obtained prior to the Master's program as a foundation, students will acquire the ability to examine the essence and universality of individual issues, leading to solutions. At the same time, the program develops outstanding individuals who have the ability to take on the challenge of pioneering new fields, display international leadership, and contribute to human well-being and the development of science and technology.
Specifically, students will:

1. Acquire advanced professional knowledge in their own research field through lab seminars and research planning for doctoral thesis subjects, and cultivate a wide range of outstanding expertise and ethics in the field of Science and Technology for Health Care and Medicine.
2. Foster leadership skills, internationality and communication skills in teaching methods and international presentation subjects, and obtain career experience by conducting international internships and research in company subjects.
3. Foster outstanding creativity, task-setting abilities and problem-solving skills that can lead the international community through conducting the world's highest level of research in doctoral thesis research.

2. Competencies Developed

The learning objective of this Doctoral course is to acquire the following abilities and knowledge to a higher standard than the Master's course in order to achieve the goals listed above:

- Knowledge about natural sciences, bioethics, the foundation of health, medical and environmental sciences necessary for research and development in the science and technology for health care and medicine field.
- Advanced professional knowledge and skills related with science and technology for health care and medicine in each disciplinary field.
- Fundamental expertise that can understand different disciplinary knowledge.
- Ability to challenge and explore new research & development areas.
- The ability to identify issues in society and solve these issues by using one's skills and creativity.
- Communication and leadership skills that enable one to accurately convey their ideas and skills to others and collaborate on tasks.

3. Learning Goals

To acquire the skills listed in "Competencies Developed", students in this program will have the following training:

A) Acquiring fundamental expertise in the field of "Science and Technology for Health Care and Medicine".

Acquiring fundamental expertise in the research field of "Science and Technology for Health Care and Medicine" through required courses and restricted elective courses in Major Courses.

B) Acquiring advanced expertise in the field of "Science and Technology for Health Care and Medicine".

Acquiring advanced professional knowledge and skills through science, engineering and dental/medical courses in Major Courses of "Science and Technology for Health Care and Medicine".

C) Acquiring research-executing skills, problem-solving.

Acquiring research-executing skills and problem-solving skills through Research Seminars, Research-Related Courses, as well as research working in lab by using obtained expertise.

D) Acquiring experience in relation to engineering ethics and society.

According to lectures by teachers working in industries, learning ethical and social values relevant to society and research and understanding engineering ethics.

E) Acquiring communication skills.

Learning advanced communication skills required as international professionals through discussion with researchers in the country and overseas.

F) Cultivating sophistication in relation to liberal arts and humanities.

Learning liberal arts and humanities required as researchers through Humanities and Social Science Courses, Entrepreneurship Courses.

4. IGP Completion Requirements

The following requirements must be met to complete the Doctoral Degree Program of this major.

1. Attain a total of 24 credits or more from 600-level courses.

2. From the courses specified in the Graduate Major in Science and Technology for Health Care and Medicine standard curriculum, you must meet the following requirements (see Table D1 below):

- You have acquired 12 credits from Research Seminars;
- You have acquired 4 credits from Research-related Courses;
- Must acquire a minimum of 2 credits from restricted elective Major Courses;
- Must acquire a minimum of 6 credits from Liberal Arts and Basic Science Courses (2 credits from Humanities and Social Science Courses, and 4 credits from Entrepreneurship Courses).

3. Pass the doctoral dissertation review and defense.

Table D1 shows course categories and the number of credits required to complete the Doctoral Degree Program of this major. It also shows the required minimum credits in each course category and points to be noted when selecting the required courses and electives.

The learning goals to be obtained by students through courses are listed as “associated learning goals”. Prior to registering courses, students need to fully understand the course goals.

Table D1. Graduate Major in Science and Technology for Health Care and Medicine Completion Requirements

Course category		<Required courses> Required credits	<Electives> Minimum credits required	Minimum credits required	Associated learning goals	Comments
Liberal arts and basic science courses	Humanities and social science courses		2 credits	6 credits	D, F	
	Entrepreneurship Courses		4 credits		D, F	All Graduate Attributes (GA) should be acquired. (Refer to Section 7 for the definition of GA.)
	Other courses					
Core courses	Research seminars	STM Seminar S3 STM Seminar F3 STM Seminar S4 STM Seminar F4 STM Seminar S5 STM Seminar F5 A total of 12 credits, 2 credits each from the above courses.		18 credits	C, E	
	Research-related courses	Research Planning for Doctoral Thesis I of STM Research Planning for Doctoral Thesis II of STM A total of 4 credits			C, E	
	Major courses		2 credits		A, B, D, E	
	Major Courses and Research-related courses <u>outside</u> the Graduate Major in Science and Technology for Health Care and Medicine standard curriculum					

Total required credits	**A minimum of 24 credits including those attained according to the above conditions**
Note	**・Japanese Language and Culture Courses offered to international students can be recognized as equivalent to the Humanities and Social Science Courses of the corresponding course level.** **・For details of the Liberal Arts and Basic Science Courses, please refer to the relevant sections.**

5. IGP Courses

Table D2 shows the Core Courses of the Doctoral Degree Program of this major. Graduate Majors listed in the Comments column offer core courses that are recognized as equivalent to the corresponding Major Courses or Research-related Courses in the standard curriculum of this major.

Table D2. Core Courses of the Graduate Major in Science and Technology for Health Care and Medicine

Course category		Course number	Course title			Credits	Competencies	Learning goals	Comments
Research seminars	600 level	STM.Z691.R	◎	★	STM Seminar S3	0-2-0	1,3,5	C,E	
		STM.Z692.R	◎	★	STM Seminar F3	0-2-0	1,3,5	C,E	
		STM.Z693.R	◎	★	STM Seminar S4	0-2-0	1,3,5	C,E	
		STM.Z694.R	◎	★	STM Seminar F4	0-2-0	1,3,5	C,E	
		STM.Z695.R	◎	★	STM Seminar S5	0-2-0	1,3,5	C,E	
		STM.Z696.R	◎	★	STM Seminar F5	0-2-0	1,3,5	C,E	
Research-related	600 level	STM.B671.R	◎	★	Research Planning for Doctoral Thesis I of STM	0-2-0	1,2,3,4,5	C,E	
		STM.B672.R	◎	★	Research Planning for Doctoral Thesis II of STM	0-2-0	1,2,3,4,5	C,E	
Major courses	600 level	STM.C601.A	○		Teaching methods for Science and Technology for Health Care and Medicine	1-0-1	1,3,4,5	C,E	Offered in English as needed
		STM.C631.A	○	★	STM International Internship	0-0-4	1,2,3,4,5	B,C,D	
		STM.C632.A	○		Research Working in Company of STM	0-2-2	1,5	B,C,D	
		STM.C633.A	○		STM off-Campus advanced training 1	0-0-1	1,2,3,4,5	B,C,D	Offered in English as needed
		STM.C634.A	○		STM off-Campus advanced training 2	0-0-2	1,2,3,4,5	B,C,D	Offered in English as needed
		STM.C635.L			Cooperative Education through Research Internships of STM	0-0-4	1,3,4,5	B,C,D	Offered in English as needed

		STM.C641.A	○	★	International Presentation III of STM	0-1-0	1,2,3,4,5	E	
		STM.C642.A	○	★	International Presentation IV of STM	0-1-0	1,2,3,4,5	E	
		STM.K605.A	○	★	International Career Development Advanced	1-1-0	1,2,3,4,5	A,B,C,D,E	【Life Science and Technology】(LST.B605)
		STM.U601.L		★	Biomedical Science	2-0-0	1		【Biomedical Sciences and Engineering】
		STM.U602.L		★	Tissue Regenerative Bioceramic Materials Science	1-0-0	1		【Biomedical Sciences and Engineering】
		STM.U603.L		★	Organic Biomaterials Science	1-0-0	1		【Biomedical Sciences and Engineering】
		STM.U604.L		★	Mathematical and numerical methods for biomedical information analysis	1-0-0	1		【Biomedical Sciences and Engineering】
		STM.U605.L		★	Advanced Biosensing Devices	1-0-0	1		【Biomedical Sciences and Engineering】
		STM.U606.L		★	Advanced Medical Device and System	1-0-0	1		【Biomedical Sciences and Engineering】
		STM.U607.L		★	Wearable & IoT Devices and Applications	1-0-0	1		【Biomedical Sciences and Engineering】
		STM.U608.L		★	Advanced Chemical Biology	1-0-0	1		【Biomedical Sciences and Engineering】

Note：

• ◎：Required course, ○：Restricted elective, ★：Course given in English

• Competencies: 1 = Specialist skills, 2 = Liberal arts skills, 3 = Communication skills, 4 = Applied skills (inquisitive thinking and/or problem-finding skills), 5 = Applied skills (practical and/or problem-solving skills)

• The character preceding the three digits in the course number denotes the course's subdiscipline (i.e., "D" represents the subdiscipline code in the course number ABC.D600.R): B: Research-related, C: Common Major Course, K: Life Science and Technology, U: Biomedical Sciences and Engineering, Z: Research seminars

6. IGP Courses That Can Be Counted as Humanities and Social Science Courses

None

7. IGP Entrepreneurship Courses and IGP Courses That Can Be Counted as Entrepreneurship Courses

In order to fulfill the completion requirements for the doctoral degree program, students must attain at least four credits in Entrepreneurship Courses, and should satisfy all of the Graduate Attributes (GAs) specified in Table D-1 of the "Entrepreneurship Courses" listed as "Liberal Arts and Basic Science Courses" in the Guide to Graduate Education and International Graduate Program, as well as shown below. Students will be evaluated in regards to GA achievements at the time of their degree completion. For courses with two GAs, both GAs stipulated for the courses are considered to be acquired if students attain the corresponding credits for those courses.

Entrepreneurship Courses and Major Courses that enable students to acquire GAs and are recognized as equivalent to Entrepreneurship Courses, offered by the Graduate Major, are listed in Table D3 below. Students can also acquire GAs and credits by taking the Entrepreneurship Courses offered by the Center for Entrepreneurship Education (CEE) listed as "Liberal Arts and Basic Science Courses" in the Guide to Graduate Education and International Graduate Program.

It must be noted that credits attained from courses that are recognized as Entrepreneurship Courses can be counted towards the completion requirements of the doctoral degree program, either for Major Courses or for Entrepreneurship Courses (not for both). Nevertheless, even in cases where credits pertaining to courses that are not considered as Entrepreneurship Courses are attained, the associated GAs may be considered by the Graduate Major to have been acquired.

For Graduate Attributes, refer to the Guide to Entrepreneurship Courses.
The Graduate Attributes of the Doctoral Degree Program are listed in Table D-1 as follows:

GA0D: You can clearly design your own career and contribute to realizing scientific, technological, or social innovation through a comprehensive understanding of the knowledge, skills, social responsibilities and ethics required to become an active member of academia and/or industry.

GA1D: You can lead in realizing scientific, technological, or social innovation by acquiring advanced leadership skills, entrepreneurship, knowledge and expertise, and by developing social responsibility necessary for materializing your designed career.

Table D3. Courses of the Graduate Major in Science and Technology for Health Care and Medicine recognized as equivalent to Career Development, and Entrepreneurship Courses

Course category	Course number	Course title			Credits	GA*	Learning goals	Comments
Courses that can be counted as Entrepreneurship Courses	STM.C631	○	★	STM International Internship	0-0-4	GA1D	B,C,D	
	STM.C632	○		Research Working in Company of STM	0-2-2	GA1D	B,C,D	for Graduate Program for Working Adults students
	STM.C633	○		STM off-Campus advanced training 1	0-0-1	GA1D	B,C,D	Offered in English as needed
	STM.C634	○		STM off-Campus advanced training 2	0-0-2	GA1D	B,C,D	Offered in English as needed
	STM.C635			Cooperative Education through Research Internships of STM	0-0-4	GA0D/ GA1D	B,C,D	
	LST.B605	○	★	International Career Development Advanced	1-1-0	GA0D/ GA1D	A,B,C,D,E	【Life Science and Technology】

	LST.C601			PhD Internship 1	0-1-0	GA1D	A,C,E	【Life Science and Technology】 Offered in English as needed
	LST.C602			PhD Internship 2	0-2-0	GA1D	A,C,E	【Life Science and Technology】 Offered in English as needed
	LST.C603			PhD Internship 3	0-4-0	GA1D	A,B,C,E	【Life Science and Technology】 Offered in English as needed
	LST.C604			PhD Internship 4	0-6-0	GA1D	A,B,C,E	【Life Science and Technology】 Offered in English as needed
Entrepreneurship Courses	STM.R601			Doctoral Recurrent Program 1 of STM	0-0-1	GA0D/ GA1D	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)
	STM.R602			Doctoral Recurrent Program 2-1 of STM	0-0-2	GA0D/ GA1D	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)
	STM.R603			Doctoral Recurrent Program 2-2 of STM	0-0-2	GA0D/ GA1D	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)

	STM.R604			Doctoral Recurrent Program 3 of STM	0-0-3	GA0D/ GA1D	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)
	STM.R605			Doctoral Recurrent Program 4 of STM	0-0-4	GA0D/ GA1D	C,D,E	Entrepreneurship Course offered by the Graduate Major in Science and Technology for Health Care and Medicine. (Cannot be counted for Major Courses)

○: course from this major, ★: course given in English

Credits in Entrepreneurship Courses must be attained from among the above-listed courses and those listed as such in the Liberal Arts and Basic Science Courses Guide.

＊GA: Graduate Attributes

The Center of Data Science and Artificial Intelligence may offer courses that are recognized as equivalent to Entrepreneurship Courses in addition to those listed as such under “Liberal Arts and Basic Science Courses” in the Guide to Graduate Education and International Graduate Program. For details about available courses or completion requirements, please refer to the study guide of the center that offers the relevant program.

8. Research Related to the Completion of Doctoral Theses

In the doctoral thesis research, in addition to problem-solving skills, we foster problem setting ability and improvement of communication skills in English. These are acquired in the process of setting and evaluating the results of the studies. An example of the flow of the doctoral thesis is shown below.

・Interim Presentation

It is important to conduct research systematically and check the progress to produce research results. Thus, students conduct Research Planning for Doctoral Thesis I in 4Q, and Research Planning for Doctoral Thesis II in 9Q-11Q.

・Judgement Criterion of the Final Defense of Doctoral Thesis

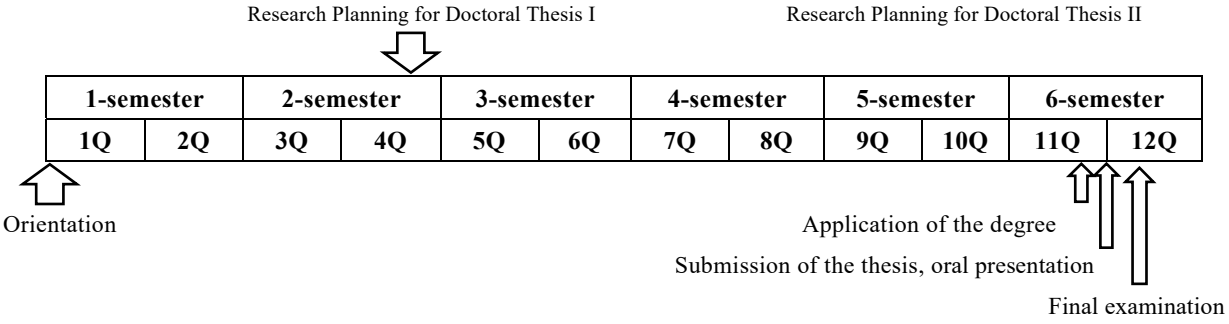
Those who wish to conduct the final defense of their doctoral thesis must undergo prior examination at Research Planning for Doctoral Thesis II and obtain the approval to apply for it.

・The Doctoral Thesis Review Criteria

The doctoral thesis must be a self-authored thesis written in English. The content of the thesis must have novelty, creativity, and sufficient academic value in the field of Science and Technology for Health Care and Medicine, and also major parts of the content must be published in international academic journals or the same level as the contents in international journals.

・The Doctoral Thesis Review Procedure

After passing the interim review, the thesis shall be submitted for oral presentation, followed by preliminary review and evaluation by the examiners. In the final review, the ability to understand the relevant field (including English proficiency) will be confirmed. The oral presentation of the doctoral thesis must be given in English.



STM Course Research Planning for Master Thesis／Doctoral Thesis

☆Master's course student

STM.B471

Research Planning for Master Thesis I of STM

Time: 4Q （~ August）
Poster Presentation

STM.B571

Research Planning for Master Thesis II of STM

Time: 6Q （~ January）
Oral Presentation

★Doctoral course student

STM.B671

Research Planning for Doctoral Thesis I of STM

Time: 4Q （~ August）
Poster Presentation

STM.B672

Research Planning for Doctoral Thesis II of STM

Time: 9Q～11Q
※Preliminary Review of Doctoral Thesis

Outstanding presenter(s) will be commended with the Poster Award !

The above schedule shows the standard course period. The format is subject to change depending on the situation.

人間医療科学技術コース 修士／博士 論文研究計画論

☆修士課程

STM.B471

人間医療科学技術
修士論文研究計画論第一

時期：入学後4Qめ（8月頃）
形式：ポスター発表

STM.B571

人間医療科学技術
修士論文研究計画論第二

時期：入学後6Q め（1月頃）
形式：口頭発表

★博士課程

STM.B671

人間医療科学技術
博士論文研究計画論第一

時期：入学後4Q め（8月頃）
形式：ポスター発表

STM.B672

人間医療科学技術
博士論文研究計画論第二

時期：入学後9Q～11Qめ
※博士事前審査を兼ねる

修士／博士論文計画論第一（ポスター）では、優秀発表者の表彰があります！
各科目の履修時期は標準のものです。形式は状況により変更になることがあります。

Course Schedule (3Q, 4Q, 3-4Q) – STM
人間医療科学技術コース開講科目 3Q， 4Q， 3-4Q 開講講義の日程について

1. Schedule and Delivery Method of Major Courses (3Q, 4Q, 3-4Q)

開講予定の専門科目の開講時期と講義形式 ： 3Q， 4Q， 3-4Q

★：英語開講科目 Given in English

No. 科目コード	Course Title 科 目	Q	Day･Period 曜日･時限	Day of Starting 講義開始･期間	Delivery Method 講義形式
STM.A401 ★	Introduction to Biomedical Instrumentation (医療機器概論)	3Q	Thu. 5 - 6 period 木 5 - 6 時限	Start10/2 End 11/20 10/2開始 11/20まで	Zoom 遠隔講義
STM.C405 ★	Outline of Science and Technology for Health Care and Medicine II (人間医療科学技術概論第二)	3Q	Fri. 3 - 4 period 金 3 - 4 時限	Start10/3 End 11/21 10/3開始 11/21まで	Zoom 遠隔講義
STM.C406	人間医療科学技術特別講義第一	3Q	集中講義 Intensive	10/20 （5-8 時限） 10/27 （5-8 時限） 11/10 （5-10 時限）	対面講義 Face-to-face Room TBD
STM.C407	人間医療科学技術特別講義第二	4Q	集中講義 Intensive	12/5 （5-6 時限） 12/12 （5-6 時限） 12/19（5-6 時限） 12/26（5-6 時限） 1/9（5-6 時限） 1/30（5-6 時限） 2/6（5-6 時限）	Zoom 遠隔講義

STM.C423 ★	Industrial design (産業デザイン)	4Q	集中講義 Intensive	（詳細は授業担当教員に確認してください。）	対面講義 Face-to-face B1-3F・PEECs Lab
STM.C442 ★	Presentation for Science and Engineering II (プレゼンテーション実践第二)	3Q	Thu. 3 - 4 period 木 3 - 4 時限	Start10/2 End 11/20 10/2開始 11/20まで	対面講義 Face-to-face Room J2-303
STM.A501 ★	Nanobio Materials and Devices (ナノバイオ材料・デバイス概論)	4Q	Tue. 3 - 4 period Fri. 3 - 4 period 火 3 - 4 時限 金 3 - 4 時限	Start12/5 End 1/30 12/5開始 1/30まで	対面講義 Face-to-face Room J2-302
STM.C502 ★	Advanced Science and Technology for Health Care and Medicine II (先端人間医療科学技術第二)	4Q	Tue. 1 - 2 period 火 1 - 2 時限	Start12/9 End 1/27 12/9開始 1/27まで	Zoom 遠隔講義
STM.C511	デザイン創造実践	3～4Q	火 5 - 8 時限	（詳細はPEECs HP等で確認してください。）	対面講義 B1-3F・PEECs ラボ
STM.C512	事業創出マネジメント	4Q	Intensive 集中講義	（詳細はPEECs HP等で確認してください。）	対面講義 B1-3F・PEECs ラボ
STM.B471-02 ★	Research Planning for Master Thesis I of STM (人間医療科学技術修士論文研究計画論第一)	4Q	Intensive 集中講義	科目の実施方法等は，コースから，履修対象者あてに直接連絡する予定です。 We will directly inform the students concerned about how these courses will be conducted.	
STM.B571-02 ★	Research Planning for Master Thesis II of STM (人間医療科学技術修士論文研究計画論第二)	4Q			
STM.B671-02 ★	Research Planning for Doctoral Thesis I of STM (人間医療科学技術博士論文研究計画論第一)	4Q			

STM.B672-03 ★	Research Planning for Doctoral Thesis II of STM (人間医療科学技術博士論文研究計画論第二)	3Q	Intensive 集中講義	この科目の履修については，指導教員と相談してください。 Please consult with your academic supervisor about taking this course.
STM.B672-04 ★	Research Planning for Doctoral Thesis II of STM (人間医療科学技術博士論文研究計画論第二)	4Q	Intensive 集中講義	

* Please refer to the timetable posted on the following website for courses offered in other graduate majors within the standard study program.

(ENG) https://www.titech.ac.jp/english/student/students/life/graduate-timetables

※ 標準学修課程内の他コース開設専門科目は，ＨＰ掲載の時間割等を参照してください。

(JPN) https://www.titech.ac.jp/student/students/life/graduate-timetables

* STM Seminar S1～F5 : Follow your academic supervisor's instructions.

※ 講究科目は，指導教員の指示に従ってください。

2. Remote Lecture by Zoom: Notice for Attendance

Zoomでの遠隔講義 受講に関する注意事項

* Please attend the remote lecture from your home or laboratory.

* Be aware that attending remote lectures on a smartphone may result in very high data usage charges.

* Lecture schedules are subject to change.
Please check the Science Tokyo website and contact from each course instructor or your academic supervisor to confirm your course schedule, including those yet to be determined.

* Your Science Tokyo student email address and the LMS will be are used for information about remote lecture attendance and small test submissions. Please register for courses early to ensure you can check your email and access the LMS. Please follow the instructions provided by each course instructor for details.

(JPN)

・配信される講義を研究室・自宅等で受講して下さい。

・スマホ等での遠隔講義の受信は通信料が膨大になる可能性があります。注意してください。

・講義のスケジュールは変更になる可能性があります。
未定のものも含めて，東京科学大学のホームページ，各講義担当教員あるいは研究室指導教員からの連絡を確認して履修してください。

・遠隔講義の受講方法・小テストの提出方法など，東京科学大学の学生メールアドレスとLMSが活用されます。メールの確認やLMS等への登録のための早めの履修登録をお願いします。詳細は各講義担当教員の指示に従ってください。

Internship Courses

○**STM.C431 Off Campus Training I of STM (0-0-1) About 1 week**

○**STM.C531 Off Campus Training II of STM (0-0-2) About 2 weeks**

○**STM.C532 Off Campus Training III of STM (0-0-4) 2.5 months or longer**

○**STM.C633 STM off-campus advanced training 1 of STM (0-0-1) About 1 week**

○**STM.C634 STM off-campus advanced training 2 of STM (0-0-2) About 2 weeks**

Course description and aims (From the syllabus – common to all courses)

This course is designed to give students experiences in the social world at companies or institutes conducting research related to "Science and Technology for Health Care and Medicine." It is necessary to discuss with the student's supervisor to decide on the host agency for the off-campus training. The number of credits depends on the student's working period at the host agency.

○**STM.C631 STM International Internship (0-0-4) 2.5 months or longerCourse description and aims**

This course is designed to give students experiences in the real world at domestic or international universities, companies, or institutes conducting research related to "Science and Technology for Health Care and Medicine." It isnecessary to discuss with the student's supervisor to decide on the host agency.

○**STM.C632 Research Working in Company of STM (0-2-2) (for Working Adults)**

Course description and aims

Students who belong to companies or research institutions summarize and report on their activities related to the topics of "Science and Technology for Health Care and Medicine" at their off-campus institutions.

○**STM.C635 Cooperative Education through Research Internships of STM (0-0-4)**

This course is for a long-term (at least 2 months), research internship with an allowance for doctoral degree students as part of graduate school education.

When taking this course, be sure to refer to the "Cooperative Education through Research Internships," which is available at the Science Tokyo website under "For Current Students > Academic Life > Cooperative Education through Research Internships":

https://www.titech.ac.jp/english/student/students/life/job-i

Students who have been confirmed to have no problems with their study and research plans after prior consultation with their academic supervisor are eligible.

Course Enrollment

○ **Important Notes**

The content and purpose of the application will be examined to determine whether or not the application can be approved as an internship course. If the content of the internship is likely a part of job hunting, it may not be approved. If a contract cannot be concluded with the internship host, the activity cannot be approved as an internship course. For example,

- When the internship host may not agree to conclude a contract (e.g., the contract with an overseas company or institution is often difficult)

- When there is insufficient time to complete the conclusion of the contract before the start of the internship.
- If the internship host proposes significant changes to the contract template specified by Science Tokyo, which requires Science Tokyo to review the changes, and as a result, there is not sufficient time to finalize the contract before the start of the internship.

In principle, the student is responsible for negotiating the contract based on the contract template specified by Science Tokyo, but the STM office handles confirmation and coordination with the Science Tokyo Administration regarding any changes in the content, and for the subsequent conclusion of the contract.

①Before the Internship (at least 2 months)

・Register for the appropriate course(s) for the period (1-2Q or 3-4Q) on the Web Services for Students and Faculty.
・Submit the **"Application Form for STM Master's/Doctoral Internship"** to the STM office after receiving approvalfrom the Academic Supervisor. ※Other required documents should also be attached.

②After the Internship (about 1 month)

・Submit the **"Report on STM Master's/Doctoral Internship"** to the STM office after receiving approval from the Academic Supervisor. ※Other required documents should also be attached.

③The following procedures shall be followed for STM.C632 Research Working in Company

・Register for the appropriate course(s) for the period (1-2Q or 3-4Q) on the Web Services for Students and Faculty.
・Submit the **"Report on Research Working in Company"** to the STM office after receiving approval from theAcademic Supervisor after one month of research work.

International Presentation Courses

○STM.C542 International Presentation I of STM (0-1-0)
○STM.C543 International Presentation II of STM (0-1-0)
○STM.C641 International Presentation III of STM (0-1-0)
○STM.C642 International Presentation IV of STM (0-1-0)

Course description and aims

The objective of this course is to cultivate international presentation (and discussion) skills through poster or oral presentations in English at international conferences based on specialized knowledge in the field of Science and Technology for Health Care and Medicine.

①Register for the appropriate course(s) for the period (1-2Q or 3-4Q) on the Web Services for Students and Faculty.
②Submit the **"Report on International Presentation"** to the STM office after receiving approval from the Academic Supervisor after one month of International presentation. ※Other required documents should also be attached.

The prescribed form is available on the STM web site. (Access is limited to on-campus only)
This will be posted on the course website

In charge of these courses: Head of STM Graduate Major, (AY2025 Professor Nohiko Koshikawa)
※Grades are determined after discussion and approval at the STM meeting, so there may be a delay when grades are available.

Inquiry：STM Office　E-mail : stm.spt@adm.isct.ac.jp　Ext: 5943　B2bldg, B-121

人間医療科学技術コースインターンシップ科目　履修案内

Information on internship STM courses

科目について

修士課程

〇STM.C431「人間医療科学技術学外研修第一」(0-0-1)　1週間程度

〇STM.C531「人間医療科学技術学外研修第二」(0-0-2)　2週間程度

〇STM.C532「人間医療科学技術学外研修第三」(0-0-4)　2.5か月以上

講義の概要とねらい(シラバスより-全科目共通)

人間医療科学技術に関係の深い企業・研究機関等において、実社会を体験することの有意義性を認め、 奨励する。学外研修先を決定する際には、**事前に指導教員等と十分な打ち合わせを行うことが必要である。**取得単位数に応じた研修期間を設定する。

博士課程

〇STM.C633「人間医療科学技術実践研修第一」(0-0-1)　1週間程度

〇STM.C634「人間医療科学技術実践研修第二」(0-0-2)　2週間程度

講義の概要とねらい(シラバスより-全科目共通)

人間医療科学技術に関係の深い企業・研究機関等において、実社会を体験することの有意義性を認め、奨励する。学外研修先を決定する際には、**事前に指導教員等と十分な打ち合わせを行うことが必要である。**取得単位数に応じた研修期間を設定する。

〇STM.C631「STM International Internship」(0-0-4)　2.5か月以上

講義の概要とねらい(シラバスより)

国内外を問わず人間医療科学技術に関係の深い大学・企業・研究機関等において、実社会を体験することの有意義性を認め、奨励する。**インターンシップ先を決定する際には、事前に指導教員等と十分な打ち合わせを行うことが必要である。**

〇STM.C632「人間医療科学技術企業実習」(0-2-2)(博士課程社会人対象)

講義の概要とねらい(シラバスより)

企業等に所属している学生が所属する学外機関における人間医療科学技術に関連する実際の活動内容をまとめ、報告する。

〇STM.C635「ジョブ型研究インターンシップ(人間医療科学技術コース)」

講義の概要とねらい(シラバスより)

指導教員と事前協議の上、学修計画及び研究計画等に支障のないことが確認された学生を対象とする。

本科目を履修する際には、本学Webページの

「在学生向け＞授業・履修＞ジョブ型研究インターンシップ」

https://www.titech.ac.jp/student/students/life/job-i

に掲載の「ジョブ型研究インターンシップについて」を必ず参照すること。

履修について

・重要

本コースでは、申請の内容や目的等を精査し、インターンシップ科目としての認定の可否を判定します。

就職活動に繋がると思われる内容等の場合は認定されない場合があるので留意すること。

インターンシップ先との契約書及び覚書の締結が不可の場合はインターンシップ科目としては認定できません。以下のようなケースがあります。

・インターンシップ先の事情により締結できない場合(海外企業、機関との契約は非常に困難)

・締結がインターンシップ開始前までに完了できない、あるいは完了できないと見込まれる場合

・本学で決めたひな型に対して、インターンシップ先が大幅な変更を申し出た場合、大学側での検討が必要となり、結果的にインターンシップ開始前までに締結が完了できない場合

なお、本学のひな型に基づく契約書及び覚書の交渉については、原則として履修者本人に行っていただきますが、内容の変更等に関する大学への確認作業及びその調整、その後の締結作業はSTMコース支援事務が担当します。

① インターンシップ前

・教務Web上より、実施した期間に応じた科目(1-2Qあるいは3-4Q)を履修登録をする。

・インターンシップ先が企業や研究機関等の場合、本学との契約が必要となるため、インターンシップ開始の遅くとも**2か月前までに**所定様式 **「人間医療科学技術コース　修士／博士インターンシップ申請書」**により申請をする。
（指導教員確認後、研究室または本人からSTMコース支援事務へ提出）
※様式には必要な添付書類等が記載されているので、添付漏れ等の不備がないように注意すること。
・学研災・学研賠の加入が必要

② インターンシップ終了後1か月以内を目安に
・所定様式 **「人間医療科学技術コース　修士／博士インターンシップ報告書」** により報告する。（指導教員確認後、研究室または本人からSTMコース支援事務へ提出）
※様式には必要な添付書類等が記載されているので、添付漏れ等の不備がないように注意すること。

③「人間医療科学技術企業実習」のみ以下のとおり
・教務Web上より、実習期間に応じた科目（1-2Qあるいは3-4Q）を履修登録する。
・実習終了後1か月以内を目安に、所定様式**「人間医療科学技術企業実習　報告書」**により報告する。（指導教員確認後、研究室または本人からSTMコース支援事務へ提出）

人間医療科学技術コース国際プレゼンテーション科目　履修案内

Information on International Presentation

科目について

修士課程

〇STM.C542「International Presentation I of STM」
〇STM.C543「International Presentation II of STM」
講義の概要とねらい（シラバスより-全科目共通）
人間医療科学技術コースの専門性を基礎として、国際会議における英語による口頭発表もしくはポスター発表を行い、国際プレゼンテーション力を養う。

博士課程

〇STM.C641「International Presentation III of STM」
〇STM.C642「International Presentation IV of STM」
講義の概要とねらい（シラバスより-全科目共通）
人間医療科学技術コースの専門性を基礎として、国際会議における英語による口頭発表もしくはポスター発表を行い、国際プレゼンテーション力を養う。さらに発表における質疑応答を通して英語でのディスカッション力を養う。

① 教務Web上より履修登録する。

② 国際学会・会議に参加後
・所定様式**「人間医療科学技術国際プレゼンテーション報告書」**により報告する。
（指導教員確認後、研究室または本人からSTMコース支援事務へ提出）
※様式には必要な添付書類等が記載されているので、添付漏れ等の不備がないように注意すること。
所定様式はSTMコースWebサイトに掲載する予定です。（アクセスは学内限定）
または担当・問い合わせ先にメールにより請求してください。その際、件名に「〇〇〇様式希望」と記入してください（〇〇〇には、上記の該当する様式名を記入してください。）
なお、これらの科目の担当教員はすべてコース主任（2025年度は越川直彦教授）となります。
※コース内会議で審議・認定後に成績が決定するため、成績を確認できる時期が遅くなることがあります。

◎担当・問い合わせ先
生命理工学院系担当事務グループ　人間医療科学技術コース支援事務
E-mail：　stm.spt@adm.isct.ac.jp　　内線：5943　場所：すずかけ台キャンパスB2棟1階121号室

人間医療科学技術コース

「人間医療科学技術特別講義第一」

－ 生命がもつ遺伝子とゲノムの理解と制御、そして疾病の発症 －

STM. C406　日本語開講・対面講義（G1 棟の講義室の予定）

概要

本講義では、環境微生物が持つ多様な遺伝子機能の進化的背景から、微生物ゲノムの合成生物学的活用、そしてヒトの疾患に関わるゲノム構造異常の分子機構まで、現代の分子生命科学の最前線を幅広く学びます。分子進化、ゲノム解析、バイオインフォマティクス、合成生物学に加え、疾患の発症機構やゲノム医療に関心のある方にとっても、貴重な学びの場となるはずです。

日程と担当教員：

１０月２０日（月）5-8 限

石川 聖人 先生（長浜バイオ大学 バイオサイエンス学部 准教授）

「細菌の生物機能とその利用」

１０月２７日（月）5-8 限

モリテツシ 先生（東京農工大学 工学研究院 准教授）

「環境微生物の利活用を支える技術的進展」

１１月１０日（月）5-10 限

畠山 慶一 先生（静岡県立静岡がんセンター 研究所　ゲノム解析研究部 部長）

「ゲノム解析に支えられるがんゲノム医療の実際と今後の展望と課題」

＊すずかけ台キャンパス講義室（詳細未定）にて対面で実施し、グループワークを実施することがあります。

履修登録者は全 7 回（3 日間）の講義を受講してください。

講義は日本語で行われます。

連絡教員　田中 祐圭（tanaka.m@mct.isct.ac.jp）

人間医療科学技術コース

「人間医療科学技術特別講義第二」

－ 生体反応の情報を用いた認知行動評価 －

STM. C407　日本語開講・オンライン講義

概要

本講義では、生体反応の情報を用いた認知行動評価について、研究事例を基に可能性や問題点を検討します。これらの事例を基に、新たな認知行動の評価可能性を設計する演習を行います。

講師

中山実　名誉教授

日程と講義内容：

(1) 12 月 5 日(金) 5,6 限: 眼球運動計測の応用事例
一般的な眼球運動研究、診断評価事例など

(2) 12 月 12 日(金) 5,6 限: 眼球運動による運転行動の評価
自動車運転、flight operation などの研究事例

(3) 12 月 19 日(金) 5,6 限: 瞳孔を用いた行動評価
情動応答、認知負荷による反応分析

(4) 12 月 26 日(金) 5,6 限: 瞳孔による眼疾患の検討
AMD や認知機能と瞳孔応答に関する検討

(5) 1 月 9 日(金) 5,6 限: 脳波を用いた行動評価
視覚情報、情動、認知機能による脳波変化

(6) 1 月 30 日(金) 5,6 限: 言語情報や学習行動の評価事例
言語情報分析の基礎、学習理解や Nursing note 分析

(7) 2 月 6 日(金) 5,6 限:認知行動の評価演習
各自の興味に基づいた提案内容の相互評価

＊ZOOM で実施し、グループワークを実施することがあります。
履修登録者は全 7 回（7 日間）の講義を受講してください。
講義は日本語で行われます。

連絡教員　田原麻梨江（tabaru.m.9f4b@m.isct.ac.jp）

修士課程学生用/For Master's Students

研究倫理教育について（修士課程）/ Research ethics education (Master)

人間医療科学技術コース（理工学系）修士課程学生　各位
To Master's students of STM (Science and engineering fields)

人間医療科学技術コース（理工学系）(レベル2)
Science and Technology for Health Care and Medicine Course Science and engineering fields
(Level 2)

本学が研究大学としてさらに発展をするために研究公正を推進することが不可欠となっており、全学生に対して研究倫理教育を実施することとなっています。下記に示した項目および科目には、東京科学大学生として身に付けるべき倫理の内容が含まれています。これらの科目の学修を通じて倫理を身に付けてください（本レベル2はB4～M2 が対象学年です)。
To further develop our university as a research institution, it is essential to promote research integrity. Accordingly, research ethics education will be provided to all students. The items and subjects listed below include the contentsof the ethics to be acquired as Science Tokyo students. Please learn about ethics through these subjects. (This level 2 is for B4-M2).

必須項目 (Requirements)
(1) 「東京科学大学における研究者等の行動規範」の確認
Confirm "Code of Conduct for Researchers at the Institute of Science Tokyo"
https://www.titech.ac.jp/0/about/policies/efforts/activities

(2) APRIN e-Learning 「東京科学大学基本コース(RCR)*」の修了
Completion of APRIN e-learning program " Institute of Science Tokyo Basic Course (RCR)"
https://edu.aprin.or.jp
(教務課よりメールで配付された ID と初期パスワードによりログインする)
*東京科学大学理工学系基本コース(RCR)と読み替えてください。
Log in using the ID and initial password that will be provided by the Student Division via email.

(参考) 本学の研究倫理教育に関するウェブサイト
Website for research ethics education of Science Tokyo
https://www.titech.ac.jp/student/students/life/research-ethics

＊研究倫理教育チェックリスト項目を自己チェック後、指導教員に確認のサインをもらい、その PDF ファイルを APRIN の修了証(東京科学大学基本コース)とともに、指定された期日までにLMSの課題提出機能を使ってアップロードすること(必須)。
＊Please self-check the checklist of research ethics education and obtain confirmation from your academic supervisor. Be sure to submit it as a PDF file along with the APRIN Certificate of Completion via the LMS assignment submission system by the specified deadline.

博士後期課程学生用/For Doctoral Students

研究倫理教育について（博士後期課程）/ Research ethics education (Doctor)

人間医療科学技術コース（理工学系）博士後期課程学生　各位
To Doctoral students of STM (Science and engineering fields)

人間医療科学技術コース（理工学系）(レベル3)
Science and Technology for Health Care and Medicine Course Science and engineering fields
(Level 3)

本学が研究大学としてさらに発展をするために研究公正を推進することが不可欠となっており、全学生に対して研究倫理教育を実施することとなっています。下記に示した項目には、東京科学大学生として身に付けるべき倫理の内容が含まれています。これらの学修を通じて倫理を身に付けてください (本レベル3はD1～D3 が対象学年です)。

To further develop our university as a research institution, it is essential to promote research integrity. Accordingly, research ethics education will be provided to all students. The items and subjects listed below include the contentsof the ethics to be acquired as Science Tokyo students. Please learn about ethics through these subjects. (This level 3 is for D1-D3).

必須項目 (Requirements)
(1) 「東京科学大学における研究者等の行動規範」の確認
Confirm “Code of Conduct for Researchers at the Institute of Science Tokyo”
https://www.titech.ac.jp/0/about/policies/efforts/activities

(2) APRIN e-Learning「JST コース(生命医科学系または理工系) 」の修了
Completion of APRIN e-learning program " JST Course Biomedical(生命医科学系) or Engineering(理工系)"
https://edu.aprin.or.jp
(教務課よりメールで配付された ID と初期パスワードによりログインする)
Log in using the ID and initial password that will be provided by the Student Division via email.

(参考) 本学の研究倫理教育に関するウェブサイト
Website for research ethics education of Science Tokyo
https://www.titech.ac.jp/student/students/life/research-ethics

＊研究倫理教育チェックリスト項目を自己チェック後、指導教員に確認のサインをもらい、そのPDFファイルをAPRIN e-Learning の修了証 (JST コース《生命医科学系または理工系》)とともに、指定された期日までにLMSの課題提出機能を使ってアップロードすること(必須)。
＊Please self-check the checklist of research ethics education and obtain confirmation from your academic supervisor. Be sure to submit it as a PDF file along with the APRIN Certificate of Completion “JST Course (1) Biomedical or (2)Engineering” using LMS assignment submission system by the deadline.

Institute of SCIENCE TOKYO

アントレプレナーシップ科目（必修）合同説明会 ～大学院生向け～

Orientation on required entrepreneurship courses –For graduate students-

On Zoom

9/26 金 FRI

修士課程学生/Master's students

17:00-17:40　日本語/Japanese
17:50-18:30　英語/English

申込/Registration

詳細(日本語)

9/30 火 TUE

博士後期課程学生/PhD students

17:00-17:30　日本語/Japanese
17:40-18:10　英語/English

Details (English)

アントレプレナーシップとは？何に役立つ？何単位必要？どういう科目がある？
基本的な質問にお答えします！What is entrepreneurship and how is it useful?
How many credits are required? What kind of courses are available?
We'll answer your basic questions!

[Contact] アントレプレナーシップ教育機構 / Center for Entrepreneurship Education (CEE)　本件担当：グローバル教育実施室　E-mail: global_edu@cee.isct.ac.jp

Pursuing Doctoral Studies

Institute of SCIENCE TOKYO

Benefits

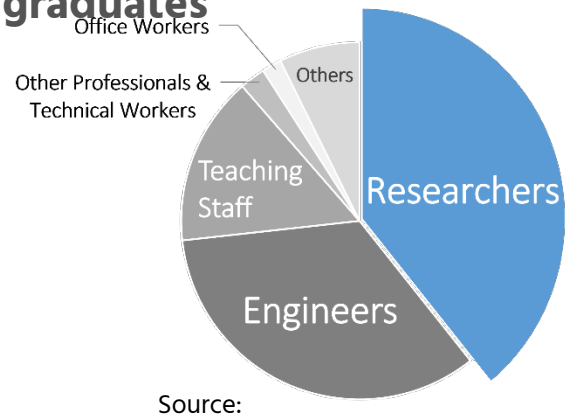
- Developing your **logical thinking, critical thinking ,and problem-solving skills**, and enabling you to understand **the process of creating new value**
- Training your creativity, while providing the **enjoyment of research** and a **broad perspective** on technology in relation to society
- Helping you gain self-confidence to **work independently** regardless of field, a **wider range of career path options**, and greater chances of finding satisfying and rewarding jobs and success.

Changes in the perception of doctoral degrees

With the goal of **taking advantage of scientific and technological progress**, and **developing capabilities for creating new industries**, the **expectations** for individuals with doctoral degrees are growing. Their advanced sci-tech knowledge, as well as **problem-finding and -solving skills** are sought after by society.

After completing doctoral programs, a **wide range of career paths** can be considered – doctoral graduates work as scientists at higher education or research institutions, active players in companies, entrepreneurs, bureaucrats, politicians, etc. In particular, they are becoming more active in R&D companies.

First occupations for science and engineering doctoral graduates



Source:
MEXT-NISTP "Japanese Science and Technology Indicators 2025"

Three Takuetsu Programs

Institute of SCIENCE TOKYO

Financial support for doctoral students

At Science Tokyo, almost all doctoral students receive financial support from public or private entities. The TAC-MI, WISE-SSS, and ISE academies engaging in Takuetsu programs offer students opportunities for financial support.

Takuetsu programs and academies

As part of efforts to foster outstanding doctoral graduates, Science Tokyo has established the aforementioned three academies that function **across academic disciplines at the Institute**, and enable **seamless transition between master's and doctoral degree programs**. With the objective of developing students' abilities and skills required to **create new value and solve social problems**, these academies offer unique programs. They aim to promote **interdisciplinary research**, and encourage **personnel exchanges** among various organizations such as industrial entities, national institutions, and overseas institutions, while placing value on laboratory work and activities.

Takuetsu programs are waiting to welcome you!

Academy for Convergence of Materials and Informatics (TAC-MI)

Academy of Super Smart Society (WISE-SSS)

Academy of Energy and Informatics (ISE)

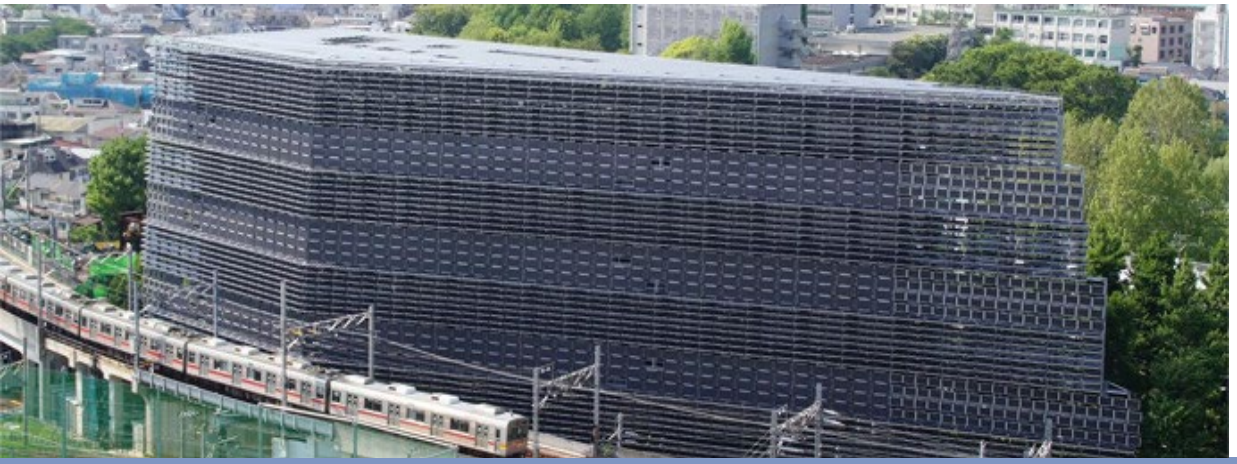
＊The enrollment examination for the TAC-MI program ended in AY2023
Applications for WISE-SSS closed as of August 2025.

■ **Joint briefing session of the three academies for Takuetsu programs**

October 29th, 2025 (Wed) 15:00-16:30 (Online) *in Japanese only*

Details here ▸

* Takuetsu programs: Programs offered by the TAC-MI, WISE-SSS, and ISE academies are supported by MEXT's Doctoral Degree Program for World-leading Innovative & Smart Education (WISE Program). They are commonly called *Takuetsu* (卓越 in Japanese, meaning excellence or superiority) programs.



Institute of SCIENCE TOKYO

Features

- ✓ **Integrated Master's and Doctoral program**
- ✓ **Financial support**
- ✓ **Open for all courses**

Academy of Energy and Informatics

Academy of Energy and Informatics

Multi-scope・Energy WISE Professionals

Enrollment Briefing Session

(online)

DATE : October 9 (Thu) and 15 (Mon), 2025

TIME : 12:30-13:30 / Japanese and English

For more information, please visit our website.>>>

Feel free to attend sessions!!

3-Minute Activity Introduction Video >>>

with Japanese and English subtitles

Academy of Energy and Informatics

Outline of Academy of Energy and Informatics

Institute of SCIENCE TOKYO

■Expectations■

Create, design and lead the future society

Multi-Scope・Energy WISE Professionals

＝

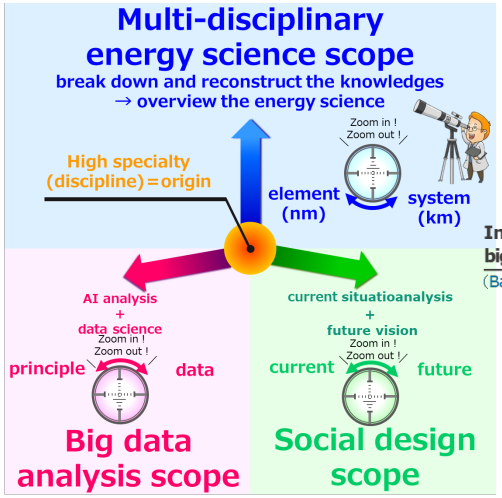
"Professionals" with "Multi-disciplinary energy science scope" applied by "Big Data Science" (AI analysis + Data science) who can design a new sustainable energy

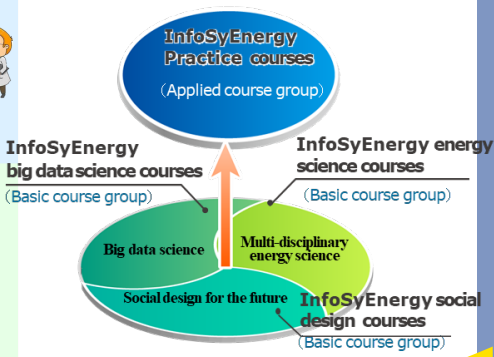
Our Efforts

- Hitotsubashi University's cooperation by providing knowledges of social science, educational skills and professional skills
- **Utilization of energy big-data in smart energy system developed and demonstrated at Science Tokyo**
- Collaboration with consortium members of 27 companies, 6 public institutes and 16 world's leading universities
- Cultivating abilities of flexibly handling on the site and finding problems by providing internship and co-research programs with domestic/overseas companies and universities
- Constructing a global human network centered on **doctoral students by participating in various events such as cutting-edge research workshops and exchange events with consortium member companies and overseas universities**
- **The business and international mentorship system will help students develop multifaceted viewpoints**

Our Curriculum

Cultivate "3 scopes" by "4 course groups" collaborating with "InfoSy**Energy** Research and Education Consortium"





InfoSyEnergy Research and Education Consortium

Promote the integrative researches of "system" and "devices"

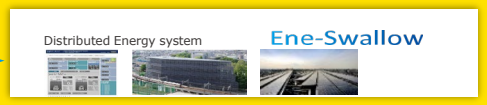
Companies × Public institutions × World's top universities × Science Tokyo

- **Over 70 Professors/Assoc. Professors participating from across all of Science Tokyo's schools**
- **Organized into nine areas, teams design and conduct collaborative research**
- **"Multi-scope" energy education through academia-industry cooperation**
- **Strategic student-industry matching, and a recurrent education system**

The Aim of InfoSyEnergy

「Synergistic effects from integrated promotion of "energy device development" and "system development

Campus system technology developed and demonstrated at Science Tokyo



博士後期課程への進学

博士後期課程に進学するメリット

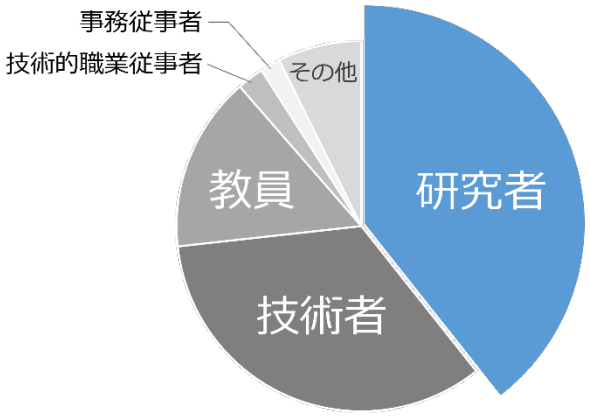
- 博士後期課程では、課題設定や問題解決のための論理的な考え方を学ぶことができ、「新しい価値を創出するプロセス」を体得することができます。
- 研究を楽しみつつ進めることにより、社会の中における技術を高い視点から俯瞰して見られるようになり、創造力の鍛錬が行われます。
- 様々な分野で独り立ちできる自信がつき、その後のキャリアパスの選択肢が広がります。やりがいのある仕事に恵まれる可能性が高く、活躍の チャンスを増やすことができます。

社会の「博士」に対する見方の変化

科学技術の高度化への対応、産業創出力の強化といった観点から、現在、社会では「博士」に対して、科学技術に対する高度な理解力を有する「課題発見・解決のプロフェッショナル」としての期待が高まっています。博士後期課程修了後も、幅広いキャリアパスが考えられます。

大学や研究機関で活躍する科学者になる、企業に入って活躍する、起業する、官僚や政治家として活躍するのも良いでしょう。研究開発型の企業においては、博士が活躍する場面が広がっています。

理工系博士課程修了者の職業別の就職状況



出典：文部科学省　科学技術・学術政策研究所　「科学技術指標2025」

関連サイト≫≫ 博士後期課程を目指す方へ
https://www.titech.ac.jp/public-relations/prospective-students/doctoral-program

３つの卓越教育課程

Institute of SCIENCE TOKYO

博士後期課程学生への経済的支援の一つの取り組み

本学では、博士後期課程に在籍するほぼ全ての学生が、つばめ博士学生奨学金や博士後期課程学生向けプログラム、日本学術振興会、民間企業・財団などから経済的支援を受けています。

本学の取り組みの一つに、卓越した博士人材を育成する、全学横断型の修博一貫の大学院教育プログラムとして、３つの卓越教育課程があります。

卓越教育院は、経済的支援を行いながら、学生の研究室での研究活動も大切にしつつ、異分野融合研究、産業界・国立機関・海外機関との人材交流等の様々なイベントを通して、新たな価値の創造による社会課題を解決する人材を養成します。

皆さん、これから本学の卓越教育院で一緒に学んでみませんか？

物質・情報
卓越教育院

超スマート社会
卓越教育院

エネルギー・情報
卓越教育院

※物質・情報卓越教育院（教育課程）は2025年度より、物質・情報卓越コースに生まれ変わりました。
超スマート社会卓越教育院（教育課程）の募集は2025年8月で終了しました。2026年度より、超スマート社会卓越コースへと生まれ変わります。

■３卓越の合同説明会

2025年10月29日（水）15:00～16:30（オンライン開催）

詳しくはこちら▶

Institute of SCIENCE TOKYO

当教育院の特長

- ✓ 修博一貫プログラム
- ✓ 教育研究支援制度
- ✓ すべてのコースから参加可能

Academy of Energy and Informatics

エネルギー・情報卓越教育院

マルチスコープ・エネルギー卓越人材プログラムのご案内

➢ 学生募集説明会(オンライン)

日時：2025年10月9日(木), 15日(水)
12:30-13:30/日本語及び英語

詳細は、ウェブサイトをご覧下さい。>>>

みなさまのご参加お待ちしております。

3分の活動紹介
ビデオ配信中>>>

Academy of Energy and Informatics

エネルギー・情報卓越教育院の概要

Institute of SCIENCE TOKYO

■目指す人材像■

未来社会を創造・デザイン・牽引する
マルチスコープ・エネルギー卓越人材

＝

“ビックデータ科学”（AI解析+データ科学）を
活用したマルチスコープで新しいサステイナブルな
エネルギー社会をデザインする人材

教育院の取り組み

■一橋大学からの社会科学、教育力、専門力の提供

■本学開発実装のスマートエネルギーシステムにおける
エネルギービッグデータの活用。

■コンソーシアムの会員である**27**の企業、**7**の公的機関、
16の世界トップ大学との協業。

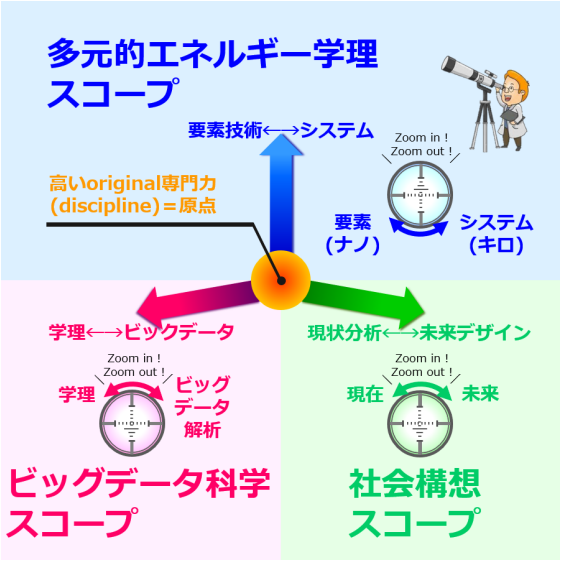
■国内外の企業、大学等での共同研究、インターンシップ
経験を通じ、現場対応能力、問題発見能力を涵養する。

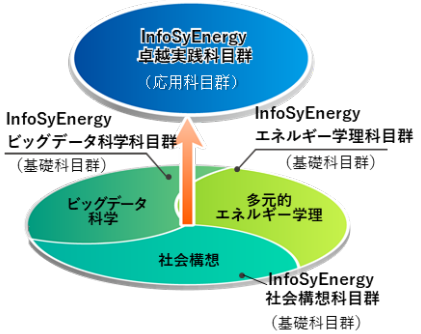
■最先端の研究ワークショップや会員企業・海外大学との
交流イベント、国際フォーラムなどへの参加を通じ、
博士学生を中心とするグローバルな人的ネットワークを
構築する。

■企業メンター・国際メンター制度を導入し、多角的な
視野を養成する。

教育課程

■「4つの科目群」による教育課程、「InfoSyEnergy研究/教育
コンソーシアム」との協業により3つのスコープ力を涵養





InfoSyEnergy
Research and Education Consortium

デバイスと一体となったシステム研究

企業 × 公的機関 × 世界トップ大
Science Tokyo

- 各学院横断で全学から教授・准教授**70**名以上が参画
- 主要**9**部門を編成し、チーム型産学共同研究を提案、推進
- 「未来のエネルギー社会をデザインする人材」を産学協働で育成
- 学生と企業の人材戦略のマッチング、体系的リカレント教育の実現

コンソーシアムの目指すもの

「エネルギーデバイス開発」と「システム開発」を
一体で推進することによるシナジー効果

Orientation for new students
September 2025

Introduction to Science Tokyo Library

X
https://twitter.com/TokyoTechLib

Institute of
SCIENCE TOKYO

Libraries

Ookayama Library

Ochanomizu Library

★Suzukakedai Library

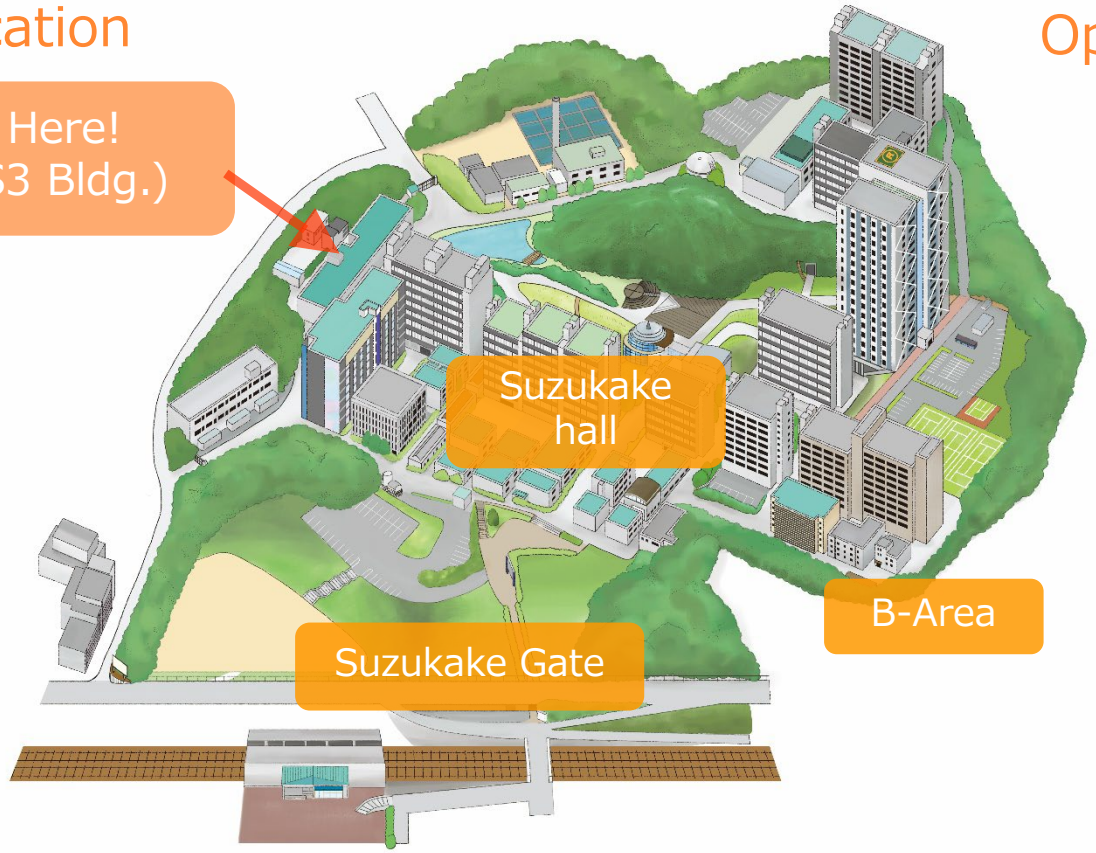
Konodai Library

For services when users belong to Science and Engineering fields visit Ochanomizu Library and Konodai Library

https://www01s.ufinity.jp/tmdu_lib/?page_id=5051&lang=english

Suzukakedai Library

Location



Opening hours (Class Term)

Weekdays
8:45 a.m. to 9 p.m.

Weekends & Holidays
11 a.m. to 5 p.m.

	Books	Journals (number of titles)	E-Journals	E-Books
International	60,638	1,219	11,938	38,245
Japanese	51,222	376	68	2,135
Total	111,860	1,595	12,006	40,380

(as of FY 2024)

1st floor

Library Counter

Peripatos Collection

Mainly consists of novels and paperbacks to enjoy reading between studies for a refreshment

Exhibition corner for Honorary Professor Yoshinori Ohsumi

1st floor

Communication Lounge

Possible: conversation, eating and drinking
“Student Life Coach” is also installed.

Career Information Corner

Books and pamphlets related to employment.
“Career Adviser Room” is also installed.

2nd floor

Campus Wireless LAN is available throughout the library

Academic Books

General Books. Materials for Language Study / Study Abroad, Materials for International Students, Materials for Liberal Arts, Boks by Professors, Books by Alumni, Reference books

6 Seminar Rooms

Capacity: from 1 up to 20 people

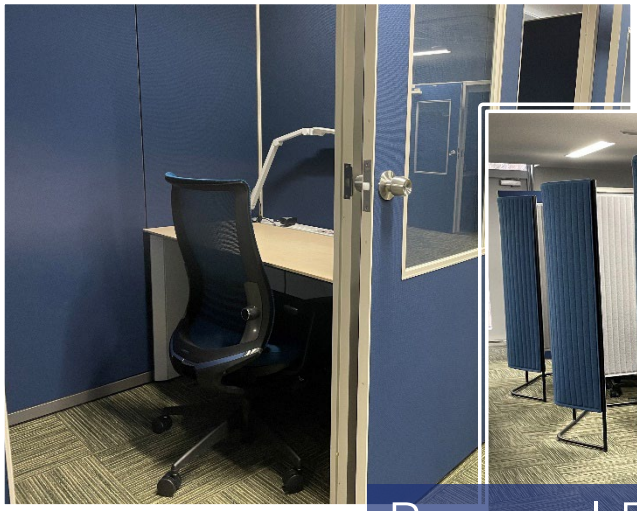
For online meeting and job hunting etc.

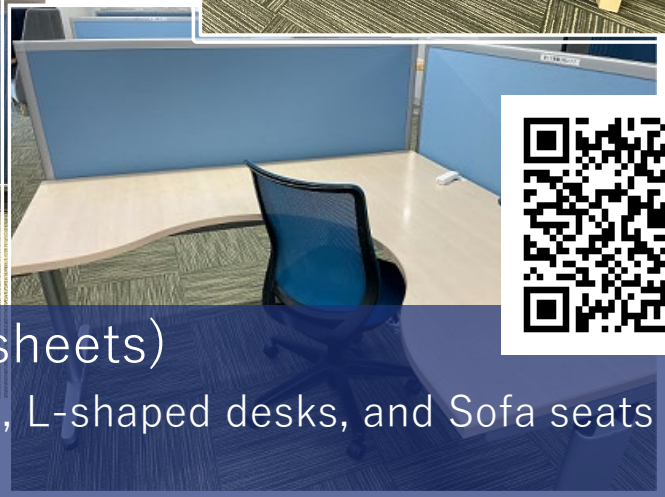
Easy reservation through Web system S&F

3rd floor

Academic Journals

Japanese Journals, International Journals, Russian Journals





Personal Research Area (48 sheets)

Private carrels , Semi-private carrels, L-shaped desks, and Sofa seats

Advance reservation not required

Check Out / Renew

You can check out 15 books* for 4 weeks

*Ookayama Library and Suzukakedai library

- A student ID card is required
- Please come to the Library counter or use Self-check out machine
- Journals and reference books are restricted to in-library use.
- If the book is not reserved, you can renew it an unlimited number of times at the Library counter

Library Counter at 1st floor

Self-checkout Machine

Return

You can return books at either Ookayama or Suzukakedai Library.

Library Counter at 1st floor

Book return bin at the entrance

Attention

If you miss the due date, you will not be able to borrow, renew, or reserve any books as many days as the book is overdue.

Other Services

- **Reserve**
  You can reserve checked-out book.

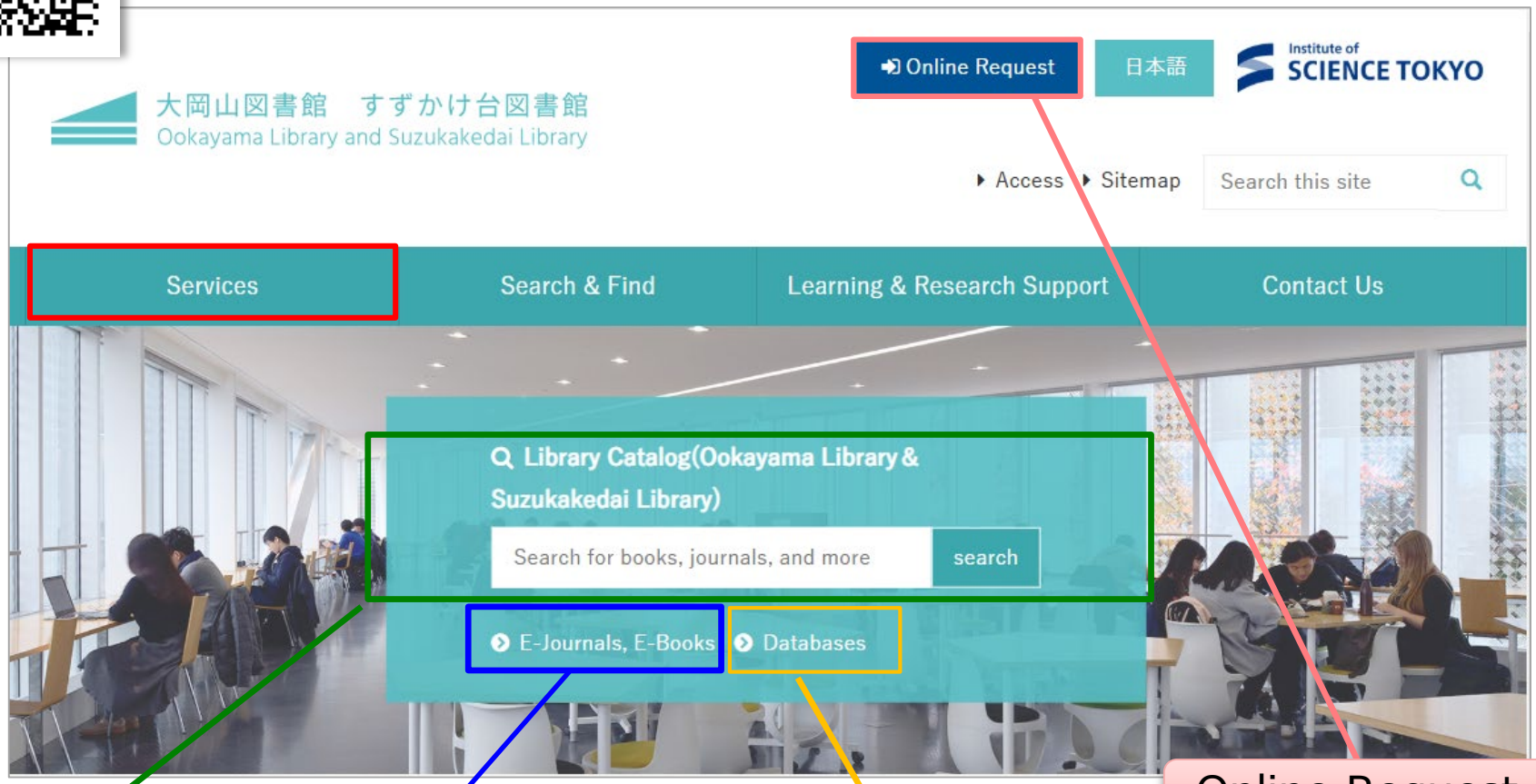
- **Order**
  You can order books from the Ookayama Library.
  *From October 2025 a delivery service is being between Ookayama Library, Suzukakedai Library, Ochanomizu Library, and Konodai Library. For more information→

- **ILL（Interlibrary Loan）**
  You can order materials from the other libraries.

All the services above are available online

- **Electronic Materials and Databases**
  You can use E-Journals, E-Books and databases from your home .
  For more information→

Library Web Site



Library Catalog

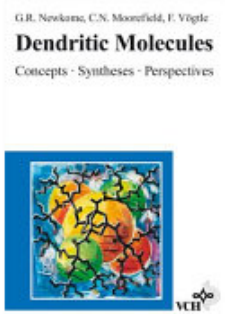
E-Journals & E-Books

Databases
(Available in campus network)

Online Request

https://www.libra.titech.ac.jp/en

Library Catalog



>> Google Books
Bookmark
Text
BibTex
Refer/BibIX
RefWorks
EndNote
Reading Record
E-mail(UTF-8)
E-mail(SJIS)

Supramolecular chemistry : concepts and perspectives / Jean-Marie Lehn

Format: Book

Published: Weinheim ; Tokyo : VCH, c1995

Description: x, 271 p. ; 24 cm

Authors: Lehn, J.-M. (Jean-Marie) <DA00513333>

ISBN: 9783527293124 [3527293124] (: hc)
9783527293117 [3527293116] (: pbk)

NCID: BA25668027

Full Text
@ Science Tokyo

Bibliographic information
(What is the book?)

Holdings

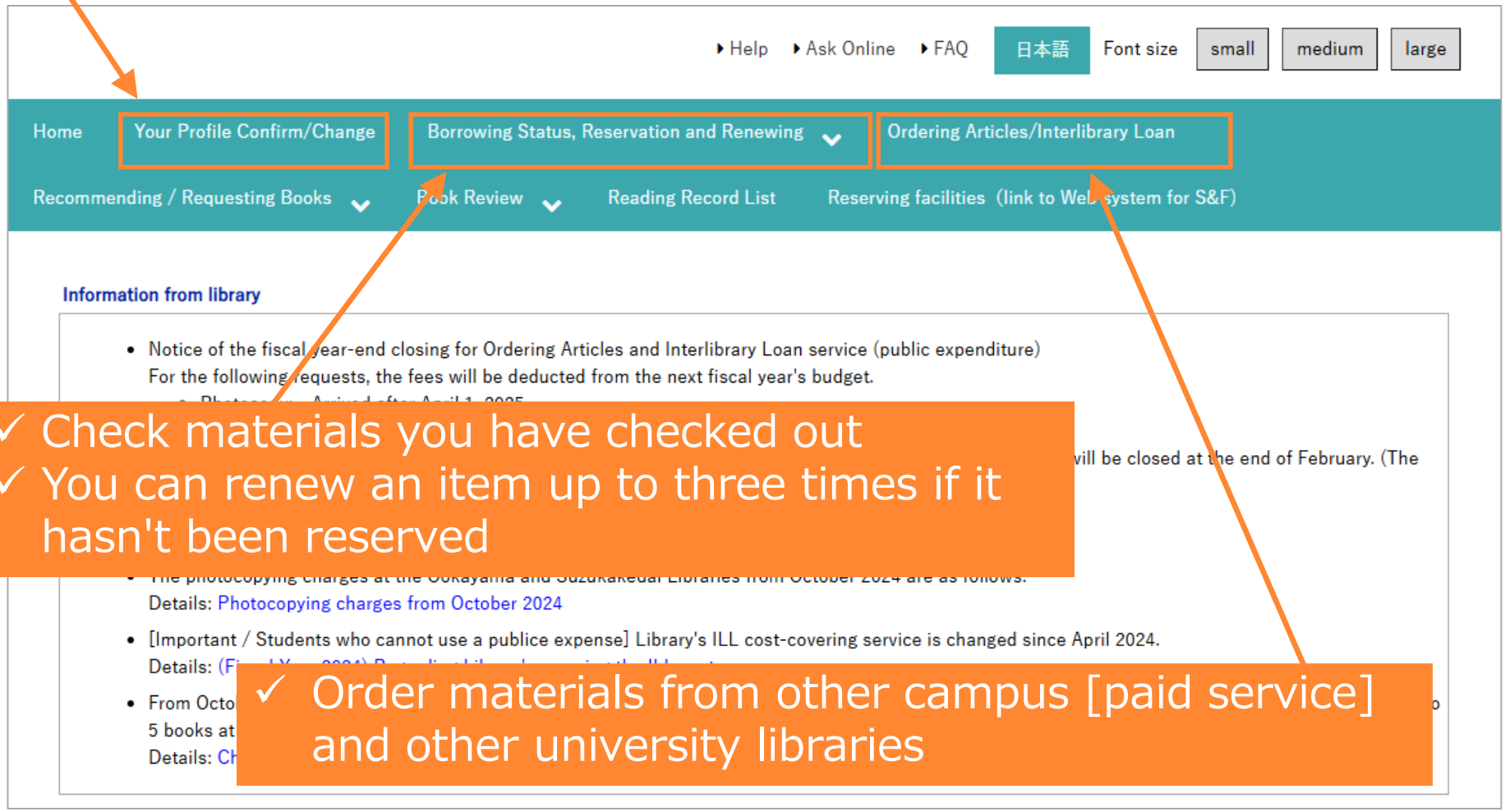
Status	Volume	Location	Call Number	Due Date (Number of Reservation)		BookID	Local Note
Available		Suzukakedai Lib. 2nd Floor - General Books	431.9/L		Reserve/Order	216424743	

Holdings
(Where is the book?)

Reserve or order from other campus
(E-mail registration is required)

Online Request

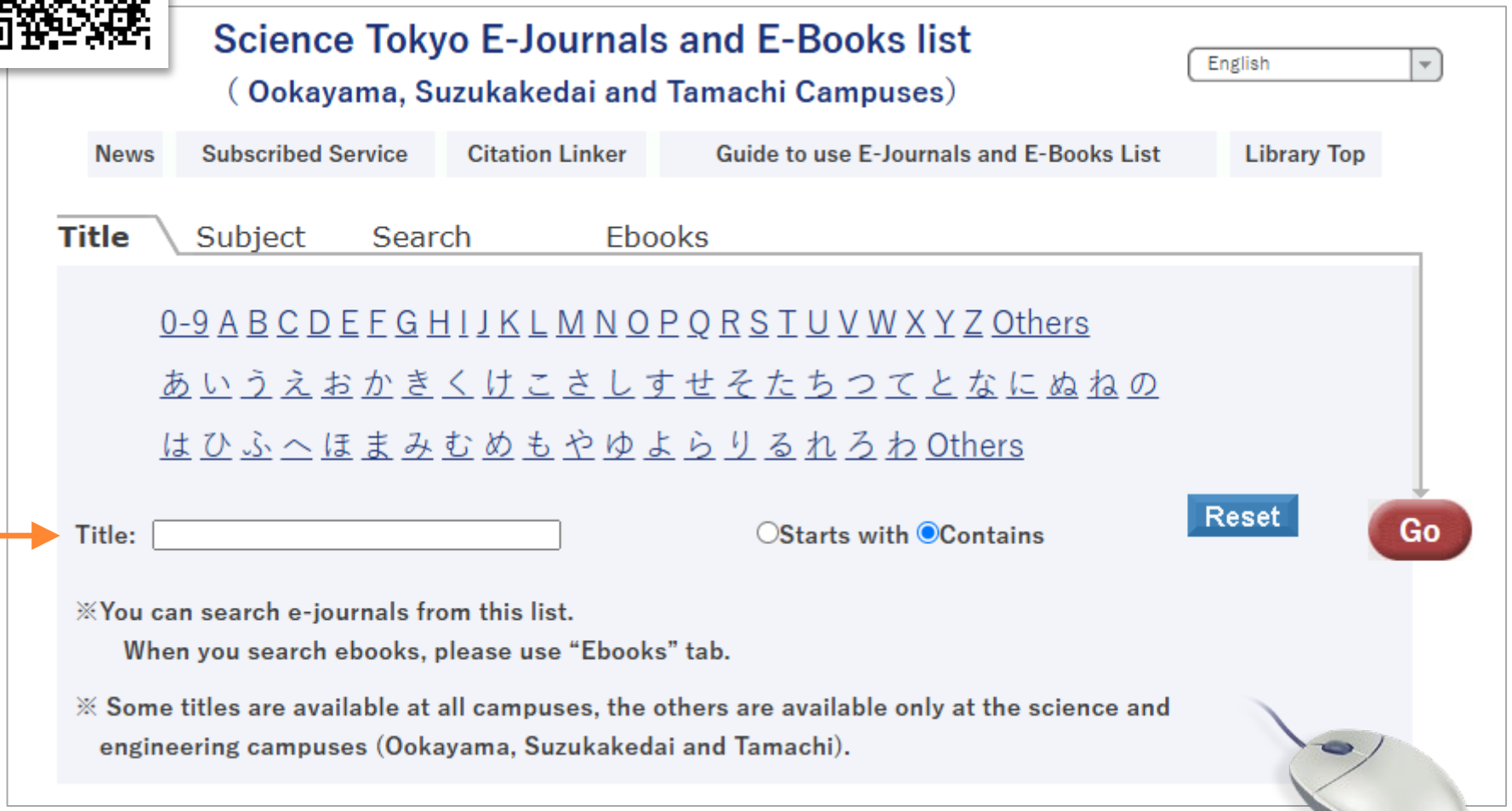
✓ Register your e-mail



✓ Check materials you have checked out
✓ You can renew an item up to three times if it hasn't been reserved

✓ Order materials from other campus [paid service] and other university libraries

E-Journals & E-Books



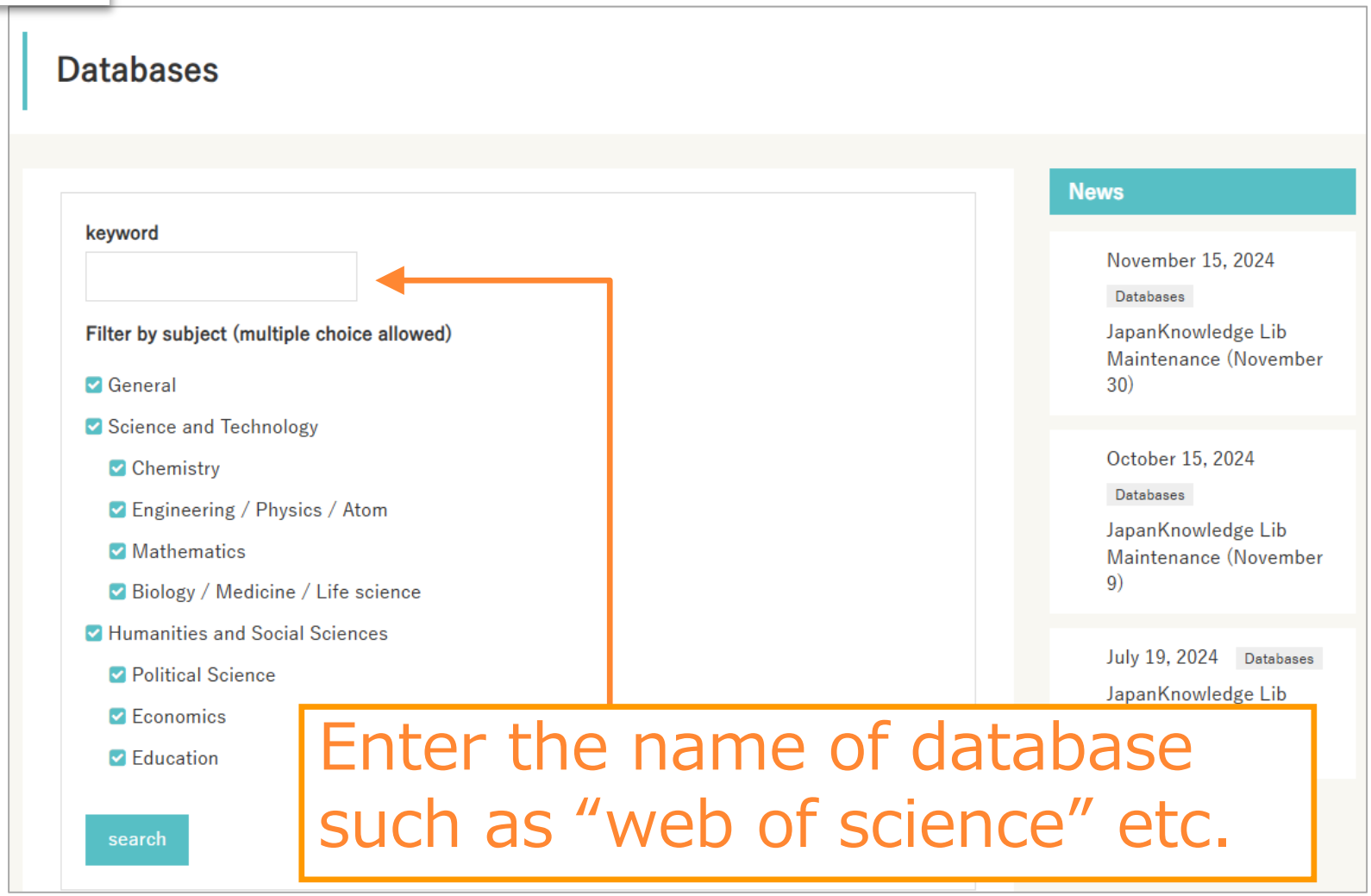
Ex. “nature biotechnology”

O Title of journals

✖ Title of articles

https://sfx.usaco.co.jp/titech/az/

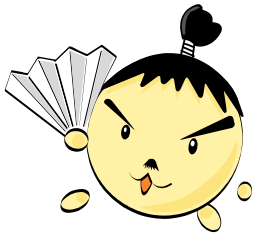
Databases



https://www.libra.titech.ac.jp/en/databases

Full Text @ Science Tokyo

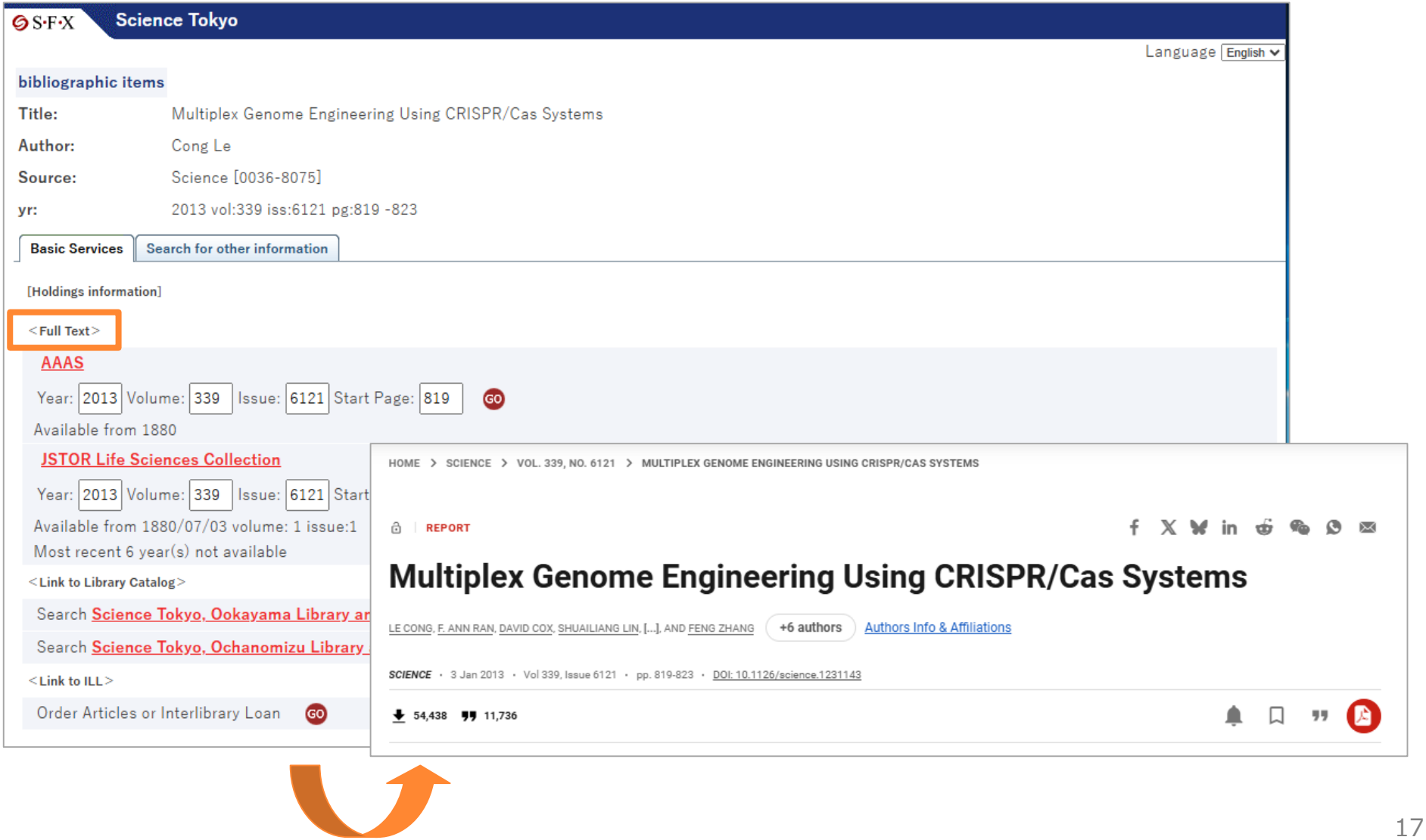
Attention !



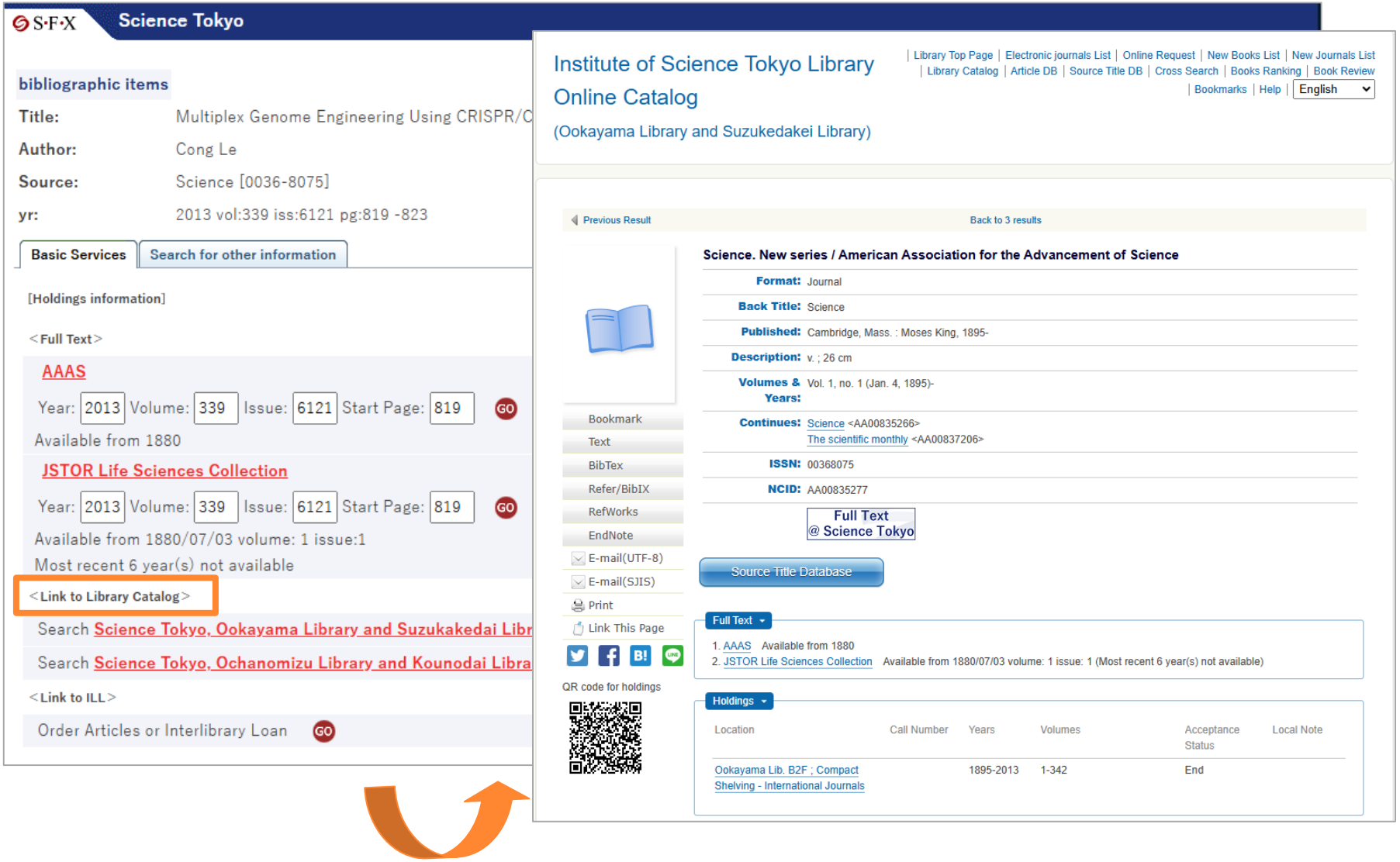
Shirabe Gennai
LiDance(Library Guidance) Character

You will find the above icon in the screen of search result.
It is useful for getting a full text so click it!

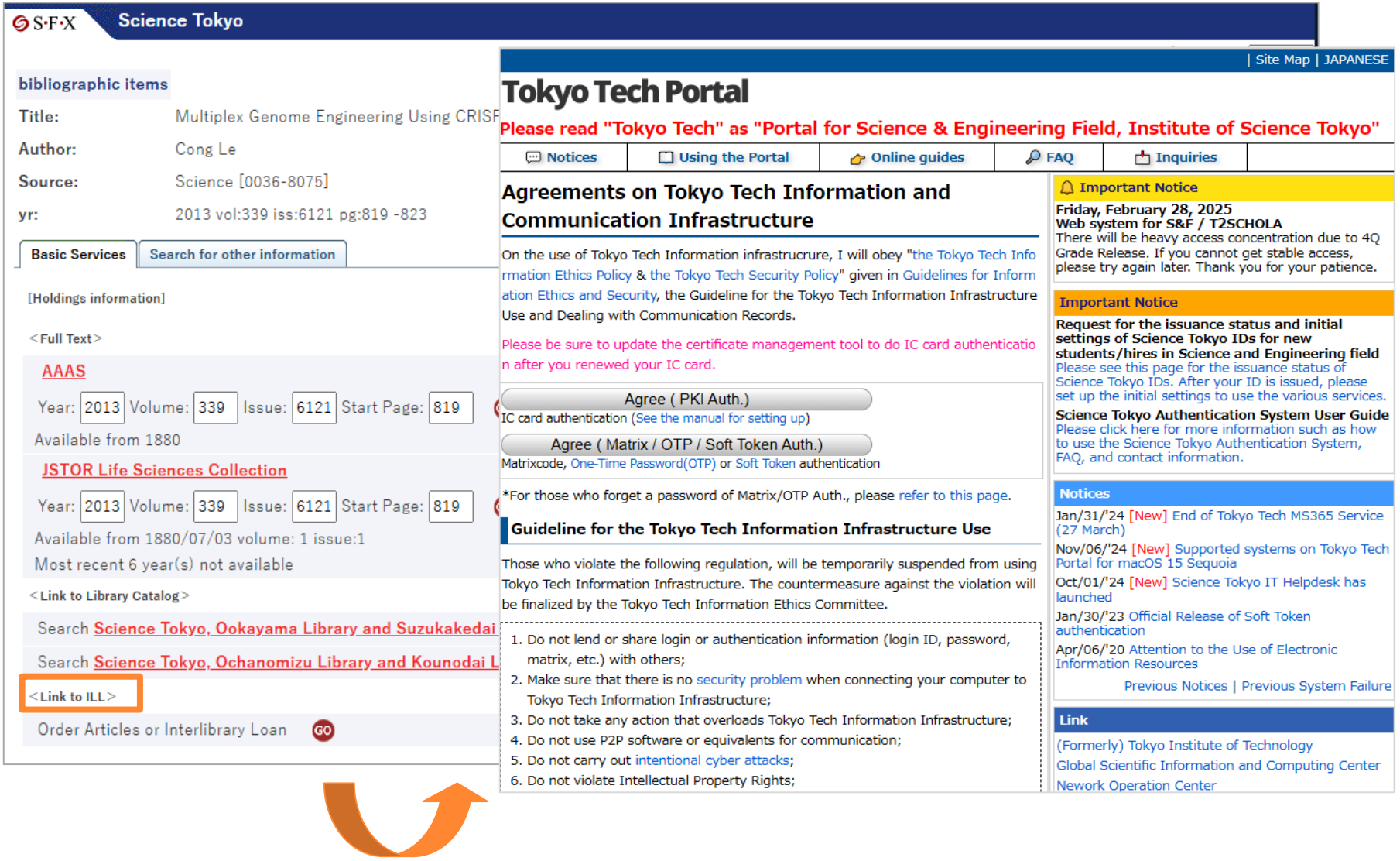
Get full text of E-Journal



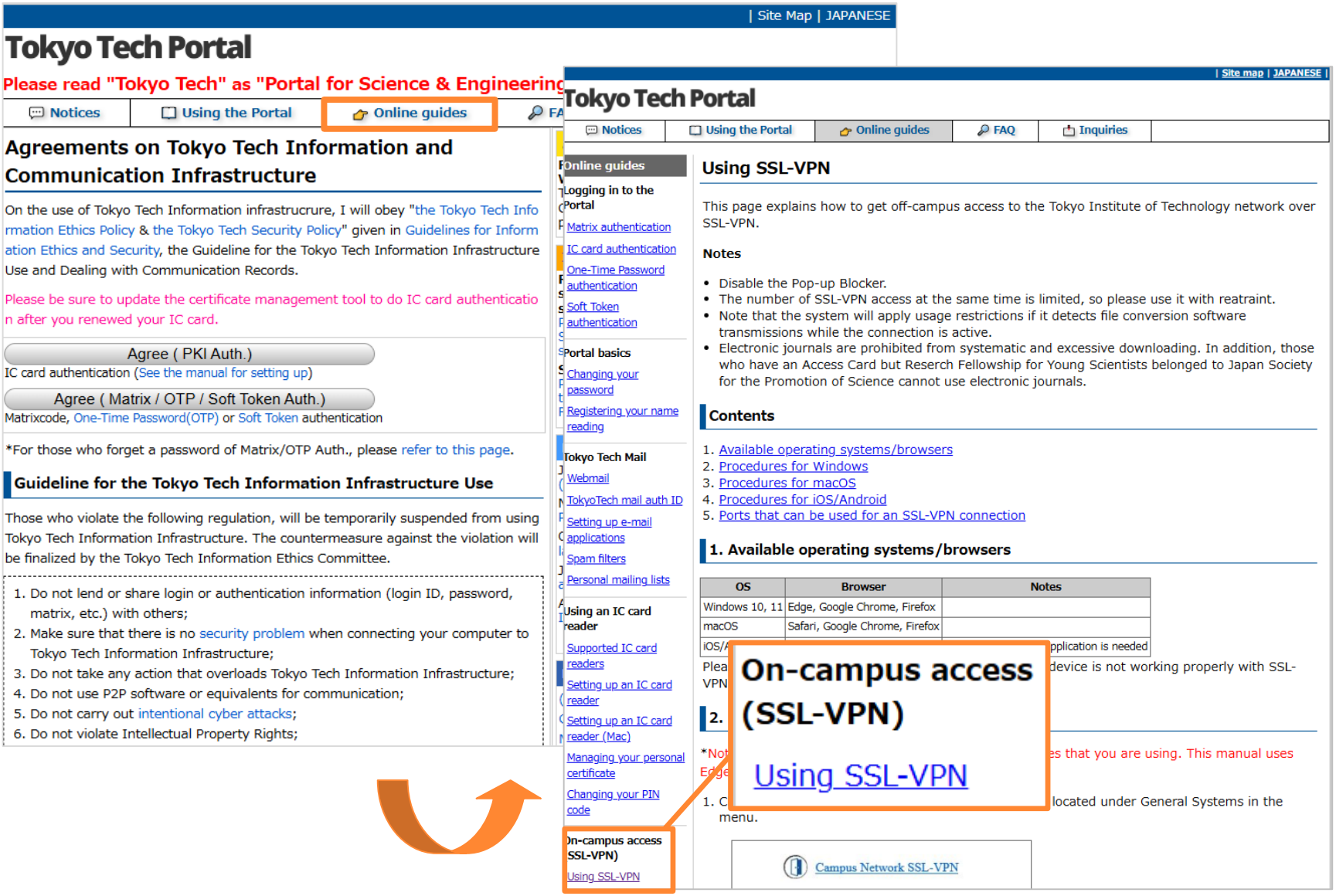
Search paper journal in the library



Order photocopiers from other library



Remote Access (SSL-VPN)



Prohibited Matters on using electronic resources

Systematic or excessive downloading

There is a possibility that access is suspended for the entire institution.

Chotto Omachi
LiDance(Library Guidance) Character

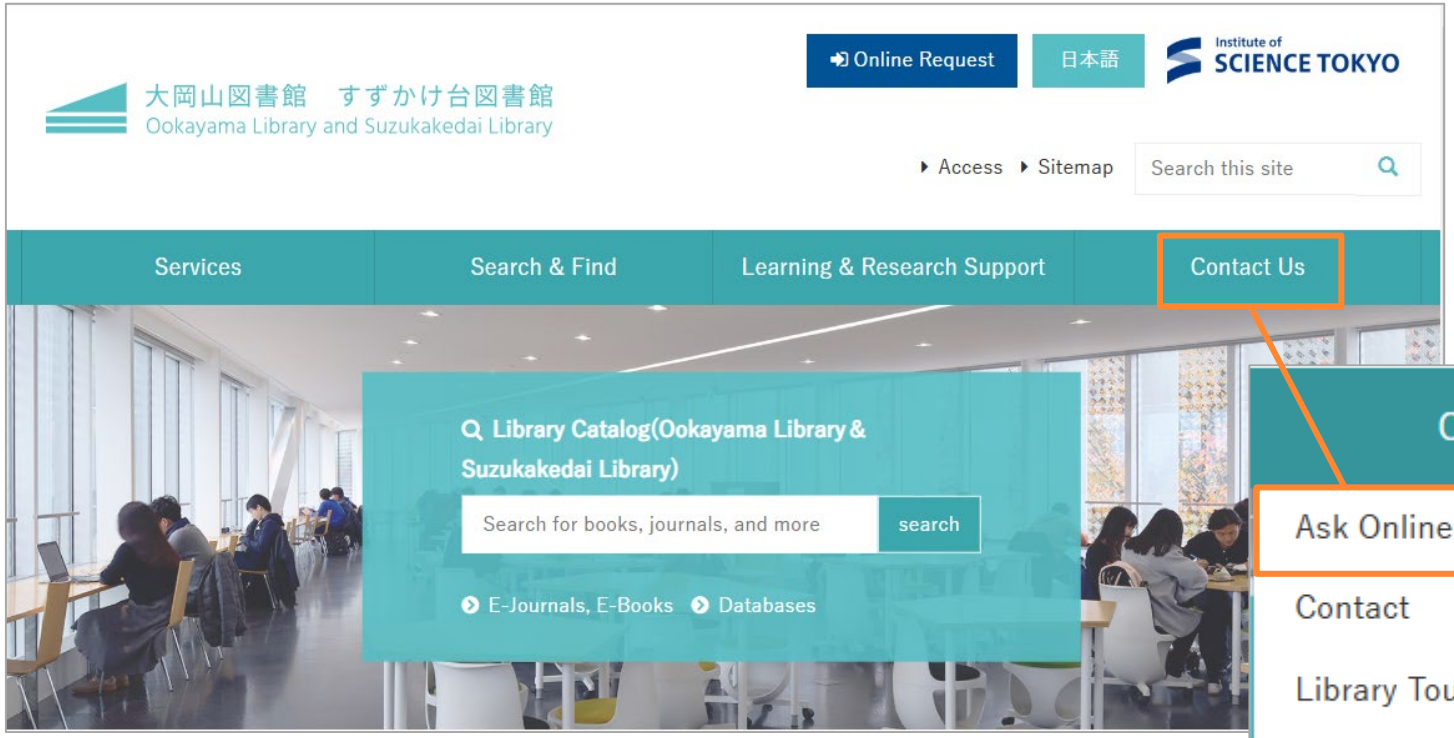
Use for any purpose other than academic research and education

Reproduction and distribution to others

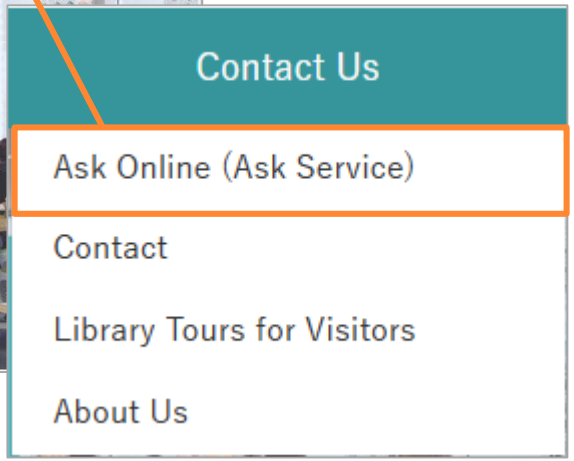
Details & FAQ >> https://www.libra.titech.ac.jp/en/ej_notice

Inquiries

Please feel free to ask us!



Email us
(Online form)



- Counter
- Extension: 5152　(Weekdays 8:45 a.m. to 5 p.m.)

人間医療科学技術コース　オリエンテーション

Science and Technology for Health Care and Medicine

図書館の利用と学術情報の入手

2025年9月

図書館X (旧Twitter)
https://x.com/TokyoTechLib

Institute of SCIENCE TOKYO

東京科学大学図書館

大岡山図書館

御茶ノ水図書館

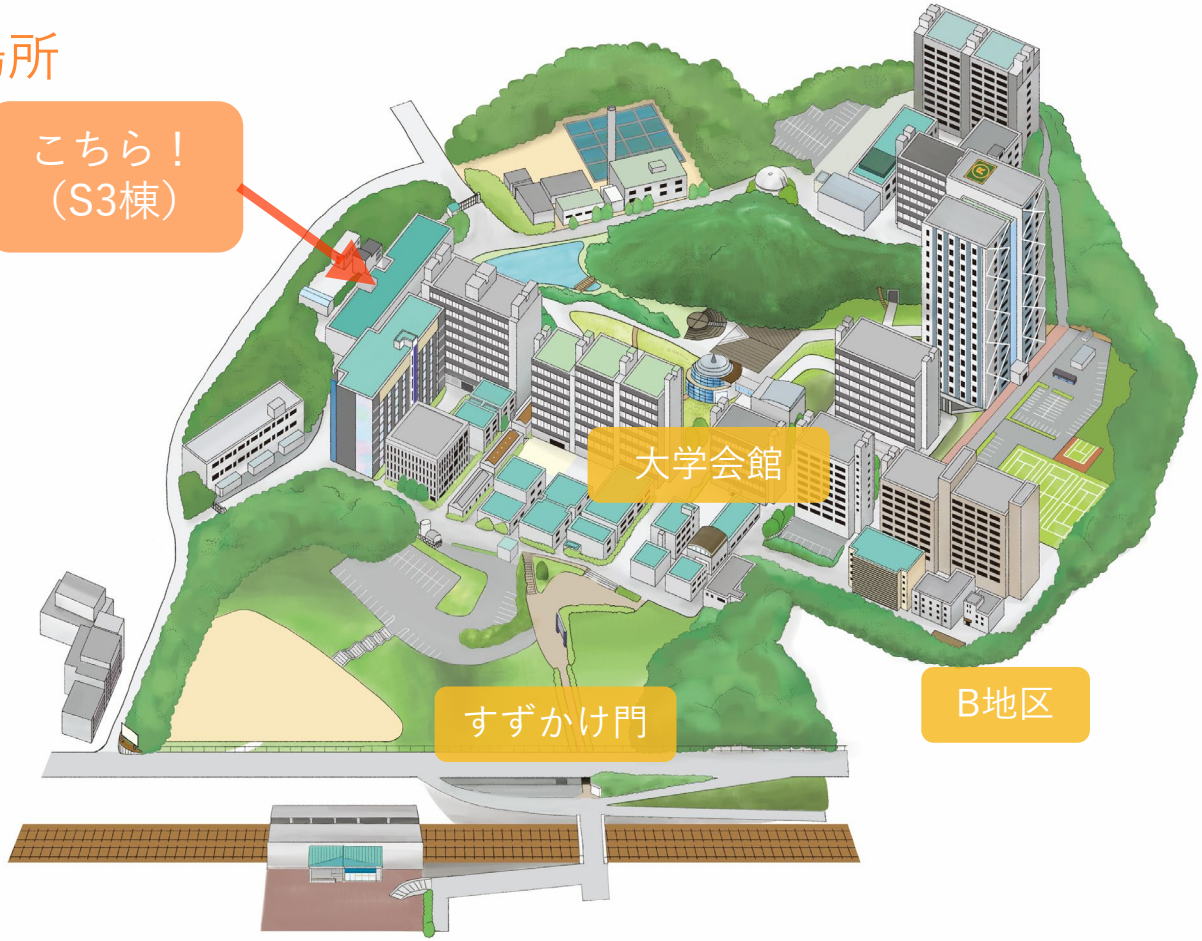
★すずかけ台図書館

国府台図書館

理工学系所属の方の
御茶ノ水図書館・国府台図書館の利用について
https://www01s.ufinity.jp/tmdu_lib/?page_id=5033

すずかけ台図書館

場所



開館時間（授業期）

平日
8:45 ～ 21:00

土、日、祝日
11:00 ～ 17:00

蔵書

洋書: 60,638
和書: 51,222
計: 111,860

雑誌（紙）

（タイトル数）

洋雑誌: 1,219
和雑誌: 376
計: 1,595

電子ジャーナル

洋: 11,938
和: 68
計: 12,006

電子ブック

洋: 38,245
和: 2,135
計: 40,380

（2024年度）

1階

図書館カウンター

大隅良典栄誉教授 展示コーナー

憩いの空間 ペリパトス文庫

小説・新書・ガイドブックなど、気軽にくつろいで楽しめる本が約8,500冊あります.
学習・研究活動の合間の気分転換にどうぞ.

1階

コミュニケーションラウンジ

会話、飲食が可能なエリア
奥には学修コンシェルジュの部屋があります.

就職資料コーナー

就職関係の図書、パンフレットなどが閲覧できます.
奥にはキャリアアドバイザールームがあります.

2階

館内全域でキャンパス無線LANが利用可能

学術図書

専門書、語学試験対策図書、語学・留学用図書、
留学生用資料、リベラルアーツ資料、先生の本、
卒業生の本、参考図書

セミナールーム（6部屋）

発話可能な個室．1人から20人まで利用可能
事前に教務Webシステムから予約してください

3階

学術雑誌

和雑誌、洋雑誌、ロシア語雑誌

個人研究エリア（48席）

予約なしで利用できる電源完備の個人用座席（個室、半個室、L字型机、ソファ席）

貸出・延長

大岡山図書館とすずかけ台図書館の所蔵資料を
合わせて15冊まで4週間借りられます.

- 学生証が必要です.
- 雑誌や一部の辞書は借りられません.
- カウンターまたは自動貸出機をご利用ください.
- 延長回数の上限はありません. （予約が入っていない場合）

（図書館カウンター）

（自動貸出機）

返却

（図書館カウンター）

（すずかけ台図書館入口付近）

・図書館カウンターかブックポストに返却してください.
・大岡山図書館で借りた本をすずかけ台図書館で返却することも、その逆も可能です.
・返却期限に遅れると、遅れた日数分だけ貸出、延長、予約ができなくなります.

その他のサービス

・取寄せ、予約

大岡山図書館の図書館所蔵図書の取寄せや貸出中図書の予約ができます.
※2025年10月より、大岡山図書館・御茶ノ水図書館・国府台図書館・すずかけ台図書館の間で図書の取り寄せ（貸出）・返却ができるようになります. 詳細は→

・文献複写、貸借依頼（ILL）

大岡山図書館 / 学外機関からの論文コピー取り寄せ、
実費で学外機関から図書を取り寄せできます.

図書館Webサイトやカウンターからお申込みください.

・電子資料の利用

電子ジャーナル、電子ブック、データベースを利用できます.
詳細は→

Webサイト

蔵書検索

オンラインリクエスト
（借りている図書の確認、
学外機関からの論文コピー取寄、
メールアドレス登録など）

電子ジャーナル・電子ブック
（学内ネットワーク経由で利用）

データベース
（学内ネットワーク経由で利用）

蔵書検索

ブックマーク登録
テキスト出力
BibTex
Refer/BibIX
RefWorks
EndNote
読書記録
メール(UTF-8)
メール(SJIS)
印刷用画面表示
このページのURL

所蔵情報QRコード

カンデル神経科学 / Eric R. Kandel [ほか] 編

版:	第2版
資料種別:	図書
出版情報:	東京 : メディカル・サイエンス・インターナショナル, 2022.9
形態:	xlviii, 1653p ; 28cm
著者名:	Kandel, Eric R., 1929- <DA00747061> Koester, John <DA20008628> Mack, Sarah <DA17781483> Siegelbaum, Steven <DA17781428> 宮下, 保司 <DA05712199> さらに 10 件
ISBN:	9784815730550 [4815730555]
書誌ID:	BC16905341

Full Text
@ Science Tokyo

図書情報
（この図書はどんなものか）

所蔵情報

状態	巻	所在	請求記号	返却予定日(予約数)		図書ID	注記
貸出中		大岡山図書館B1F-一般図書	491.37/Ka	2025/04/10	予約・取寄	30092719X	
貸出中		すずかけ台図書館2F-一般図書	491.37/Ka	2025/04/10		300929079	

所蔵情報
（この図書がどこにあるか）

予約、他キャンパスから取寄せる
（要メールアドレス登録）

オンラインリクエスト

「利用者情報確認・変更」から
メールアドレスが登録できます.

今借りている図書の確認、貸出延長
（１冊につき3回まで）ができます.

他キャンパスの図書館から論文コピー（有料）、
学外機関から論文コピー・図書の取寄せができます.

電子ジャーナル・電子ブック

nature biotechnology 等と入力して検索

○：雑誌タイトルで検索
×：論文タイトルで検索

https://sfx.usaco.co.jp/titech/az

データベース

https://www.libra.titech.ac.jp/databases

Full Text @ Science Tokyo

Multiplex Genome Engineering Using CRISPR/Cas Systems

Cong, L; Ran, FA; (...); Zhang, F

Feb 15 2013 | SCIENCE ▾ 339 (6121) , pp.819-823

Full Text @ Science Tokyo 出版社のサイト リポジトリによるフリー査読済論文 •••

記事での引用: 1

ココに注目！

11,070
被引用数

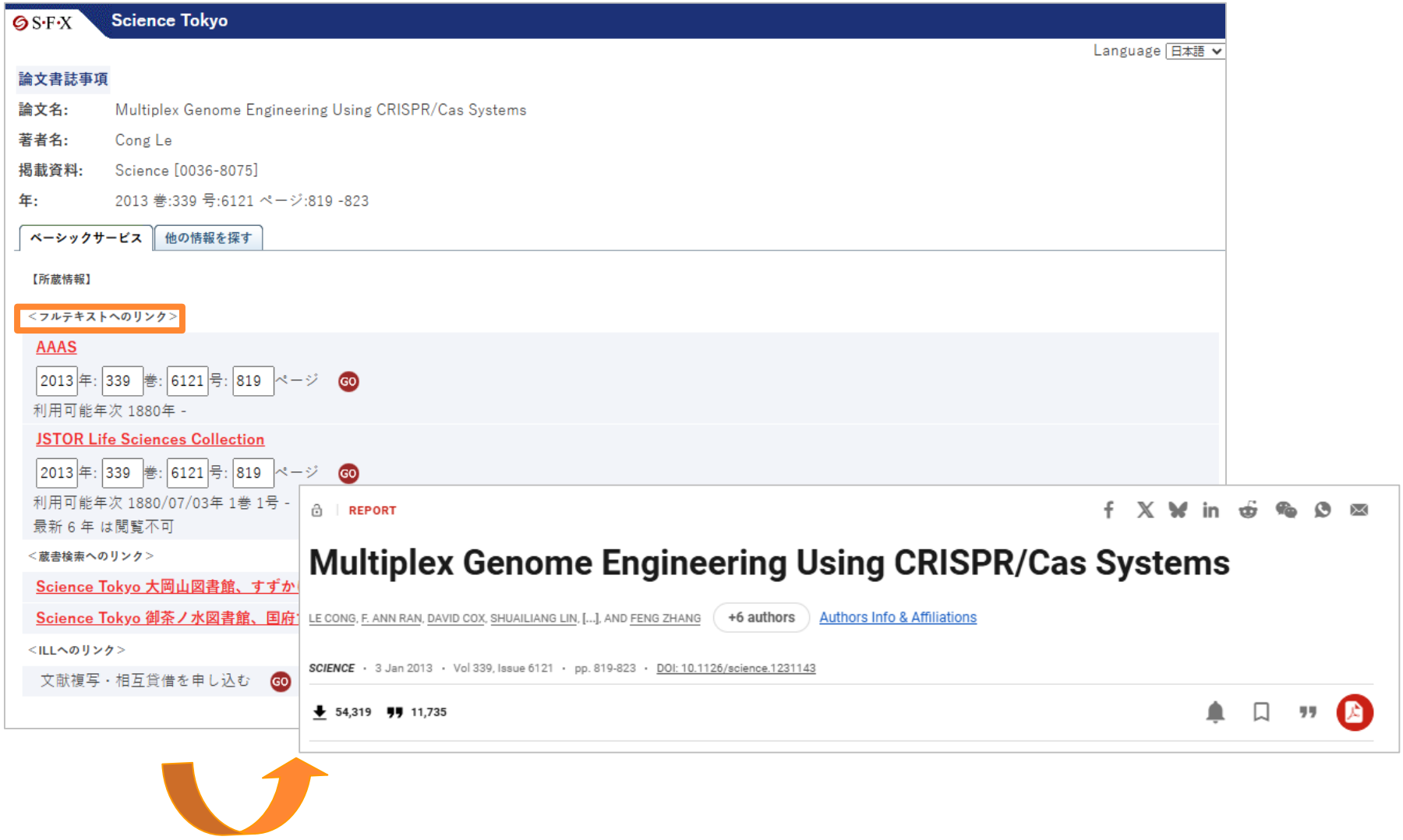
29
引用文献

関連レコード

LiDance公式キャラクター
調辺　源内(しらべ　げんない)

データベースの検索結果に表示される
このアイコンから、論文の全文をどこで
入手できるかチェックできます.

文献の入手① 電子ジャーナル



文献の入手② 図書館資料

文献の入手③ 他機関からの取寄せ

リモートアクセス（SSL-VPN接続）

利用上の注意

LiDance公式キャラクター
その場忍

大量ダウンロード

提供元が大量であるとみなすような行為、たとえば
雑誌1号分を全部ダウンロードするなどはしないでください.
全学からのアクセスがブロックされるおそれがあります.
必要な論文のみ、その都度ご利用ください.

個人の学術研究 および 教育目的以外の利用

複製や第三者への配布

詳しくは・・・

- データベース・電子ジャーナル利用上の注意
  https://www.libra.titech.ac.jp/ej_notice

お問い合わせ

すずかけ台図書館

- 1階カウンター
- TEL: 内線5152（平日8：45～17：00）

大岡山図書館

- 地下1階カウンター
- TEL: 内線2097（平日8：45～17：00）

両館共通

- 図書館Webサイト（Askサービス）

修博一貫カリキュラム移行申請書

Application form for Seamless Transition Between Degree Programs

年　　月　　日

Date:　　/　　/

(yyy)　(mm)　(dd)

人間医療科学技術コース主任　殿

To the Head of Department in STM

入学年度/Year of Admission ..... 年度/AY

所　　属/Affiliation ..... 学院/School

..... 系/Department

Graduate Major in Science and Technology for Health Care and Medicine

学籍番号/Student ID No. .....

氏　名/Name ..... 印/Seal

私は，博士後期課程への進学を希望しており，修博一貫カリキュラムへの移行を申請しますので，許可くださるようお願いいたします。

I hereby request to apply the Seamless Transition Between Degree Programs, because I hope to go to Doctoral degree program.

指導教員承認/Name(s) and seal(s) of academic supervisor(s)

（押印不要）

主) .....

副) .....

事務使用欄

受付日	発表日	評価	備　考

STM Graduate Major (Science and engineering fields)
Taking 600-level courses in the Master's degree program

1) Students are generally not allowed to take 600-level liberal arts and career courses.

2) Major courses in 600-level, other than 1).

   - A student can take the courses after completion of the research plan presentation and approval by the STM faculty committee.
   - Students who wish to take these courses must submit "Application form for Seamless Transition Between Degree Programs" prior to the presentation of "Research Planning for Master Thesis I of STM." If the student passes the evaluation at the presentation, one can take 600- level courses.
   - After the acquisition of the credits, they will be listed on the transcript of the Master's program, but will not be counted as the credits toward the Master's degree completion requirements.
   - After enrolling in the doctoral program, the student should complete the accreditation procedure so that the credits can be treated as the ones for the completion of the doctoral program.

✧ Students in the IGP-A Integrated Master's and Doctoral Degree are automatically evaluated without submitting the Application form for Seamless Transition Between Degree Programs in "Research Planning for Master Thesis I of STM."

✧ If a student does not submit the "Application form for Seamless Transition Between Degree Programs" and does not pass the evaluation by STM, one will not be allowed to take 600-level courses during the Master's program. (Even if the course is accidentally approved due to a procedural error, the student will not be able to receive credits after entering the doctoral program.

人間医療科学技術コース(理工学系)

修士課程における 600 番台科目の履修について

(1) 600 番台の文系教養科目、キャリア科目は原則として履修することはできません。

(2) 600 番台の専門科目、(1)以外の科目

- 研究構想発表を終え、コースが認めた場合には履修可能です。
- 履修を希望する学生は、「修士論文研究計画論第一」の発表会に先立ち「修博一貫カリキュラム移行申請書」を提出してください。発表会での審査で合格すれば 600 番台科目の履修が可能です。
- 修得後は、修士課程の成績証明書には記載されますが、修士の修了要件単位にはなりません。
- 博士後期課程進学後に認定手続きを行うことで、博士後期課程の修了要件単位として扱うことができます。

※ IGP-A の修博一貫プログラムの学生は、「修士論文研究計画論第一」における「修博一貫カリキュラム移行申請書」を提出しなくても自動的に審査が行われます。

※「修博一貫カリキュラム移行申請書」を提出していない場合、600 番台科目の履修は不許可となります。(仮に手続きミス等により許可となっても、博士後期課程進学後に単位認定を行うことはできません)

Financial support for doctoral students (external)

1. Scholarship

Scholarships for international students

Non-Japanese students attending Science Tokyo at their own expense are eligible to apply for two types of scholarships from private scholarship foundations. The procedure for applying for each of these private scholarships is different. In one case, the student can apply directly for the scholarship without any recommendation from the University. In the second case, a recommendation from the University is required.

2. Japan Society for the Promotion of Science (JSPS) Research Fellowship for Young Scientists

（1） Doctoral Course Students (DC)

・Monthly stipend: 200,000 yen / research grant (Grant-in-Aid for JSPS Fellows): up to 1,500,000 yen/year

・There are restrictions on income from part-time jobs and scholarships.

（2） Overseas Challenge Program for Young Researchers

・Support for research study abroad expenses (travel, accommodation, and research expenses) is available while enrolled in the Doctoral Program.

Financial support for doctoral students (internal)

Title	Financial resources	Annual payment per person	Remarks
Tsubame Scholarship for Doctoral Students (Tsubame Scholarship)	Science Tokyo	480,000 yen/year（standard） 635,400 yen/year（special）	“Science Tokyo SPRING", “Science Tokyo BOOST" and “JSPS Doctoral Course (DC) Fellowships" students are not eligible for support.
Program for Development of Next-Generation Front-Runners with Comprehensive Knowledge and Humanity（Science and Engineering fields）(Science Tokyo SPRING (SE))	JST	2,160,000 yen/year Research expenses 300,000 yen/year (max) Support for travel expenses for off-campus study	Student recruitment will be conducted as follows 1. Recruitment for new doctoral students (spring and fall) 2. Recruitment for master's students who wish to enter the doctoral program in the spring of the next year (Program Slots Offer in Advance)
Program for Development of Co-creative Experts towards Top-level AI Research（Science and Engineering fields） (Science Tokyo Boost (SE))	JST	3,600,000 yen/year Research expenses 300,000 yen/year (max) Support for travel expenses for off-campus study	Student recruitment will be conducted as follows ・Recruitment for new doctoral students (spring and fall)
Research Fellow（Institute of Integrated Research)	Science Tokyo	840,000 yen/year	RA equivalent “Science Tokyo SPRING", “Science Tokyo BOOST" and “JSPS Doctoral Course (DC) Fellowships" students are not eligible for support.
School of Life Science and Technology Bio×Digital Financial Support Program	Science Tokyo	155,400 yen/year	・Students who are motivated to engage in bio digital studies. ・There are additional eligibility

Financial support for doctoral students (internal)

Title	Financial resources	Annual payment per person	Remarks
Tuition Exemption 【JSPS Research Fellowship for Young Scientists (DC)】	Science Tokyo	Full exemption	Starting October 2024

TA / RA opportunities are also available: http://www.jinjika.jim.titech.ac.jp/syoku/index.html (Japanese only)
Information is correct at the time of publication. Please check individual websites as required for updates.

Financial support through educational programs for doctoral students

Title	Financial resources	Annual payment per person	Remarks
Financial support of WISE Program (Doctoral Program for World-leading Innovative & Smart Education) ✓ Academy of Energy and Informatics (InfoSyEnergy)	Sponsorship, donations, joint research funds, etc.	About 1,700,000 yen/year Can be provided along with the Tsubame Scholarship (standard) for a total amount of approx. 2,200,000 yen/year of support: In addition, there are various types of support for research expenses and travel expenses.	You can apply for “Science Tokyo SPRING(SE)” or “Science Tokyo BOOST(SE)”. Note: Support details for FY2027 and beyond have not yet been determined. Please be sure to check the details.

Websites with information about the doctoral program

Prospective Students

https://www.titech.ac.jp/english/0/prospective-students/domestic

Career Support Events

Career-related events of the Student Support Center at the University are held only in Japanese, so please confirm details on the Japanese page. On the other hand, you can receive career counseling in English.
https://www.titech.ac.jp/english/student-support/students/career/events

Cooperative Education through Research Internships

It is possible to earn credits in an internship at the same time while receiving a salary. Check the job description to see if you can make the most of your expertise.
https://www.titech.ac.jp/english/student/students/life/job-i

大学院課程学生への経済的支援（学外実施分）

1. 奨学金

（1）日本学生支援機構（JASSO）による貸与奨学金

種類	修士課程（月額）	博士後期課程（月額）
第一種奨学金（無利子）	5万円、8.8万円から選択	8万円、12.2万円から選択
第二種奨学金（有利子）	5万円、8万円、10万円、13万円、15万円から選択	

（2）民間財団等による奨学金（日本人学生向け）

・大学推薦なしで直接申請できる奨学金と、大学推薦必要な奨学金あり。
・地方公共団体の貸与奨学金（返還必要・無利子）と、民間の給与奨学金（返還不要）、貸与奨学金（返還必要・多くが無利子）がある。

（3）民間財団等による奨学金（私費外国人留学生向け）

・「大学推薦」は、学生支援課で登録申請必要。推薦学生を選出。
・「直接応募」は、大学ウェブサイトに掲載。各自で応募。

2. 日本学術振興会による制度・プログラム

（1）「特別研究員(DC)」制度

・研究奨励金20万円/月と特別研究員奨励費（研究費）～150万円/年。アルバイトや奨学金制限有

（2）若手研究者海外挑戦プログラム

・博士後期課程在籍中に研究留学経費の支援（渡航費・滞在費・研究費）

大学院課程学生への経済支援（学内実施分）

名称	財源	一人当たりの年間支援額	備考
つばめ博士学生奨学金	東京科学大学 （大学経費）	480,000円（一般奨学金） 635,400円（特別奨学金）	SPRING、BOOST、DCの採択者等は支援対象外
総合知と癒しの次世代フロントランナー育成プログラム（理工学系） (Science Tokyo SPRING(SE))	科学技術振興機構 （次世代研究者挑戦的研究プログラム／SPRING）	・216万円/年（18万円/月） ＋研究費 30万円/年 ＋学外研鑽費用支援	新入生を対象とした募集（入学後採用(春／秋)）と本学修士学生のうち翌年度春入学希望者を対象とした募集（予約採用）を実施
トップレベルAI研究のための共創型エキスパート人材育成プログラム（理工学系） (Science Tokyo BOOST(SE))	科学技術振興機構 （次世代AI人材育成プログラム(博士後期課程学生支援)／BOOST）	・360万円/年（30万円/月） +研究費 30万円/年 +学外研鑽費用支援	新入生を対象とした募集（入学後採用(春／秋)）を実施
リサーチフェロー制度 （総合研究院）	東京科学大学 （大学経費）	84万円/年	RA相当 SPRING、BOOST、DCの採択者等は支援対象外
生命理工学院バイオ×デジタル学修支援金制度	東京科学大学 （大学経費）	155,400円/年	バイオデジタル学修に意欲のある学生対象 その他支給要件あり

大学院課程学生への経済支援（学内実施分）

名称	財源	一人当たりの年間支援額	備考
東工大基金奨学金	東京科学大学 （大学経費）	『青木朗記念奨学金』　※5万円/月 『高砂熱学工業 創立100周年記念奨学金』　※5万円/月 『Air Trunk奨学金』　5万円/月	一部所得制限有
授業料免除【日本学術振興会特別研究員（DC）採用者】	東京科学大学 （大学経費）	授業料全額免除	2024年度後学期より実施

※印：修士課程学生への支援　　無印：博士後期課程学生への支援

・上記以外の東工大基金奨学金については、HPをご確認ください。
https://www.titech.ac.jp/student-support/students/tuition/giving-scholarships

・この他，TA/RAがあります。http://www.jinjika.jim.titech.ac.jp/syoku/index.html

・現時点での支援です。変更もあるので，詳細は各ホームページ等を確認してください。

博士後期課程学生への教育プログラムによる経済的支援

名称	財源	一人当たりの年間支援額	備考
卓越教育院経済支援制度 （エネルギー・情報卓越教育院）	協賛金，寄附金， 共同研究経費等	・170万円程度/年（奨励金、RA給与等） つばめ博士学生奨学金の併給可 同奨学金（一般）を併給した場合 **220万円程度/年** ・上記のほか、研究費、旅費支援等の 様々な支援あり	「総合知と癒しの次世代フロントランナー育成プログラム（理工学系）」または「トップレベルAI研究のための共創型エキスパート人材育成プログラム（理工学系）」に応募が可能です。 注意：2027年度以降の支援内容は未定です。必ず、詳細を確認してください。

博士後期課程に関する情報が掲載されているウェブサイト

博士後期課程を目指す方へ

https://www.titech.ac.jp/public-relations/prospective-students/doctoral-program

Dr's K-meet（博士後期課程学生のための蔵前就職情報交換の集い）

蔵前工業会（同窓会）と学生支援センターが共催する、博士後期課程学生向けの就職情報交換会。企業も多数参加。
https://www.kuramae.ne.jp/career/event/20251015-16/

ジョブ型研究インターンシップ

給料をもらいながらインターンシップでの単位修得が同時に可能。自身の専門性を生かすことができるかをジョブディスクリプションで確認します。
https://www.titech.ac.jp/student/students/life/job-i

Security Export Control

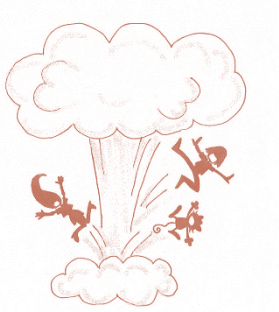
Institute of SCIENCE TOKYO

- What is Security Export Control？

  Security Export Control is a framework, based on the Foreign Exchange and Foreign Trade Act (FEFTA)[1], to maintain international peace and security by preventing weapons[2] and goods and technologies that could potentially be used for military applications from falling into the hands of terrorists or states that may be a security risk.

  [1] Penalties under FEFTA: 【Criminal Penalty】 *Imprisonment:* No more than 10 years; *Fines:* Individual No more than JPY 30 million, Company No more than JPY 1 billion 【Administrative Penalty】 Prohibition of exports for no more than 3 years

  [2] "Weapons" means both conventional weapons and weapons of mass destruction (WMD), including nuclear weapons, chemical weapons, biological weapons, and missiles which carry WMD



- If you are thinking about doing any of the following activities, first consult with your academic supervisor. You may be required to follow Security Export Control procedures before proceeding.

1) Going overseas[3]	2) Communicating with those overseas[3]	3) Graduating from Science Tokyo[3]
・Providing undisclosed technical information overseas ・Taking items (samples, equipment, USB memory) out of Japan ＊ Check with your supervisor before sending items abroad. The value of the item is not relevant.	・Transferring undisclosed technical information from your laboratory ＊ Providing information via SNS is also subject to Security Export Control procedures. ＊ Most laboratories prohibit the provision of technical information from the lab to non-lab members.	・Taking undisclosed technical information (data for a thesis/paper, etc.) out of Japan after graduation ・Taking samples of research material out of Japan after graduation

[3] In the case of international students, this includes returning to or communicating with those in their countries

Academic supervisors: When your students are to conduct any of the activities above, you are required to verify whether or not the activity in question is subject to Security Export Control. If internal examination is required, please fill out and submit the Consultation Form (available from the Security Export Control website for faculty members) to the section in charge of Export Control. https://www.titech.ac.jp/english/0/about/policies/efforts/export-control

If you have any questions, consult the section in charge of Security Export Control.
Email: ic_exportcontrols@adm.isct.ac.jp

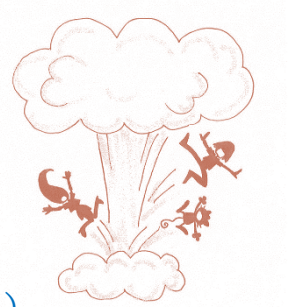
September, 2025

安全保障輸出管理

Institute of SCIENCE TOKYO

● 安全保障輸出管理とは？

世界の平和と安全の維持のために、武器※や軍事転用可能な技術・貨物を、安全保障上懸念のある国家やテロリストの手に渡さないようにするための、外為法（外国為替及び外国貿易法）に基づく管理制度※2のことです。



※「武器」とは、通常兵器と大量破壊兵器（核兵器、化学兵器、生物兵器、及びそれらを搭載したミサイル）の両方を意味します。

※2 違反した場合、刑事罰(懲役：10年以下、または罰金[法人]：10億円以下、[個人]：3千万円以下もしくは併科）、行政制裁（3年以内の、貨物の輸出・技術の提供の禁止)が科されます。

● 輸出管理手続きが必要なとき（下記のいずれかに当たるときは指導教員にご相談ください。）

1）日本国外に行くとき※3	2）日本国外に連絡するとき※3	3）卒業するとき※3
・海外で行う技術の提供が、未公開の情報である場合 ・海外へ物品（サンプル、機器、USBデータ等）を持ち出す場合 ＊ 外国へ物品を送る場合も同様の確認が必要です。なお、金額は関係ありません。	・研究室内の未公開技術情報を、海外へ提供する場合 ＊ SNS等のネットワークを介しての通信による技術提供も同様です。 ＊ 多くの研究室で、未公開技術情報を研究室外へ提供することを禁止しています。	・論文作成前のデータ等、未公開の技術情報を海外へ持ち出す場合 ・研究成果物のサンプルを海外へ持ち出す場合

※3 留学生が自国へ帰る・連絡する場合も含まれます。

指導教員のみなさまへ　研究室の学生が上記の活動を行う場合、指導教員は自らの研究活動での輸出管理と同様に問題がないかを確認し、学内手続きが必要な場合等は、相談シート（教職員向け安全保障輸出管理HP掲載）に記入し、安全保障輸出管理相談窓口までご提出ください。
https://www.titech.ac.jp/0/about/policies/efforts/export-control

ご不明点がありましたら、安全保障輸出管理相談窓口（ic_exportcontrols@adm.isct.ac.jp）にご相談ください。

2025.9作成