



Tokyo Tech International Graduate Programs

School of Materials and Chemical Technology: SMCT

<https://www.titech.ac.jp/english/about/organization/schools/organization03.html>

Information for International Students

https://www.titech.ac.jp/english/graduate_school/international/

International Graduate Program (Slide #18, 26-29)

https://www.titech.ac.jp/english/graduate_school/international/international_graduate/

International Graduate Program (A) Overseas Application Guide (Slide #19-25, 29,30)

https://www.titech.ac.jp/english/graduate_school/international/graduate_program_a/

International Graduate Program (B) (Slide #28)

https://www.titech.ac.jp/english/graduate_school/international/graduate_program_b/

International Graduate Program (C) Overseas or Domestic Application Guide (Slide# 27, 29)

https://www.titech.ac.jp/english/graduate_school/international/graduate_program_c/

1. Tokyo Tech Overview and SMCT

Tokyo Tech

SMCT Overview (School of Materials and Chemical Technology)

2. International Graduate Program

IGP-A (Program outline, Graduate Major & Degree, MEXT Scholarship)

Other Graduate programs (IGP-C, IGP-B, Short introduction)

Summary of Application Schedule for IGP-A and IGP-C

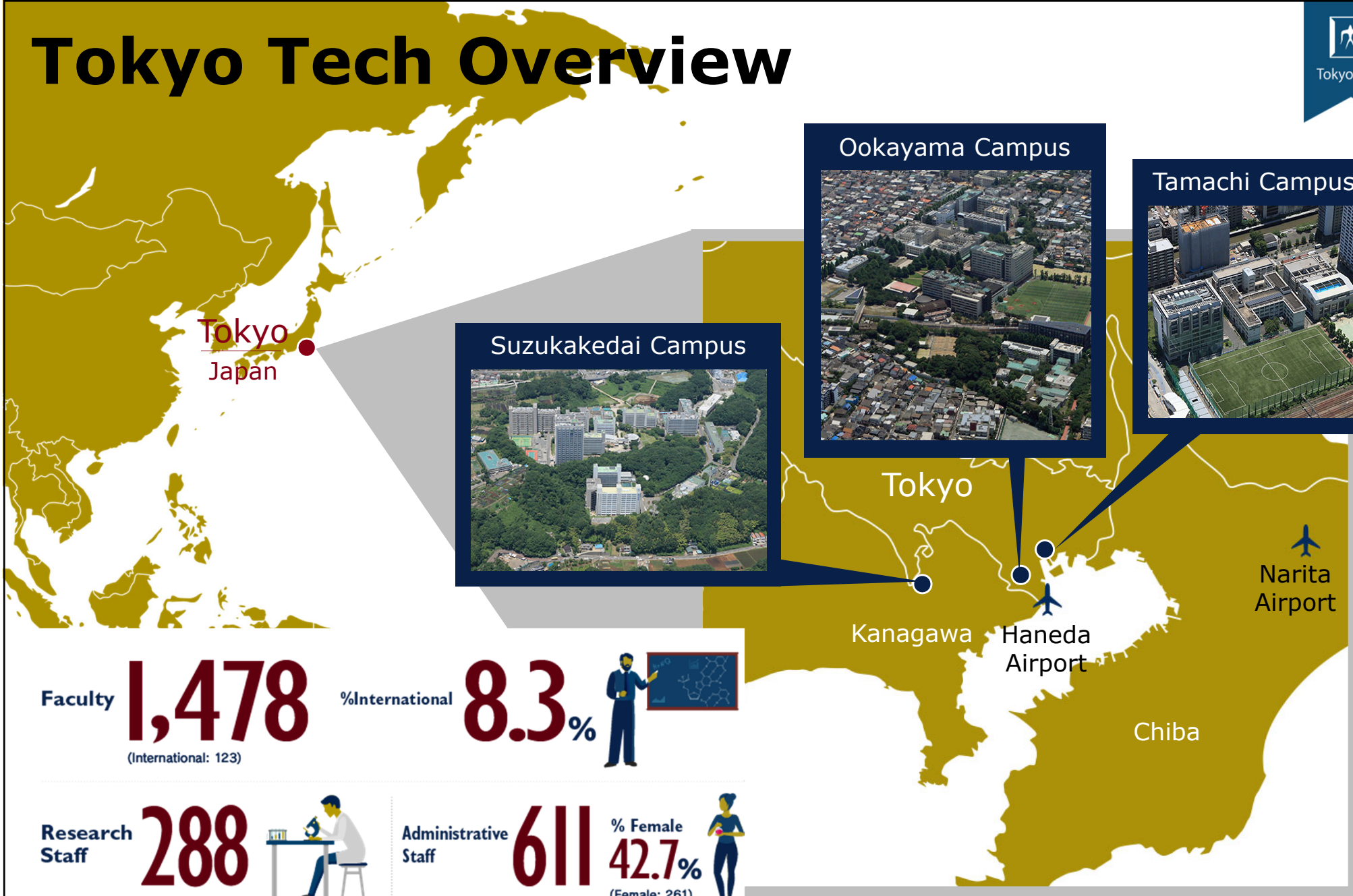
Other information

(Japanese government (MEXT) scholarship, English score)

Tokyo Tech Overview



Tokyo Tech



Faculty **1,478** %International **8.3%**
(International: 123)



Research Staff **288** **Administrative Staff** **611** % Female **42.7%**
(Female: 261)



Students **9,962** % Female **15.0%** %International **12.2%**
(Female: 1,497) (International: 1,214)
as of May 2017



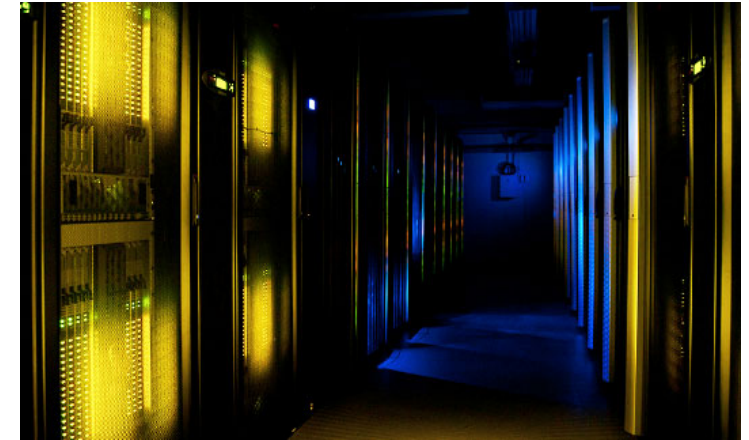
140 Years of Technical Innovation

1881 Founded as **Tokyo Vocational School** by the Japanese Government

1929 Elevated to a degree conferring university as **Tokyo Institute of Technology**

2004 Reestablished as an independent administrative institution under the name **National University Corporation (86 Univs in Japan)**

2018 Received status of **"Designated National University"** (9 Univs in Japan)



TSUBAME Supercomputer (2010-)
The world's most energy-efficient supercomputer

Present **The top science & technology university in Japan**

2000 **Nobel Prize in Chemistry**

Dr. Hideki SHIRAKAWA



Polyacetylene: Polymer conductor

2016 **Nobel Prize in Physiology or Medicine**

Dr. Yoshinori OHSUMI



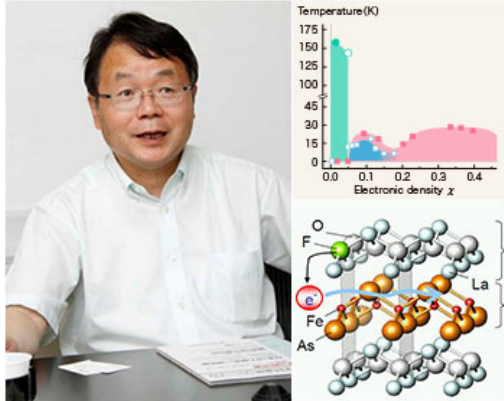
Autophagy

Recent Research Highlights & Awards



Hideo Hosono

Director of the Materials Research Center for Element Strategy



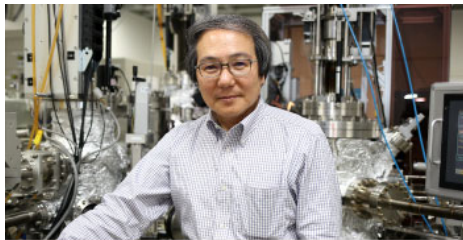
His discovery of **“iron-based superconductors”** that defies conventional wisdom

Thomson Reuters Citation Laureates (2013)
Japan Prize (2016)

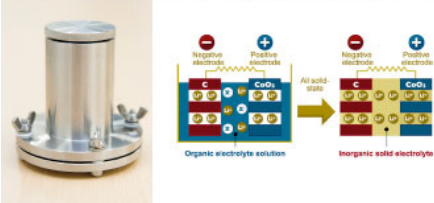
Ryoji Kanno

Director of Research Center for All-Solid-State Battery

Toward realization of **all-solid-state batteries**,



he demonstrated the possibilities of using a solid electrolyte in defiance of conventional wisdom.



Yasuharu Suematsu

Honorary Professor



“Pioneering research on **semiconductor lasers** for high-capacity long-distance optical fiber communication”

Japan Prize (2014)

Kenichi Iga

Professor Emeritus



“Conception and development of the vertical cavity **surface emitting laser** and its multiple applications to optoelectronics”

Benjamin Franklin Medal (2013)

Challenges for creating a safe low-carbon society

Environmental Energy Innovation (EEI) Building at Tokyo Tech



With the green power provided by the solar panels and a fuel cell system, the EEI building is nearly energy self-sufficient.

International Standing in Education and Research



World University Rankings (Education) 2021

- 2nd in Japan (Education Rankings 2021)



QS World University Rankings 2021

- Overall: 56th (3rd in Japan)
- Engineering & Technology: 34th (2nd in Japan)



QS World Rankings by Subject/Faculty

Chemistry (2021) **QS 28th** in the world

Chemical Engineering (2021) **QS 33rd** in the world

Materials Science (2021) **QS 53rd** in the world

Composition and Organization of Tokyo Tech



Members

Undergraduate	4,866
International	5.5% 267
Graduate	5,491
International	24.7% 1,355
Faculty	1,107
Administrative and Technical Staff	611

(As of May 2019)

Schools (6)

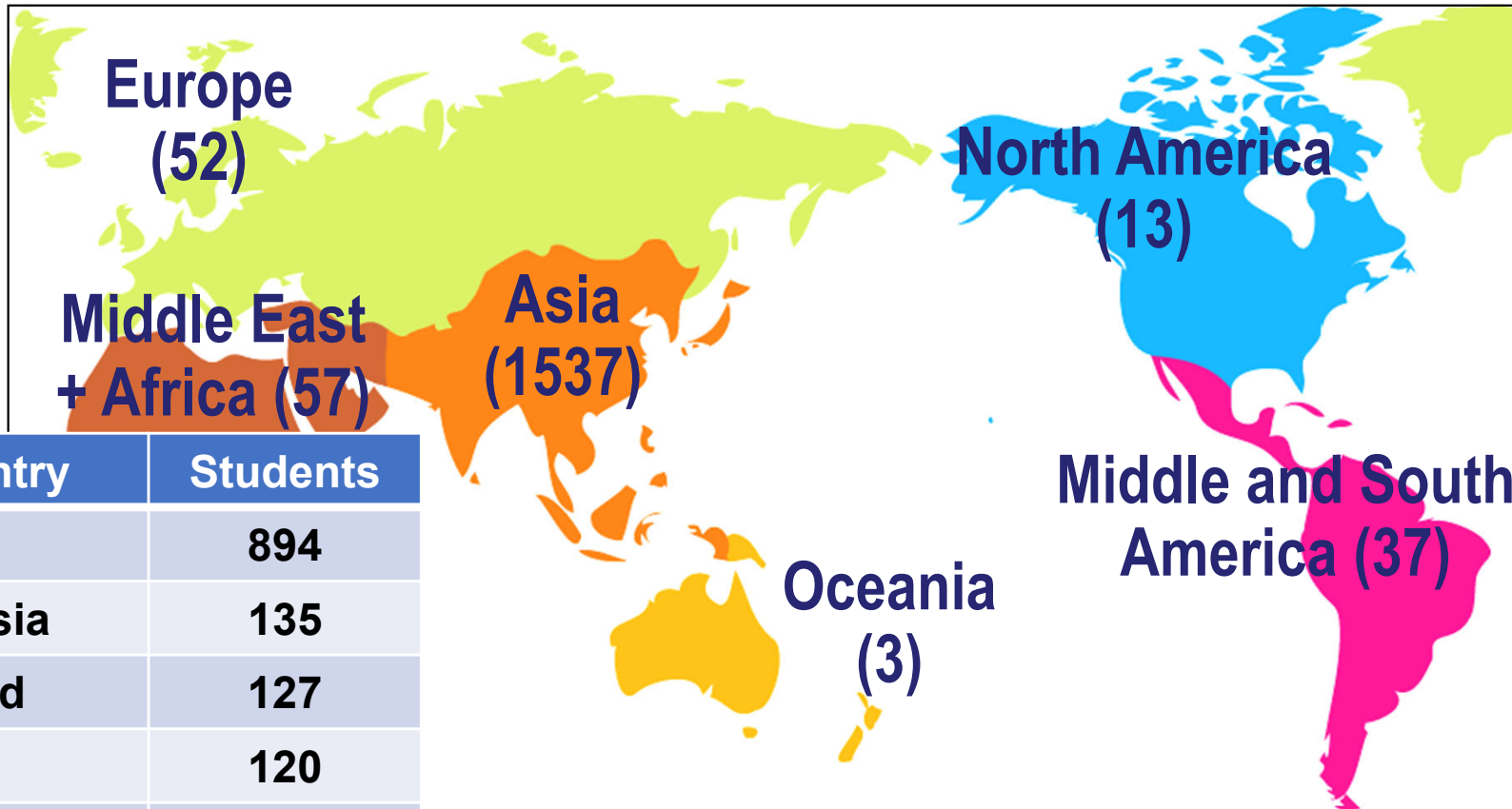
- Science
- Engineering
- **Materials and Chemical Technology**
- Computing
- Life Science and Technology
- Environment and Society

Institute for Liberal Arts

Institute of Innovative Research

- 4 Laboratories
- 2 Research centers & Research units

International Students



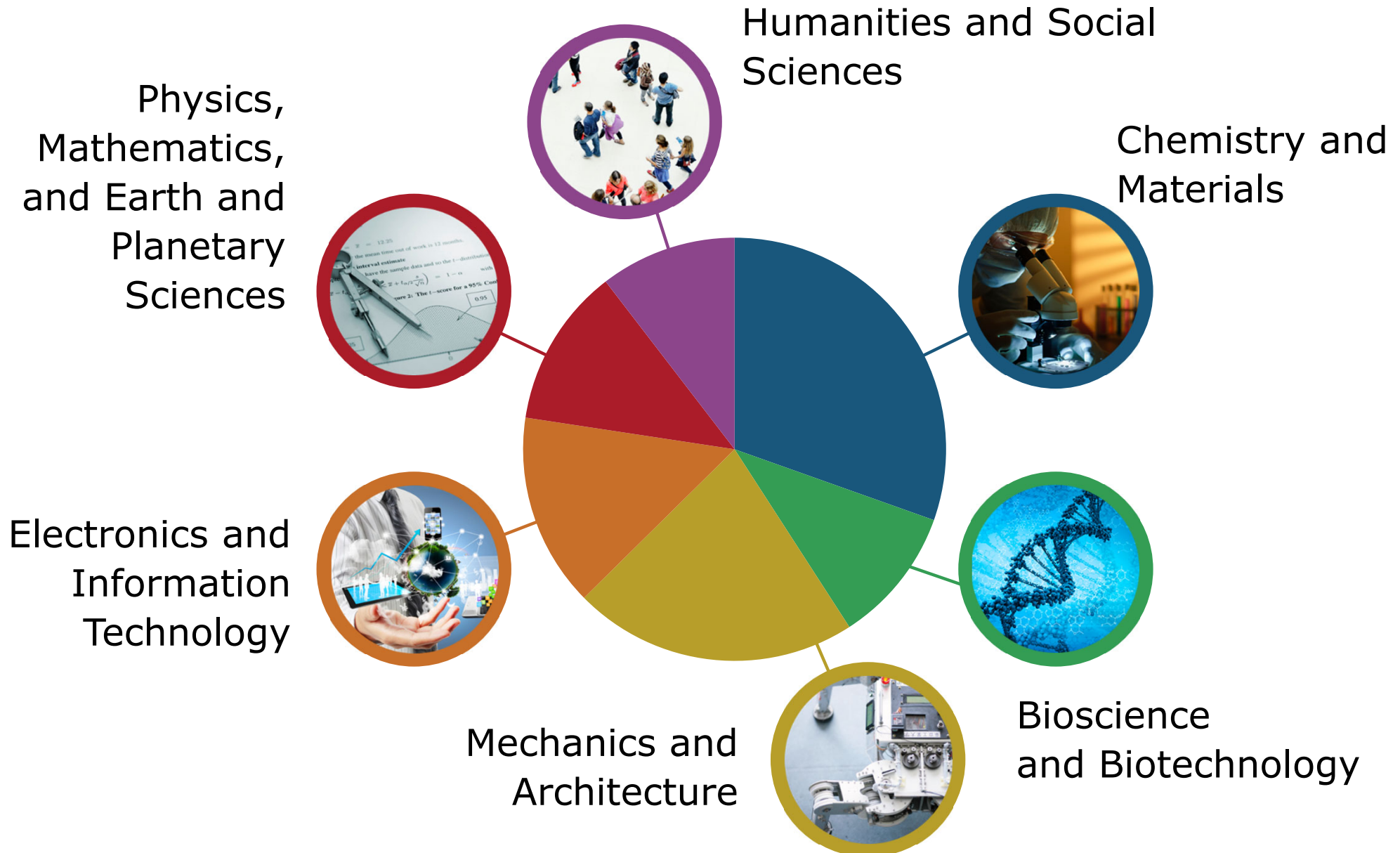
Country	Students
China	894
Indonesia	135
Thailand	127
Korea	120
Vietnam	44
Taiwan	36
Malaysia	33
India	33
Mongolia	23
Philippines	21
Cambodia	21

Total 1,699
(ca.16.6%)

(As of May 1, 2020)

Research Areas

(of the 1110 Faculty Members)



Schools, Departments, Majors



School	Department	Undergraduate Major	Graduate Major							
Science	Mathematics	•	•							
	Physics	•	•							
	Chemistry	•	•		•					
	Earth and Planetary Sciences	•	•							
Engineering	Mechanical Engineering	•	•	•	•	•	•			
	Systems and Control Engineering	•	•							
	Electrical and Electronic Engineering	•	•	•	•					
	Information and Communications Engineering	•	•	•						
	Industrial Engineering and Economics	•	•							
Materials and Chemical Technology	Materials Science and Engineering	•	•	•	•	•	•	•		
	Chemical Science and Engineering	•	•	•	•	•	•	•		
Computing	Mathematical and Computing Science	•	•							•
	Computer Science	•	•							•
Life Science and Technology	Life Science and Technology	•	•	•						
Environment and Society	Architecture and Building Engineering	•	•				•			•
	Civil and Environmental Engineering	•	•				•			•
	Transdisciplinary Science and Engineering	•	•			•		•		
	Social and Human Sciences		•							
	Innovation Science		•							
	Technology and Innovation Management (PMD)		•							
Institute for Liberal Arts	Liberal arts courses taken throughout each program									

New students join one of seven academic groups to gain core knowledge

Example: Graduate students in Materials Science and Engineering can choose from 5 majors

Human Centered Science and Biomedical Engineering

Energy Science and Engineering

Engineering Sciences and Design

Nuclear Engineering

Artificial Intelligence

Urban Design and Built Environment

1. Tokyo Tech Overview and SMCT

School of Materials and Chemical Technology (SMCT)

Undergraduate and Master/PhD Courses in School of Materials and Chemical Technology



School of Materials and Chemical Technology	As of May. 1, 2020	
	DATA	
	Faculty	183
	Total Students/	2615
	International Students	/292
	Students in Bachelor's Programs/	604
	International Students	/25
	Students in Master's Programs/	876
	International Students	/146
	Students in Doctor's Programs/	259
	International Students	/121

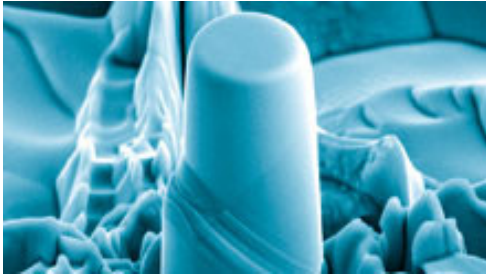
Department of Materials Science and Engineering

<https://educ.titech.ac.jp/mat/eng/>

Department of Chemical Science and Engineering

<https://educ.titech.ac.jp/cap/eng/>

Why Study at the School of Materials and Chemical Technology (SMCT) ?



Experience the joy of discovering new materials and possibilities.

University research aims for breakthroughs that lead to the discovery of never-before-seen materials and substances. When you discover a novel substance, you come to appreciate this research and its impact on society.



Finding a field that matches your interests is easy, and your future options open up.

There is great diversity in substance and materials research, with everything from science to engineering topics. That is why **substance and materials professionals are needed** in all sorts of sectors, such as cars, machines, electrical devices, textiles, medicine, and energy.



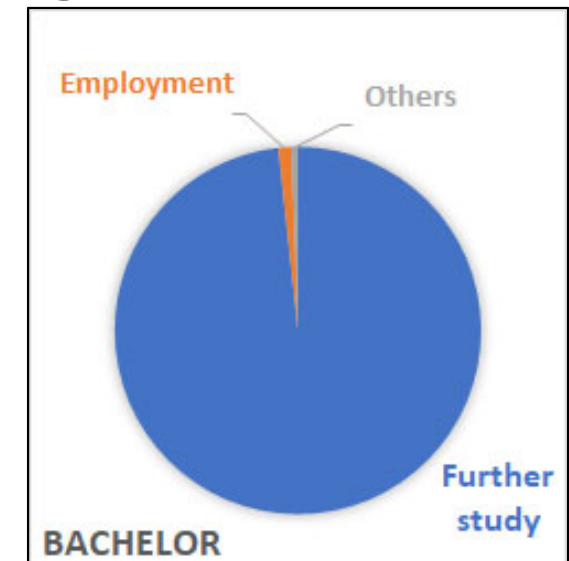
This field is connected to key industries, so you do not need to worry about not finding a job.

In addition to plentiful options, **this field is connected to areas crucial to Japanese industry, where many of our graduates are enjoying great success.** It is fair to say that if you study hard, you will not have a problem finding a job — another benefit to studying at the School.

Career path of graduates of SMCT: (1/2)

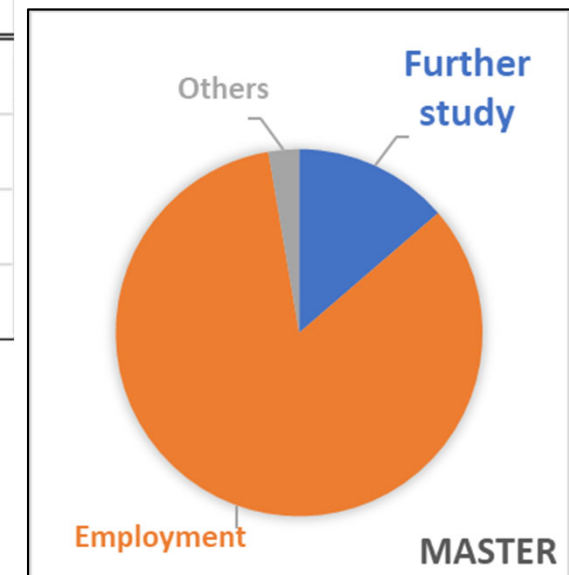
1. SMCT students after graduation in FY2019

1 SMCT students after graduation in FY2019			
	Bachelor	Master	Doctor
Number of Graduates	176	409	81



2. Ratio of Further study and Employment of Bachelor and Master in FY2019

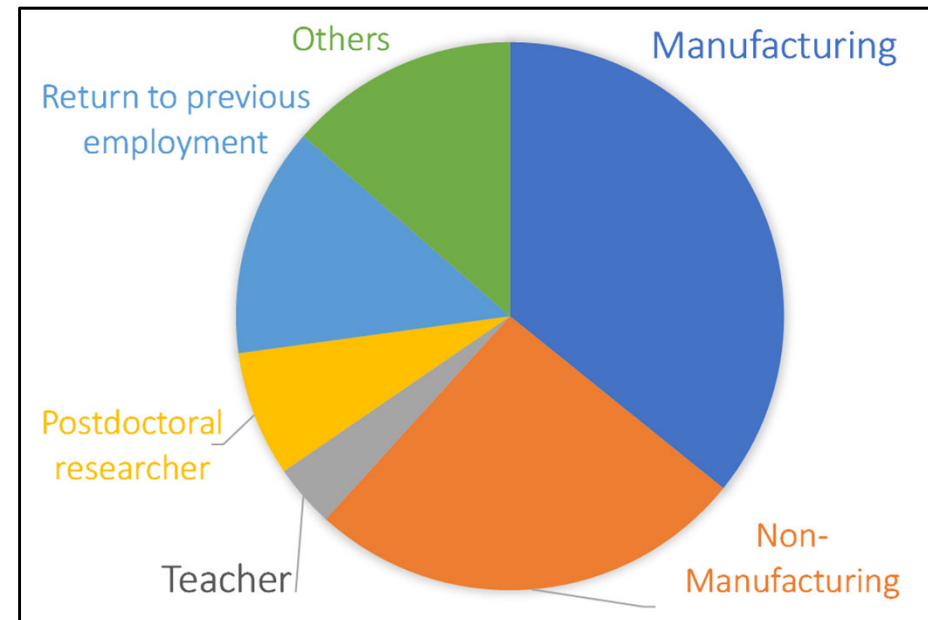
Subject	<Bachelor>		<Master>	
	Person	Ratio %	Person	Ratio %
Graduates	176	100	409	100
Further study	173	98.3	56	13.7
Employment	2	1.1	342	83.6
Others	1	0.6	11	2.7



Career path of graduates of SMCT: (2/2)

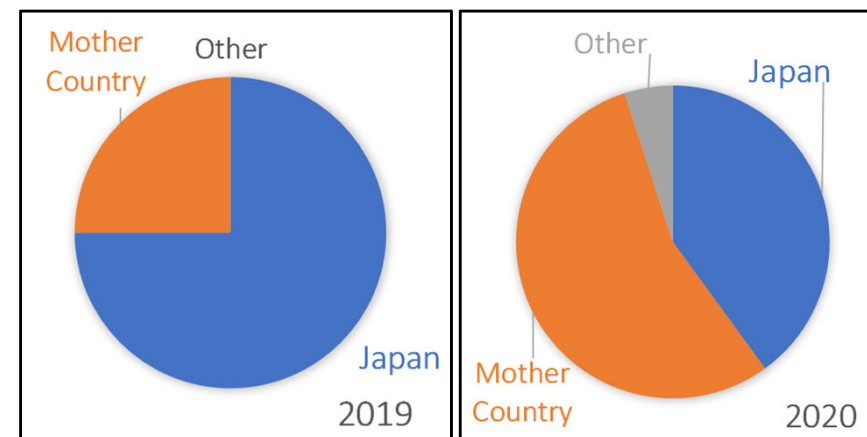
3. Ratio of Employment for Doctor' Course students (all students) in FY2019

Subject	Person	Ratio %
Graduates	81	100
Manufactureing	29	35.8
Non-Manufacturing	21	25.9
Teacher	3	3.7
Postdoctral researcher	6	7.4
Return to previous employment	11	13.6
Others	11	13.6



4. Employment Places for Doctor's Course students (from foreign countries) in FY2019 and 2020

Subject	2019		2020	
	Person	Ratio %	Person	Ratio %
Graduates	8	100	20	100
Japan	6	75.0	8	40.0
Mother Country	2	25.0	11	55.0
Other	0	0.0	1	5.0
Employment	5	62.5	13	65.0
Researcher	3	37.5	7	35.0



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Other Graduate programs (IGP-C, IGP-B, Short introduction)

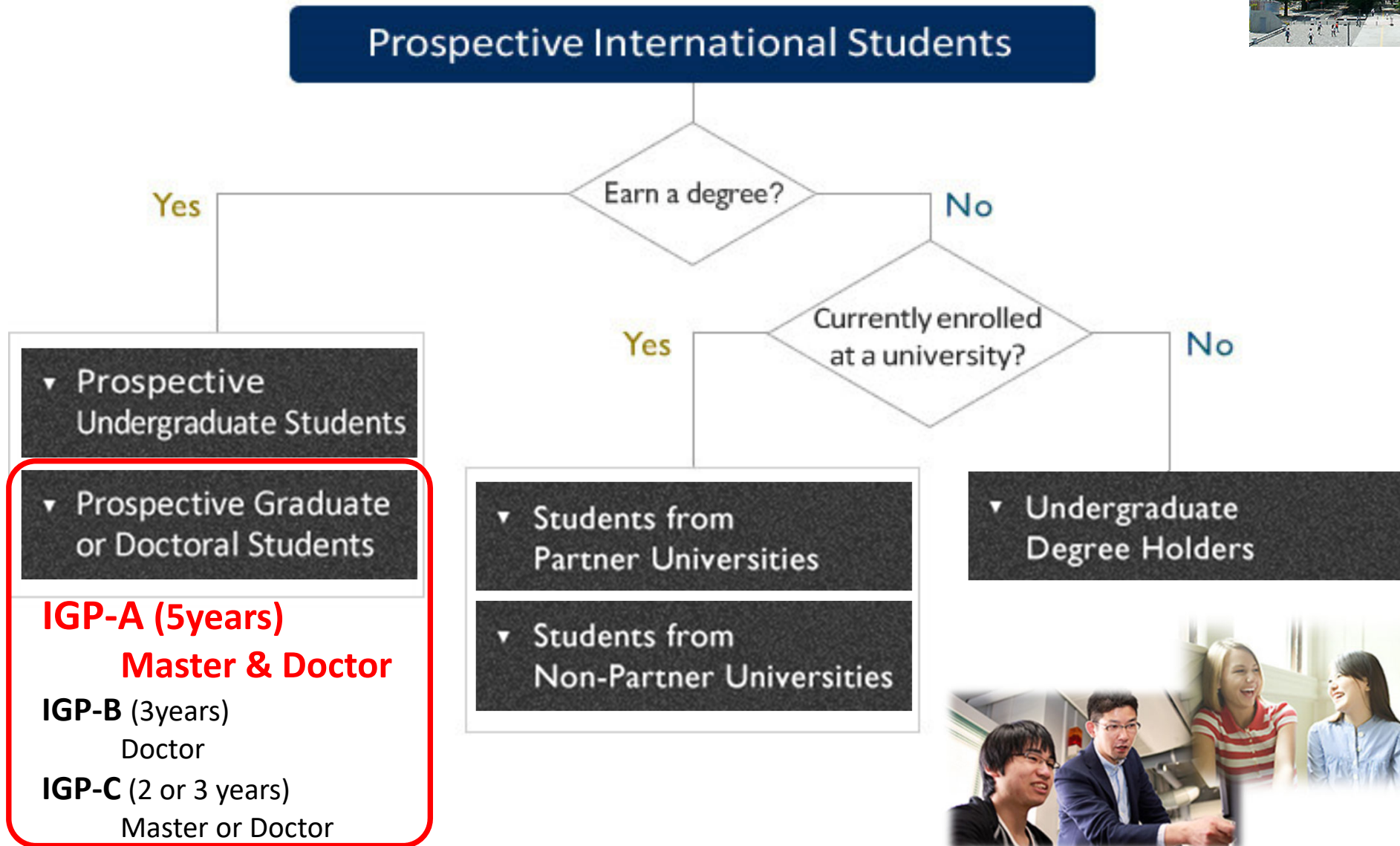
Summary of Application Schedule for IGP-A and IGP-C

Other information

(Japanese government (MEXT) scholarship, English score)

International Study Programs

Tokyo Tech offers diverse programs for international students. Select an international program best suited to your goals.



International Graduate Program (A) IGP-A



Using *last year's entrance exam as an example*, the latest version will be announced later.

Enrollment Date: September, 2021

Number of Admitted Students: Several students in each departments

Types of Programs: **Integrated Doctoral Education Program**, Master's Program
depending on each IGP-A programs

Application

Admission: September, 2022

Application period: Early September to Early December, 2021(to be announced)
for the last year (enrollment date is September 2021), the application period is from September 11 to December 8, 2020. usually, from 2nd week of September to 1st week of December

URL https://www.titech.ac.jp/english/graduate_school/international/graduate_program_a/

No Japanese language requirement.

Lectures and seminars are held in English.

Possibility to apply for the MEXT Scholarship



MEXT Scholarship Benefits

Tuition at Japanese university

Allowances for living expenses

A round-trip airfare

e.g. 2018 monthly stipend:

- Research Student 146,000 JPY (31,854,278 VND)
- Master's 147,000 JPY (1,330 USD)
- Doctoral 148,000 JPY (1,340 USD)

Tokyo Tech - Japanese Government (MEXT) Scholarship

www.titech.ac.jp/english/graduate_school/international/scholarships/mext_scholarship.html

INQUIRIES FOR MEXT SCHOLARSHIP AT TOKYO TECH:

International Student Exchange Division

Tokyo Institute of Technology

tokyotech.mext@jim.titech.ac.jp

International Graduate Program (A)

List of Department & Programs for IGP-A



International Graduate Program (A)	Offered Degree Programs	School
1 International Graduate Program in Science for Innovative Leaders	Integrated Doctoral Education Program	Science
2 Super Smart Society Engineering Program	Integrated Doctoral Education Program	Engineering
3 Interdisciplinary Education Program on Material Research and Development Synergized by Data Science for Advanced Human Resource: (Id-MatD²)	Integrated Doctoral Education Program	Materials and Chemical Technology
4 Graduate Program to Foster Global Ecosystems	Integrated Doctoral Education Program	Life Science and Technology
5 Postgraduate Program for Environmental Designers Contributing to Resilient Cities	Master's Program & Integrated Doctoral Education Program	Environment and Society
6 Global Engineering Program for Inclusive Society and Sustainable Environment	Integrated Doctoral Education Program	Environment and Society

International Graduate Program (A)

IGP-A Program in SMCT (Id-MatD²)



Interdisciplinary Education Program on **Material Research and **Development** Synergized by **Data Science** for Advanced Human Resource (**Id-MatD²**)**

Program Outline:

The goal of this program is to foster "advanced materials human resources" based on **Materials Research and Development** through synergy with **data science**.



URL https://educ.titech.ac.jp/mat/eng/news/2020_09/059584.html

(This program is the Integrated Doctoral Education Program of master's and doctoral degrees)

International Graduate Program (A)

IGP-A Program in SMCT (Id-MatD²)



Interdisciplinary Education Program on Material Research and Development Synergized by Data Science for Advanced Human Resource (Id-MatD²)

Program Outline:

Type of Degree:

Master of Science, Master of Engineering, Master of Arts

Doctor of Science, Doctor of Engineering, Doctor of Philosophy

Aims: To train highly educated engineers with both data science knowledge and materials research/development capabilities.

- Technical knowledge in the **fields of advanced materials and chemical technology.**

Expectation: To take roles **as leaders in international projects.**

- **high degree of creativity and innovative thinking.**

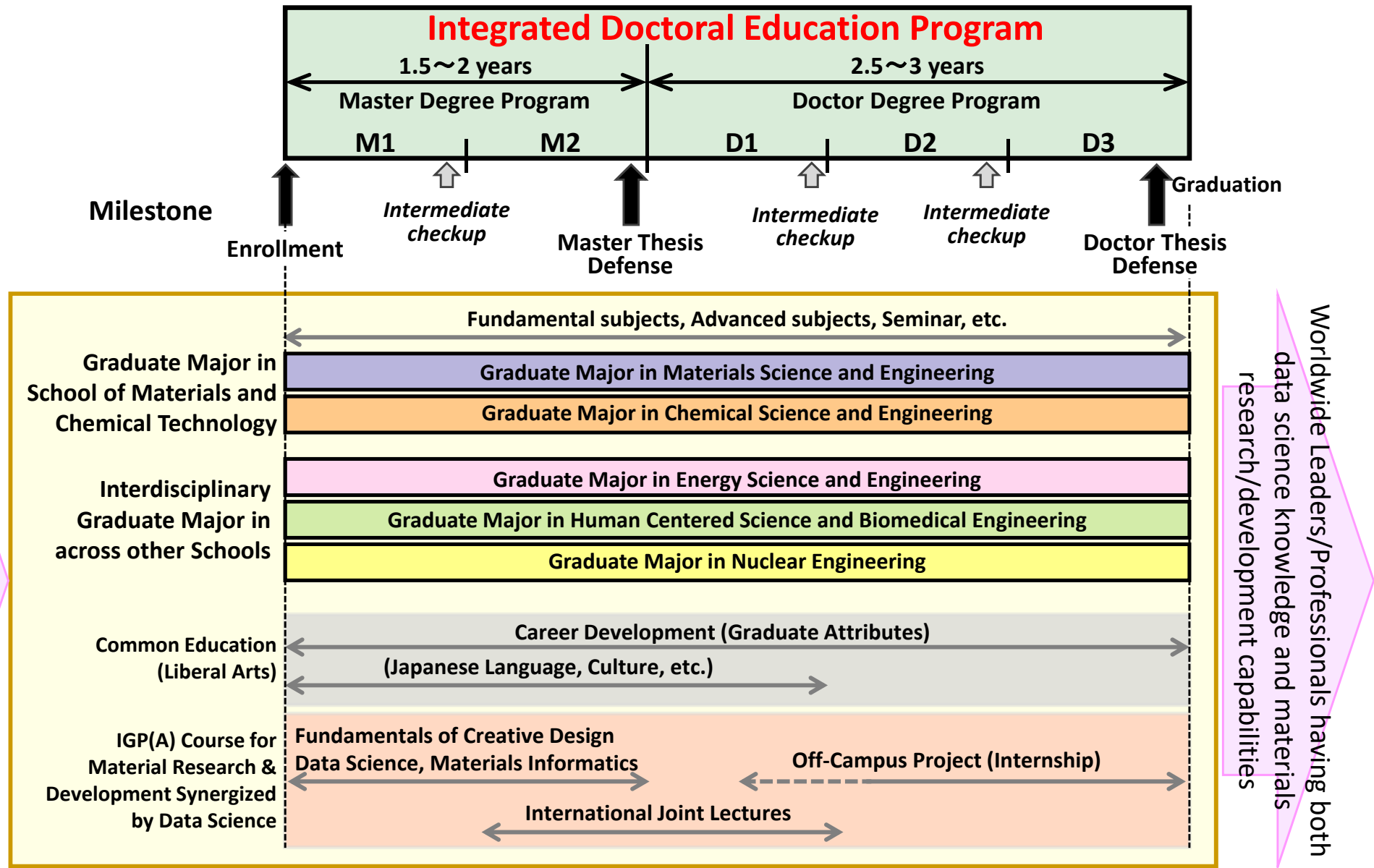
URL https://educ.titech.ac.jp/mat/eng/news/2020_09/059584.html

(This program is the Integrated Doctoral Education Program of master's and doctoral degrees)

Summary of curriculum and schedule to finish this program



The program aim is to train highly educated engineers who combine the knowledge of data science and the ability of research/development for materials.



Core Courses for Id-MatD²

Please visit

Page of “Interdisciplinary Education Program on Material Research and Development Synergized by Data Science for Advanced Human Resource” (Id-MatD2)

https://educ.titech.ac.jp/mat/eng/news/2020_09/059584.html

Graduate Majors

- ❖ Materials Science and Engineering
- ❖ Chemical Science and Engineering
- ❖ Energy Science and Engineering
- ❖ Human Centered Science and Biomedical Engineering
- ❖ Nuclear Engineering

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Other Graduate programs (IGP-C, IGP-B, Short introduction)

Summary of Application Schedule for IGP-A and IGP-C

Other information

(Japanese government (MEXT) scholarship, English score)

- Types of Programs: **Master's Program, Doctoral Program**
- **No Japanese language requirement:**
Lectures and seminars are held in English.

Application

- Admission : **April** (the Spring Program)
September (the Fall Program)
- Application Period:
Jan - April for the Fall program
August - October for the Spring Program



- Application procedures, required documents and eligibility:
www.titech.ac.jp/english/graduate_school/international/graduate_program_c/

Mainly for privately-funded international students, including those who receive scholarships from foreign governments or companies.

JASSO scholarship (48,000 JPY for 6-12 months) or other scholarship opportunities may be available.

Tokyo Tech-RIKEN International School

- Academic supervisors at both Tokyo Institute of Technology and RIKEN professors

Nano-materials and Nano-biomaterials

Application for Students Seeking Scholarships offered by Organizations/Governments other than the Japanese Government

- CSC (the China Scholarship Council), LPDP (the Indonesia Endowment Fund for Education) and the Indonesian Directorate General of Higher Education (DGHE or DIKTI) *subject to change

Types of Programs: **Doctoral Program**

Admission : **September**

Application: www.titech.ac.jp/english/graduate_school/international/graduate_program_b/

Summary: IGP (overseas application) Application Schedule

International Graduate Program (A)

International Graduate Program (C)

Find an academic supervisor first. Information on faculty members' Website Search by "Tokyo Tech STAR Search"

Obtain English proficiency test score reports **from TOEFL-iBT, TOEFL-PBT, TOEIC or IELTS Academic Module** in two years before the application deadline

Interview by faculty members in person or via Internet

Application Deadline: **Dec. 2021**

Screening by Tokyo Tech:
Dec. 2021-Mar. 2022 (MEXT Scholarship student candidate selection included)

Screening by MEXT: Apr.-July 2022

Admission: **Sept. 2022**

Application Deadlines:

-**Oct. 2021** for Apr. 2022 admission
-**April 2022** for Sept. 2022 admission

Screening by Tokyo Tech:
-Dec. 2021 for Apr. 2022 admission
-Jun. 2022 for Sept. 2022 admission

Admission: **Apr./Sept.2022**

Summary: Japanese Government (MEXT) Scholarship

Scholarships to support international students' study in Japan are available through the Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Two ways to apply

https://www.titech.ac.jp/english/graduate_school/international/research_students/mext_scholarship

1. Embassy Recommendation

Apply through the Japanese embassy or a consulate general in home country

Admission: **April or September**

Application period: around **March - June** (a year before admission)

2. University Recommendation (IGP-A and SGU)

2.1 International Graduate Program A (IGP-A)

https://www.titech.ac.jp/english/graduate_school/international/graduate_program_a/

2.2 SGU-Top Global University Project-

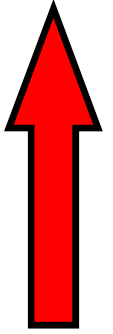
During the period of implementation of the "Top Global University Project", applicants with outstanding academic records who have applied to regular graduate programs at Tokyo Tech are eligible to apply for the University Recommendation -SGU-. The number of awards is very limited.

https://www.titech.ac.jp/english/graduate_school/international/scholarships/mext_scholarship.html#SGU_MEXT

Requirements of English Language proficiency Test Score for Applicants of MEXT scholarships

Comparison table of each English proficiency qualification / certification test and Common European Framework of Reference for Languages: Learning, teaching, assessment (CEFR)

CEFR	ケンブリッジ 英語検定 Cambridge English Qualifications	実用英語技能検定 1級-3級	GTEC Advanced Basic Core CBT	IELTS	TEAP	TEAP CBT	TOEFL iBT	TOEIC L&R/ TOEIC S&W
C2	230 200			9.0 8.5				
C1	199 180	3299 2600	1400 1350	8.0 7.0	400 375	800	120 95	1990 1845
B2	179 160	2599 2300	1349 1190	6.5 5.5	374 309	795 600	94 72	1840 1560
B1	159 140	2299 1950	1189 960	5.0 4.0	308 225	595 420	71 42	1555 1150
A2	139 120	1949 1700	959 690		224 135	415 235		1145 625
A1	119 100	1699 1400	689 270					620 320



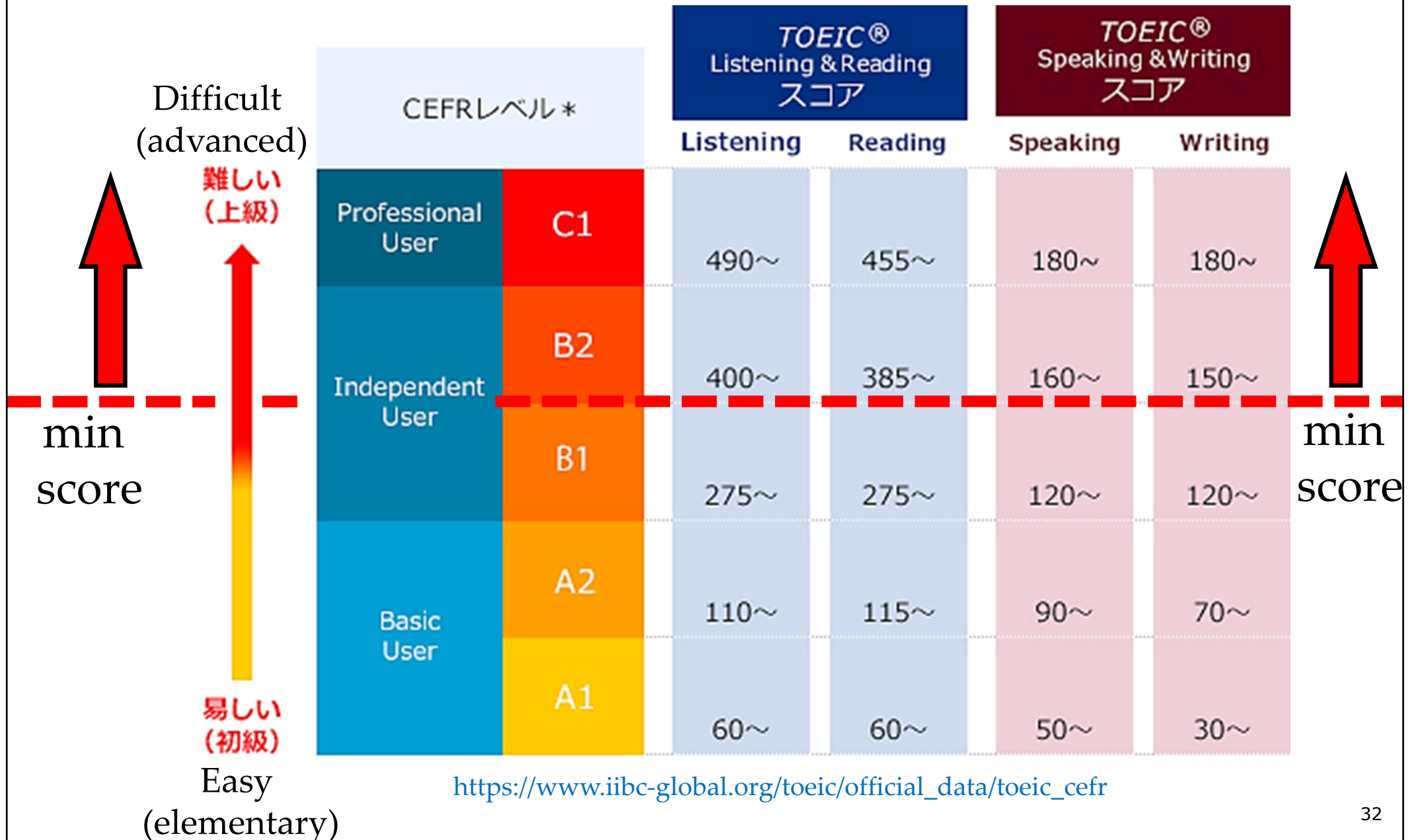
Min.
score

Min.
score

は各級合格スコア ※括弧内の数値は、各試験におけるCEFRとの対象関係として測定できる能力の範囲の上限と下限

Requirements of English Language proficiency Test Score for Applicants of MEXT scholarships

Comparison of TOEIC® Program test scores and CEFR



Information on Living in Japan for International Students

Status of residence and resident card, Bank, etc. for daily life

https://www.titech.ac.jp/english/graduate_school/international/information.html



Dormitory

International students may seek accommodation in a university-recommended dormitory, direct-application dormitory, company dormitory, or private apartment.

https://www.titech.ac.jp/english/graduate_school/international/dormitory.html



Experiences at Tokyo Tech

Interviews of current international students and contributions from Tokyo Tech alumni.

https://www.titech.ac.jp/english/graduate_school/international/experiences/



Tokyo Tech

Thank You