Toward World-Class Education and Research

2. 11. 2021, Go Abroad Fair, RWTH Aachen University
International Student Exchange Division, Tokyo Institute of Technology
1. Overview
2. Education
3. Research
4. International programs
Location

Tokyo, Japan

Ookayama Campus

Tamachi Campus

Suzukakedai Campus

Haneda Airport

Narita Airport

Chiba
### 140 Years of Technical Ingenuity

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1881</td>
<td>Founded as <strong>Tokyo Vocational School</strong> by the Japanese government</td>
</tr>
<tr>
<td></td>
<td>• To produce engineers with a high level of expertise</td>
</tr>
<tr>
<td></td>
<td>• To revitalize Japan through the promotion of technology</td>
</tr>
<tr>
<td>1929</td>
<td>Elevated to a degree-conferring university as <strong>Tokyo Institute of Technology</strong></td>
</tr>
<tr>
<td>2004</td>
<td>Reestablished as an independent administrative institution under the name <strong>National University Corporation Tokyo Institute of Technology</strong></td>
</tr>
<tr>
<td>2018</td>
<td>Received status of <strong>Designated National University</strong></td>
</tr>
</tbody>
</table>
Organization and Stats

Organization

- School of Science
- School of Engineering
- School of Materials and Chemical Technology
- School of Computing
- School of Life Science and Technology
- School of Environment and Society
- Institute for Liberal Arts
- Institute of Innovative Research
- Strategic Research Hubs
  - Earth - Life Science Institute
  - Material Research Center for Element Strategy
  - Research Institute for the Earth Inclusive Sensing

Stats

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students</td>
<td>5,526</td>
</tr>
<tr>
<td>International</td>
<td>1,438</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>4,773</td>
</tr>
<tr>
<td>International</td>
<td>271</td>
</tr>
<tr>
<td>Faculty</td>
<td>1,584</td>
</tr>
<tr>
<td>International</td>
<td>129</td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>608</td>
</tr>
</tbody>
</table>

(May, 2020)
<table>
<thead>
<tr>
<th>Rank</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>2</td>
<td>University of Oxford</td>
</tr>
<tr>
<td>3</td>
<td>Stanford University</td>
</tr>
<tr>
<td>3</td>
<td>University of Cambridge</td>
</tr>
<tr>
<td>5</td>
<td>Harvard University</td>
</tr>
<tr>
<td>23</td>
<td>The University of Tokyo</td>
</tr>
<tr>
<td>33</td>
<td>Kyoto University</td>
</tr>
<tr>
<td>56</td>
<td>Tokyo Institute of Technology</td>
</tr>
<tr>
<td>75</td>
<td>Osaka University</td>
</tr>
<tr>
<td>82</td>
<td>Tohoku University</td>
</tr>
</tbody>
</table>

Data in 2022
Our Goal

To become one of the world’s top ten research universities

- **Education**: Produce graduates who will thrive in a global society as the world's top researchers and leaders
- **Research**: Achieve worldwide success in research and innovation & develop infrastructure to enhance research
- **Globalization**: Create a global environment for education and research
- **Contribution to Society**: Contribute to society through research and educational achievement
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Education Reform

Cultivate talented people in the fields of science and technology with the expertise and skills to lead

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Build the Education System of One of the World’s Top Universities</strong></td>
</tr>
<tr>
<td>2</td>
<td><strong>Innovate Learning</strong></td>
</tr>
<tr>
<td>3</td>
<td><strong>Promote ambitious internationalization</strong></td>
</tr>
</tbody>
</table>
Innovations for Globalized Education

Joining of undergraduate and graduate schools
(April 2016)

• Continuity in the curricula between bachelor’s and master’s programs
  and between master's and doctoral programs

• Clearly defined degree competencies
## Education system

### Prior System

**Undergraduate**
- 3 Schools 23 Departments

- School of Science
- School of Engineering
- School of Bioscience and Biotechnology

**Discontinuity in curricula**

**Graduate**
- 6 Schools 45 Departments

- Graduate School of Science and Engineering
- Graduate School of Bioscience and Biotechnology
- Interdisciplinary Graduate School of Science and Engineering
- Graduate School of Information Science and Engineering
- Graduate School of Decision Science and Technology
- Graduation School of Innovation Management

### Current System

**6 Schools, 19 Departments & a professional master’s degree program**

<table>
<thead>
<tr>
<th>Area</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science</strong></td>
<td>Mathematics / Physics / Chemistry / Earth and Planetary Sciences</td>
</tr>
<tr>
<td><strong>Engineering</strong></td>
<td>Mechanical Engineering / Systems and Control Engineering / Electrical and Electronic Engineering / Information and Communications Engineering / Industrial Engineering and Economics</td>
</tr>
<tr>
<td><strong>Materials and Chemical Technology</strong></td>
<td>Materials Science and Engineering / Chemical Science and Engineering</td>
</tr>
<tr>
<td><strong>Computing</strong></td>
<td>Mathematical and Computing Science / Computer Science</td>
</tr>
<tr>
<td><strong>Life Science and Technology</strong></td>
<td>Life Science and Technology</td>
</tr>
<tr>
<td><strong>Environment and Society</strong></td>
<td>Architecture and Building Engineering / Civil and Environmental Engineering / Transdisciplinary Science and Engineering / Social and Human Sciences / Innovation Science / Technology and Innovation Management (professional master’s degree program)</td>
</tr>
</tbody>
</table>
1. Overview
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Research Areas
(of the 1090 Faculty Members)

- Chemistry and Materials
- Bioscience and Biotechnology
- Electronics and Information Technology
- Mechanics and Architecture
- Physics, Mathematics, and Earth and Planetary Sciences
- Humanities and Social Sciences
Tokyo Tech Research Map 2019-2020

https://www.titech.ac.jp/english/public-relations/research/research-map
Research Awards

2016 Nobel Prize in Physiology or Medicine

Yoshinori Ohsumi
Honorary Professor
Physiology or Medicine
“for his discoveries of mechanisms for autophagy”
Gairdner Intl. Award
for “pioneering the molecular elucidation of autophagy, an essential intracellular, degradation system and when disordered, is linked to many diseases including neurodegeneration, cancer, and infection” (2015)

Order of Culture, Japan Prize

2000 Nobel Prize in Chemistry

Hideki Shirakawa
Chemical Engineering
“for the discovery and development of conductive polymers”

2013 Thomson Reuters Citation Laureate

Hideo Hosono
Honorary Professor, Physics
“for his discovery of iron-based superconductors”
6,235 citations, as of February 25, 2016.
JACS, 2008, 130 (11), 3296. Iron-Based Layered Superconductor La[O1-xF_x]FeAs (x = 0.05–0.12) with T_c = 26 K

IEEE Edison Medal
“For pioneering contributions to the concept, physics, and development of the vertical-cavity surface-emitting laser” (2021)

2014 Benjamin Franklin Medal
for “pioneering research on semiconductor lasers for high-capacity long-distance optical fiber communication” (2014)

2015 Gairdner Intl. Award

2015 International Prize for Biology

2015 Person of Cultural Merit, Japan

2015 Thomson Reuters Citation Laureate

2016 Kyoto Prize

2016 Gairdner Intl. Award

6,235 citations, as of February 25, 2016. Iron-Based Layered Superconductor La[O1-xF_x]FeAs (x = 0.05–0.12) with T_c = 26 K

2016 Person of Cultural Merit, Japan

2016 Thomson Reuters Citation Laureate

Yasuharu Suematsu
Honorary Professor
for “pioneering research on semiconductor lasers for high-capacity long-distance optical fiber communication” (2014)

2015 Gairdner Intl. Award

2015 International Prize for Biology

2015 Person of Cultural Merit, Japan

2015 Thomson Reuters Citation Laureate

Kenichi Iga
Professor Emeritus
for “the conception and development of the vertical cavity surface emitting laser and its multiple applications to optoelectronics” (2013)

IEEE Edison Medal
“For pioneering contributions to the concept, physics, and development of the vertical-cavity surface-emitting laser” (2021)
Contents

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International Students

As of May 1, 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>935</td>
</tr>
<tr>
<td>Indonesia</td>
<td>139</td>
</tr>
<tr>
<td>Thailand</td>
<td>131</td>
</tr>
<tr>
<td>Korea</td>
<td>122</td>
</tr>
<tr>
<td>Vietnam</td>
<td>44</td>
</tr>
</tbody>
</table>

Total 1,804 (ca. 17.3 %)

Middle East + Africa (71)

Europe (81)

Asia (1,597)

North America (13)

Latin and South America (39)

Oceania (3)
Global Scientists and Engineers Program (GSEP) for inbound bachelor’s level students

• From April 2016 Bachelor of Engineering degree program fully conducted in English
• Transdisciplinary program not limited to any specific science or engineering field
• Japanese language and culture classes, optional specialized classes in Japanese
• Core courses taught in project-based learning format
• Eight students receive a full 4-year scholarship from MEXT
International Graduate Program (IGP)

- Launched in 2007
- 3 types of full-degree programs
  - Master’s Program
  - Doctoral Program
  - Integrated Doctoral Education Program
- Lectures and seminars conducted in English

For details, visit:
www.titech.ac.jp/english/graduate_school/international/internationalgraduate/
Young Scientist Exchange Program (YSEP)

- At the time of participation, students
  a) have completed at least two and a half years of study in a four-year bachelor’s degree program,
  b) have completed at least two years of a three-year bachelor’s degree program, or
  c) be in a master’s degree program
- Research Project guided by an academic advisor
- Japanese Studies including visits to Japanese companies, cultural experiences, language classes
- Courses provided in English

- Period: 2 quarters (a semester)
- Start Date: September or March
- Eligible to apply for JASSO Scholarship
- Limited to 50 students per year
- For details:
  http://www2.gakumu.titech.ac.jp/ysep/
Academic Cooperation Agreement Program (ACAP)

- Undergraduate (2nd year or above) and Graduate Students
- **Research-oriented Program:** Research and study under the guidance of an academic supervisor
- **Course-oriented Program:** Enroll in courses alongside regularly-enrolled Tokyo Tech students

- **Study/Research Period:** From 3 months to 1 year (For JASSO scholarship recipients, from 2 quarters (a semester) to 4 quarters (a year) )
- **Start Date:** the first day of any month (For JASSO scholarship recipients, the period of study must start in either April or September)
- For details: http://www.titech.ac.jp/english/graduate_school/international/exchange/acap.html
Danke schön!
Immigration Restriction and Border Enforcement Measures in Japan
The new entry of foreign nationals into Japan has not been permitted since January 14, 2021.

We have received no new information on immigration relaxation as of today.

Persons who have available re-entry permit are able to enter at this moment.
Expected requirements after entering Japan

- Students will be required to stay at hotel for self-quarantine for 15 consecutive days. (The university dorm room cannot be used for self-quarantine.)

- Students will be required to report your health condition through the rental smartphone which Tokyo Tech will arrange for you.

- All expenses should be charged by students (FYR, it may cost about JPY 200,000 - 250,000 as of now.)
FYI: Procedures for entering Japan

This is the current procedures for entering Japan from overseas as of October 29, 2021.

1. Undergo a PCR test within 72 hours of the departure time for the flight due to be boarded and obtain a Test Certificate verifying a negative test result

2. Before departure, secure a place to stay for the duration of the quarantine period after entry to Japan

3. Secure a means of transportation from the airport of arrival to the place where you will be staying for the duration of the quarantine period

4. Install necessary applications on your smartphone

5. Prepare for submission of Questionnaire

(CONTINUED)
FYI: Procedures for entering Japan

This is the current procedures for entering Japan from overseas as of October 29, 2021.

6. Undergo a PCR test at the airport after arrival in Japan
7. Submit "Written Pledge" and "Questionnaire" at the quarantine of airport in Japan
8. Stay at home, etc., for a period of 14 days starting from the day after arriving in Japan*

*NOTICE
- Germany has been designated as the epidemic areas under the Immigration Control Act.
- All persons who come from Germany are asked to wait for 3 days after entering the country in accommodations secured by the Quarantine Station, and are subjected to the PCR test on the 3rd day (or the 6th day in some cases).
Rules during the 14-day period after entry

This is the current procedures for entering Japan from overseas as of October 29, 2021.

① Daily Actions (with MySOS App*)
- Report Your Location
- Report Your Health Condition
- Answering Video Calls About the Health and Location

② Other Actions (besides MySOS App)
- Settings for saving location records in smartphone
- Use of COCOA/Covid Contact Confirming App

*”MySOS” is the Health and Location Monitoring App.
For more details: https://www.hco.mhlw.go.jp/en/
COVID-19 Vaccination Certificates

With a valid vaccination certificate, you can shorten your quarantine period of 14 days at home or in the place you're staying if you satisfy some prescribed requirements. Please be sure to check the details by yourself.

Ministry of Foreign Affairs
"COVID-19 Vaccination Certificates Valid for Entry into Japan from Abroad “
https://www.mofa.go.jp/ca/fna/page24e_000317.html
Reference websites

- Ministry of Foreign Affairs:
  "Application for Visa for foreign nationals eligible for Phased Measures toward Resuming Cross-Border Travel"
  https://www.mofa.go.jp/ca/fna/page22e_000921.html
  "Phased Measures for Resuming Cross-Border Travel"
  https://www.mofa.go.jp/ca/cp/page22e_000925.html
  "Border enforcement measures to prevent the spread of novel coronavirus (COVID-19)"
  https://www.mofa.go.jp/ca/fna/page4e_001053.html
Reference websites

• Ministry of Health, Labour and Welfare:
  “Q&A concerning the substantial strengthening of border controls”

• Immigration Services Agency of Japan:
  Information related to COVID-19
Studying at Tokyo Tech
Programs for International Students

2.11.2021, Go Abroad Fair, RWTH Aachen University
Non-degree program: YSEP and ACAP

Student exchange programs (tuition waiver)

- **YSEP: Young Scientist Exchange Program**
  
  One Academic Semester (=2 quarters) (6 credits)
  
  - Spring: From March to August
  - Fall: From September to February

- **ACAP: Academic Cooperation Agreement Program**
  
  - Research-oriented for 3-12 months
  - Course-oriented for 1-4 quarters
YSEP (Young Scientist Exchange Program)

YSEP Students do...

- Research Project guided by an academic advisor.
- Take courses about study Japanese culture, society and industries in English.
- Fieldwork to Japanese companies.
YSEP (Young Scientist Exchange Program)

Eligibility
At the time of participation, students
a. have completed at least 2.5 years of study in a four-year bachelor’s degree program, OR
b. have completed at least 2 years of a three-year bachelor’s degree program, OR
c. be in a master’s degree program

Period
One Academic Semester (=2 quarters) :
Spring : Mar. – Aug. (6 months)
Fall : Sep. – Feb. (6 months)
YSEP (Young Scientist Exchange Program)

How to Apply

1. **Contact the student exchange office of your university. Students must be nominated by your university before applying to Tokyo Tech.**

2. Prepare the required documents for the application.

3. **Choose three academic researchers of Tokyo Tech at applying.**

4. **Apply to Tokyo Tech through the Online system**

5. **Each applicant who has successfully pass the selection is informed his/her supervisor who is allocated by Tokyo Tech.**
ACAP (Academic Cooperation Agreement Program)

- **Research-oriented Program**
  Students study and conduct research under the supervise of an academic advisor.

**Eligibility**

At the time of participation,
- Graduate students
- Final-year of Undergraduates

**Period**

3 - 12 months

program can be started from any month!
ACAP (Academic Cooperation Agreement Program)

Course-oriented Program
Students take a course either in English or Japanese.

Eligibility
At the time of program participation,
- For Students who Take Course in English: Graduate students OR Final-year Undergraduates
- For Students who Take Course in Japanese: Graduate students OR Undergraduates who are above second year. (Official test score which certifies the ability for Japanese language is required.)

Period
1 - 4 quarters
program can be started from the beginning of every quarter.
How to Apply for Research-oriented

1. Contact the student exchange office of home university. Students must be nominated by home university before applying to Tokyo Tech.

2. Search for a prospective academic supervisor at Tokyo Tech and contact him/her to get the permission to join the lab.

3. Apply to Tokyo Tech through the Online system
ACAP (Academic Cooperation Agreement Program)

How to Apply for Course-oriented

1. Contact the student exchange office of home university. Students must be nominated by home university before applying to Tokyo Tech.

2. Contact our ACAP specialized faculty member at each department and obtain the permission to the program.

3. Apply to Tokyo Tech through the Online system.
Tokyo Tech STAR Search (Researcher Finder)

Tokyo Tech STAR Search provides comprehensive information about researchers at Tokyo Institute of Technology. It consists of publications, educational courses, appearances on TV programs, and so on.

**Statistics:** Researchers: 2,156 / Last Month's Search Count: 8,860 / Last Month's Researcher Page Views Number: 119,554


**Basic Search**

*The search result may be case sensitive or insensitive because of the specification of the each data sources. More details can be found at the list of target.*
Application Deadline for YSEP and ACAP

- **YSEP**
  - Fall Semester: the end of February
  - Spring Semester: August 20th (of previous year)

- **ACAP**
  - For students **applying for a JASSO Scholarship:**
    Student must start the program in **April** or **September**;
    - Start in **April:** Apply by December 10th
    - Start in **September:** Apply by the end of February
  - For students **NOT applying for a JASSO Scholarship:**
    Applications are due by the 10th of the month that is more than three months prior to the applicant’s desired start date (e.g. for an ACAP start date of September 1st, apply by May 10th)
Scholarship for YSEP and ACAP

◆ JASSO Scholarship*

Monthly Stipend
80,000 JPY

Eligibility

➢ YSEP:
  All the Participants

➢ ACAP:
  ● Study/Research Period: More than 2 quarters
  ● Date of program start: only in April or September

*JASSO=Japan Student Services Organization
For more details, please visit our website!

➢ **YSEP**
   - Program Website:
     [http://www2.gakumu.titech.ac.jp/ysep/index.html](http://www2.gakumu.titech.ac.jp/ysep/index.html)
   - Contact Info:
     International Student Exchange Division
     [ysep@jim.titech.ac.jp](mailto:ysep@jim.titech.ac.jp)

➢ **ACAP**
   - Website at Tokyo Tech Official Website:
     [http://www.titech.ac.jp/english/graduate_school/international/exchange/acap.html](http://www.titech.ac.jp/english/graduate_school/international/exchange/acap.html)
   - Contact Info:
     International Student Exchange Division
     [inbound@jim.titech.ac.jp](mailto:inbound@jim.titech.ac.jp)
Other Programs for International Students

➤ **Degree Program for Master and Doctor courses**
  - International Graduate Programme (IGP)
    - All lectures and guidance in English
    - Master’s (2 years), Doctoral (3 years) and “Integrated Doctoral Education Program”
    - Contact: ryugakusei@jim.titech.ac.jp
Other Programs for International Students

- **Short Term Program**
  - **Summer Program**
    - Research program for several weeks
    - Contact: summer.program@jim.titech.ac.jp
  - **Winter Program**
    - Contact: winter.program@jim.titech.ac.jp
  - **SERP (Summer Exchange Research Program)**
    - Research program for 3 months in summer
    - Students from Specific Faculties are eligible
    - Contact: serp@jim.titech.ac.jp
Why Tokyo Tech?
Tokyo Tech, the top national university for science and technology in Japan with a history spanning more than 140 years, has formulated a new education system which was launched in April 2016 with the aim of becoming one of the world’s top 10 research universities.

Tokyo Tech continues to develop global leaders in the fields of science and technology, and contributes to the betterment of society through its research, focusing on technical solutions to solve global problems.

Why SERP?
SERP is a summer exchange research program that provides engineering students an opportunity to undertake a self-directed research project on a topic of their own choosing under faculty supervision.

Furthermore, by undertaking research in Tokyo, participants are exposed to Japanese high-technology, food and culture which allows development of cross-cultural communication and leadership skills.
Eligibility
Master's and Doctoral students and undergraduate students in their final year who are enrolled in the partner institutions at the time of participation.

SERP Partner Universities
- University of Wisconsin-Madison
- University of California, Santa Barbara
- University of Cambridge
- University of Oxford / University of Southampton
- University of Warwick / Sorbonne Université (UPMC)
- École Polytechnique / RWTH Aachen University
- Technical University of Madrid / Karlstad University
- University of the Basque Country

Research Period
3 months (June~ Aug/ July ~ Sep/ Aug ~ Oct/ Sep ~ Nov)

Laboratory Affiliation at Tokyo Tech
Students must belong to one of the engineering laboratories and be supervised by the host professor.

Application and Tuition Fees Exempt

Courses and Workshop
SERP students can attend below courses under certain conditions.
A) Japanese language introductory course “Survival Japanese”
B) Factory & Research Institution visit course “Hightech-Japan”
C) Multidisciplinary Int’l Student Workshop “MISW”

Cultural/Social Activities
SERP students can join a wide variety of cheerful events.
◆ Hisao & Hiroko Taki Plaza

Grand opening in April 2021!

Concept:

International and Japanese students can meet here, deepen their bonds, and let's create the future we don’t know yet together.

**2F: Attic Lab**
The "fruit" of the tree, contains a large makerspace where groups can interact, create, and innovate, forming the very essence of activities of Tokyo Tech.

**1F: Cafe, Public Art**
The 1st floor makes up the "branches" of the tree. It contains a cafe, public art area, and other features that deepen interactions and generates meaningful associations with the outside world.

**B1F: Study Abroad, Job Hunting, and Study Learning Information Area**
The B1 floor is the "trunk" of the tree that withstands all the elements. This is where students can acquire information on overseas universities, study abroad, and employment, and learn about the world and themselves.

**B2F: Event Space**
The bottom floor represents the "roots" that absorb the nutrients and water required for life. It contains an event space and workshop area where peer interaction yields inspiration.
Inspiration

- event space
- workshop area
- kitchen area
- Student Support desks
Knowledge

- Student division
- Information area
- Global lounge
- Career Support Services
Designed by world-famous manga artist and film director Katsuhiro Otomo.
Technology

movable tatami seating

freewheeling space

counter and chairs
Tokyo Tech VR - Visit our virtual campus! -

【Entrance】
Please enter the main building from 🔺

CLICK HERE TO ACCESS!
https://www.ori.titech.ac.jp/vrcampus/app/public/#/event/aachen/start

【Lobby】
Please enjoy contents from doors.

Inquiries about this site:
annex.aachen@jim.titech.ac.jp
Thank You
Vielen Dank
ありがとうございました