

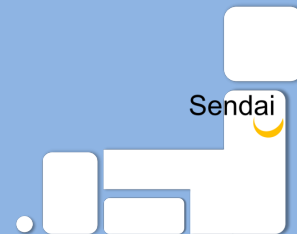


TOHOKU  
UNIVERSITY

# TSSP 2022

June 20<sup>th</sup> - July 15<sup>th</sup> 2022

Sendai



## TOHOKU UNIVERSITY **STEM** SUMMER PROGRAM: **Exploring the Frontier of Science & Technology** for undergraduates in partner universities

### About Tohoku University

Tohoku University has engaged in world-class education and research activities since its founding in 1907, and is officially authorized as “Designated National Universities in Japan” together with Tokyo and Kyoto Universities. Sendai, where Tohoku University is located, is a small “big city” and has many sites where you will have the chance to extensively experience Japanese culture.

### Program Description

The **Tohoku University STEM Summer Program (TSSP), *Exploring the Frontier of Science & Technology*** is designed specifically for freshmen and sophomores majoring in science and engineering (STEM). We will provide students with insight on what world society needs based on advanced science and technology in the future and how they can contribute to society through research, and we will offer cutting edge classes in advanced sciences and engineering.

This 4-week program consists of the following 4 parts: **(1) cutting edge science and technology being developed at Tohoku University; (2) science and technologies related to disasters and reduction of damage based on experiences of the Great East Japan Earthquake; (3) group problem-solving activities (hands-on experiments) to gain experience with the frontier science and technology; and (4) Japanese language and culture.** At the end of the program students will make a final (wrap-up) presentation on items (1) or (2) on their experience. The program includes experiments, lectures, facility/ laboratory visits, presentation and fieldtrips. The following topics will be covered.

**(1) Cutting edge Science & Technology**

- Spintronics • Biomolecular Design • Robotics • Materials Science • Information Science

**(2) Disaster Science & Technology**

- Earth Science • Disaster Science in Japan • Disaster Response

**(3) Group Activities (Hands-on Experiments)**

- Challenging Experiments for Quantum Phenomena
- Make and Handcraft an Efficient Motor and a Paper Airplane based on the Science and Engineering Theory

**(4) Japanese Culture**

- Aikido • Zen Meditation • Calligraphy • Flower Arrangement

✿ **Field Trips**

- Swordsmith in Miyagi
- Tsunami Damaged Local Areas
- TOYOTA Factory in Iwate
- J-PARC (Accelerator Facility) in Ibaraki

**Number of Enrollments:** 30 students

**Home Page:** <https://www.insc.tohoku.ac.jp/english/short/tssp/>



## Eligibility

Applicants must be enrolled in full-time undergraduate degree programs at one of the listed partner institutions below (**tentative**). Freshmen and sophomores may be more suitable for this summer program.

**Australia:** Univ. of Melbourne, **China:** Tsinghua Univ., **Canada:** Univ. of Waterloo

**Singapore:** National Univ. of Singapore

**United Kingdom:** Univ. Col. of London, Univ. of York, Univ. of East Anglia

**U.S.A.:** Penn State Univ., Purdue Univ., SUNY-Albany, The Univ. of California (Berkeley, Davis, Irvine, Los Angeles, San Diego, Santa Barbara, Santa Cruz, Riverside), Univ. of Hawaii at Manoa, Univ. of Maryland, Univ. of Washington

## Application Procedures

We accept the application only from nominated students. The application details will be sent to eligible students by email.

**Application Deadline to Tohoku Univ.:** March 4, 2022 (JST)

## Credits

Participating students are required to take hands-on experiments and lectures, attend facility/laboratory visits and participate in group-work sessions, after which they will give wrap-up presentations. On completing these requirements, students are eligible for 8 ECTS\*. These credits are not conferred at Tohoku University. Students who require credits for this program should inquire at their home universities.

*\*1 ECTS credit is equivalent to 25 hours of workload. ECTS credits used to evaluate the student workload required for completion.*

## Program Cost

### Program expenses

**(80,000 (education) + 40,000 (facilities) = 120,000 JPY)**

These program expenses have to be paid separately by the specified payment deadline of each category by credit card.

Additional non-refundable processing fee (approx. US\$ 10) will be charged for each payment.

### Accommodation expense

**(179,010 JPY)**

6,630 JPY per night including tax and breakfast

Full payment is requested at the start of the program.

+

= **Total  
299,010 JPY**

All participants are requested to pay the total program expenses of 120,000 JPY that covers all expenses for various activities during the program by specified payment deadlines. Travel, accommodations, insurance, meals, and personal daily expenses are to be paid individually. Students are advised to have sufficient money for meals and personal expenses. Payment instructions for the program expenses will be informed to the admitted applicants.

## Scholarship

A JASSO (Japan student services organization) scholarship of 80,000 JPY will be offered to outstanding students who meet the JASSO requirements and successfully complete the program.

## Accommodation

Off-campus accommodation is ten-minutes away from Aobayama campus, where most activities are held during the program. Each student will be accommodated in a furnished individual bedroom and a bathroom. The accommodation cost is 6,630 JPY per night with breakfast. (June 19<sup>th</sup> IN, July 16<sup>th</sup> OUT)

HOTEL PEARL CITY SENDAI: <https://www.pearlcity.jp/sendai/en/>

## Insurance

Summer program participants are required to buy travel insurance in their own country BEFORE coming to Japan. Students will be solely responsible for any accidents that occur while staying in Japan. Their insurance must cover death and medical care expenses not only due to accidental bodily injury but also for sickness.

## VISA

Those who need a visa to enter Japan should indicate this on their application forms. Tohoku University will provide an invitation letter to admitted students. Passport holders of certain countries do not need a visa to enter Japan for periods of less than 90 days.

## CONTACT

Tohoku University Global Learning Center/Student Exchange Division

Email: [tssp@grp.tohoku.ac.jp](mailto:tssp@grp.tohoku.ac.jp)