

TOHOKU UNIVERSITY ENGINEERING SUMMER PROGRAM 2017

July 24th – August 4th



About TOHOKU UNIVERSITY

Since its founding in 1907, Tohoku University has engaged in world's top class education and research activities. Sendai city, where Tohoku University is located, has many cultural sites where you have the chance to extensively experience Japanese culture.

TESP

The Graduate School of Engineering offers a two-week program under three courses of “**Robotics**”, “**Electrical and Electronic Engineering**” and “**Structural Materials Engineering** “. We will provide a series of graduate level lectures and hands-on activities in laboratory. All will be taught in English by our experienced professors from the Graduate School of Engineering, Graduate School of Information Science, and Graduate School of Biomedical Engineering.

In addition, the program provides cultural activities and a field trip that expose participants to Japanese culture and beautiful historical sites around northeastern area of Japan. Students studying in the field of engineering at Tohoku University will support the program with these activities. We welcome young professionals from our partner universities around the world to take this opportunity to experience an inspiring and challenging summer here in Sendai, Japan.

Program Structure

The program offers two-week intensive activities that are characterized by four components: core lectures, hands-on activities in laboratory, cultural activities such as Kimono dressing and tea ceremony, and a field trip. The academic part of each course is as follows:

Robotics Course

➤Core Lectures

11 slots of 1.5 hours lectures on the following topics: Field and Space Robotics, Rescue Robotics, Human-Robot Interaction, Haptic Interface, Robot Vision, Medical Robotics, Molecular-size Robotics, Biologically Inspired Robotics (students are expected to attend all lectures.)

➤Hands-on Activities:

Selective from the following topics: Field and Space Robotics, Human-Robot Interaction, Haptic Interface, Robot Vision, Molecular-size Robotics

Electrical and Electronic Engineering Course

➤Laboratory visit and experience

Laboratory of Microphotonics
Laboratory of Wireless Information Technology
Laboratory of Electromagnetic Engineering

➤Hands-on Activities:

Design and make a prototype of a smart wireless power transfer system which can generate the solar electric power and transfer the power wirelessly to the electric devices.

Structural Materials Engineering Course

➤Core Lectures:

Alloy Design and Synthesis by Arc Melting, Spark-Plasma Sintering and 3D Printing, Microstructure Observation and Analysis by Optical and Electron Microscopy and X-ray Diffractometry, Mechanical Property Measurement by Nano-Indentation, Vickers Hardness, Tensile and Compression Tests

➤Classes:

Phase Diagrams, Plastic Deformation and Dislocation Theory, High-Temperature Materials, Introduction of Bulk Metallic Glasses
Introduction of Power Processing, etc



TOHOKU
UNIVERSITY

ELIGIBILITY

TESP accepts applications from graduate students who are nominated by TESP's partner institutions. Program requires students to be fluent in English, background knowledge and laboratory experience on your selected field.

APPLICATION PROCEDURES

➤ **Students:** Contact your international office or coordinating professor to apply. Students must be nominated by their home institutions. Nominated students are required to fill in the online application form and upload the required documents by the deadline below.

➤ **For International Office/Coordinating Professors:** Please nominate students from those interested, and send a list of candidates via email to tesp@grp.tohoku.ac.jp. Also please provide a link for the online application form sent separately to only those nominated. Applicants are required to apply via the online application form and upload the following supporting documents by the deadline below.

APPLICATION DEADLINE April 28, 2017

Required Documents

All documents should be in English. Please attach the English translation if the document is in other languages.

- Portrait Photo
- Academic transcript at home university
- Personal statement (300-500 words)
- Passport copy (the identification page with photo and name)

PROGRAM FEE: 15, 000 JPY

Tohoku University will provide tuition, accommodation*, program activities and welcome & farewell party. Participants are responsible for meals, local transportation and airfare.

*NOTE:

Those who get any type of scholarships more than 80,000(JPY) for the program should bear half of the accommodation fee (approx. 36,000 JPY for 13 nights, as of 2016).



INSURANCE

All 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.

ACCOMMODATION

Hotel accommodation in downtown will be arranged. Participants will commute to campus by subway at their own expense.

SCHOLARSHIP OPPOTUNITY

JASSO (Japan Student Services Organization) Scholarship may be awarded to those who meet the requirements. Please inquire with international office staffs at your university.

Scholarship amount: 80,000 JPY

Contact Us

TESP2017 Tohoku University
Contact Person: Fang HAN (Ms.)
Phone & Fax: +81-22-795-7996
Email: tesp@grp.tohoku.ac.jp

Website:

<http://www.eng.tohoku.ac.jp/english/life/s-programs.html>

TESP Youtube:

<https://youtu.be/PVFveiHymP8>