

Tohoku University stays open and ahead



Since its establishment in 1907, Japan's Tohoku University has not wavered from its "Research First" principle and "Open Door" policy in line with its original mission to provide first-rate education and support groundbreaking studies that solve many of the problems facing the globe and help build a just and peaceful world.

Tohoku University acquired a sterling reputation because of the efforts and accomplishments of all those who have passed through the halls of its campuses and facilities for more than a century. It has distinguished itself from other universities because of its alumni, faculty, staff, and the local community.

Today, the world faces a variety of difficult challenges that need to be addressed on a global level. By applying the knowledge accumulated over the past century and overseeing more achievements in the fields of research and education, the school remains determined to play a leading role as a world-class university that helps humanity overcome those challenges.

Consistently at the top

From January 1999 to December 2009, in a ranking of universities around the world compiled by Thomson Scientific, Tohoku University placed third worldwide and first in Japan in terms of materials science, tenth worldwide and second in Japan in physics, and 18th worldwide and fifth in Japan in chemistry.

And according to a survey by the *Asahi Shimbun* newspaper, Japanese high schools named Tohoku University the country's best university in the "overall assessment" and "academic and personal development" categories.



Akihisa Inoue, president of Tohoku University

Opening its doors to foreigners and women

The great Chinese writer Lu Xun, also known as Zhou Shuren (1881–1936), is regarded by some to be a spiritual pillar of modern China. Through his works, Lu initiated the modernist movement in Chinese literature.

Lu Xun was the first foreign student to enter Sendai Medical College (the predecessor of Tohoku University), which he did in 1904. Although he originally wanted to become a physician, Lu Xun later devoted himself to writing, deeply inspired by the intelligence and compassion of his anatomy teacher, Professor Genkuro Fujino, who was later immortalized in fictionalized accounts of his life in school.

To commemorate the 100th anniversary of Lu Xun's enrollment, Tohoku University established in 2004 the Lu Xun Award (renamed the Professor Fujino Award) and the Lu Xun Incentive Award (renamed the Professor Fujino Incentive Award), which respectively recognize researchers who have made notable contributions to the university and to outstanding Chinese students.

In 1913, despite resistance from the government, Tohoku University (then an Imperial institution) became the first learning institution in Japan to accept women, with the enrollment of Chika Kuroda, Ume Tange and Raku Makita.

Under its "open door" policy, Tohoku University's first president, Masataro Sawayanagi, accepted graduates of higher normal schools and



Tohoku University consistently ranks among the best Japanese universities every year.

colleges, as well as licensed middle school teachers.

Chika Kuroda would later become a teacher at her alma mater, Tokyo Women's Higher Normal School (later renamed Ochanomizu University) and study at the University of Oxford and other institutions abroad. Upon returning to Japan, she studied under Riko Majima at the Institute of Physics and Chemistry and was responsible for much pioneering research. In 1929, she became Japan's second female Doctor of Science.

Practice-oriented research and education

Among Tohoku University's prominent former faculty members is Shigeru Oda, who has served Japan as a delegate to the United Nations, UNESCO, IAEA, and several other international organizations. While completing his doctorate in law at Yale University, Oda carried out pioneering research on the Law of the Sea and wrote his dissertation on the subject, which made him one of the world's leading experts in international law.

He returned to Japan in 1953 and became associate professor at Tohoku University, teaching international law.

Oda also served at the International Court of Justice at The Hague for an unprecedented three terms for a total of 27 years. He was also elected as a member of the Japan Academy and is a member of Tohoku University's Management Committee.

In another field, Tohoku alumni Masayoshi Esashi is director of the Micro System Integration Center (μ SIC).

Value-added devices, which are key system components, are being developed through his research on "micro systems." These devices are fabricated using on-chip integration of heterogeneous components (for circuits, sensors, and moving structures).

Micro systems have been commercialized by prototyping them in his laboratory or by training dispatched industrial researchers. The electrostatically levitated rotational gyroscope shown here is an example of a commercialized micro

system.

The gyroscope is used to measure two axes of rotation and three axes of acceleration simultaneously with high precision for navigation.

According to an industry-by-industry evaluation in *Nikei-Sangyo* newspaper, Esashi's laboratory was ranked highest.

Future Global Leadership Program

In 2009, the Ministry of Education, Culture Sports, Science, and Technology (MEXT) chose Tohoku University as one of the 13 universities to take part in the government's "Global 30 (G30) Project," which aims to attract 300,000 overseas students by 2020 in line with efforts to internationalize the country's educational system.

As a participant in the program, Tohoku University launched its Future Global Leadership (FGL) Program, which will increase the number of courses taught in English and thus allow both international and Japanese students to earn their degrees via courses taught exclusively in English.

Rebuilding after a crisis

Following the natural disaster that hit north-eastern Japan in March 2011, Tohoku University President Akihisa Inoue has affirmed the school's commitment to rise from the devastation:



Newly accepted students gather at Tohoku University's opening ceremony this year.

"I would like to offer my deepest thanks to all of you who have supported and encouraged us following the Great East Japan earthquake of March 11, 2011. Although we were hit by the historically unprecedented earthquake, Tohoku University will exert our collective efforts to contribute to the regional society by bringing together our wisdom for the restoration and revitalization of the region.

At the same time, we will strategically and systematically address research that will lead Japan into a new era and disseminate and apply our research findings.

While we are closely monitoring the Fukushima Daiichi Nuclear Power Station in regards to the radiation leak incident, radiation monitoring conducted by our university shows normal levels.

Due to the earthquake, some of our university's facilities and equipment were damaged. We are, however, committed to immediate and complete restoration of our research and educational infrastructure. We will move forward in order to realize even greater strides in our educational and research capabilities, and in our ability to contribute to society."

Tohoku University:
<http://www.tohoku.ac.jp/english/>

Global 30 Project (G30):
<http://www.fgl.tohoku.ac.jp/>



Shigeru Oda, professor emeritus and former judge of the International Court of Justice



Electrostatically levitated rotational gyroscope