

Future Global Leadership At Tohoku University

The Search for Knowledge

International Programs Taught in English



Established as the third Japanese national university in 1907

In 1907 Tohoku University was founded on the principles of "research first", "open doors" and "emphasis on practical education". It was the third Japanese national university, following Tokyo University (est. 1887) and Kyoto University (est. 1897).

18,000 students across 10 faculties, 16 graduate schools and 3 professional graduate schools

Tohoku University has **10 Faculties** (Faculty of Arts and Letters, Faculty of Education, School of Law, Faculty of Economics, Faculty of Science, School of Medicine, School of Dentistry, Faculty of Pharmacy and Pharmaceutical Sciences, School of Engineering and the Faculty of Agriculture) **16 Graduate Schools** (the Graduate Schools of Arts and Letters, Education, Law, Economics and Management, Science, Medicine, Dentistry, Pharmaceutical Sciences, Engineering, Agricultural Science, International Cultural Studies, Information Sciences, Life Sciences, Environmental Studies, Biomedical Engineering, and Educational Informatics /Education Division) and **3 Professional Graduate Schools** (the Law School, School of Public Policy and Accounting School).

As of May 2009 there were around **11,000 undergraduates** and **6,900 graduates** enrolled at the university with around **2,850 teaching staff** providing instruction. In terms of size this places us among the top national universities, after the University of Tokyo and Kyoto University. **Our student-teacher ratio of 6.5-1** ranks top among Japanese universities, offering a very different learning environment to the larger private universities.

Number one for research funding allocation per teaching staff member

There are **5 research institutes attached to the university** (Institute for Materials Research, Institute of Development, Aging and Cancer, Institute of Fluid Science, Research Institute of Electrical Communication, Institute of Multidisciplinary Research for Advanced Materials), committed to sharing the fruits of their high-level studies with our undergraduate and graduate education and research programs. Furthermore, our graduate schools and research institutes are well funded. The average research budget commanded per teaching staff member is the highest of any national university (financial year 2006).

We are competitive at the cutting edge of international research

In this section we would like to introduce some objective evaluations of Tohoku University's research performance. Thomson Reuters ISI Essential Science Indicators (ESI) represents one of the major recognised international standards in the evaluation of academic research contributions. In the annual ranking provided by this organisation, Tohoku University has achieved the following results in 2009.

(Japanese Research Institute Ranking: Trends in Research Citations in Japan)

Materials Science	Physics	Chemistry	Engineering
World 3 rd	World 10th	World 17 th	World 51 st
(National 1 st)	(National 2 nd)	(National 5 th)	(National 3 rd)

Ranked top by Japanese high schools

Our university has been chosen as the best Japanese university in both the "overall assessment" and "academic and personal development achieved by students" sections of a survey carried out among Japanese high schools by one of Japan's leading newspapers.

(The Asahi Shimbun Company 'eUniversity Ranking' 2009)

Overall Ranking

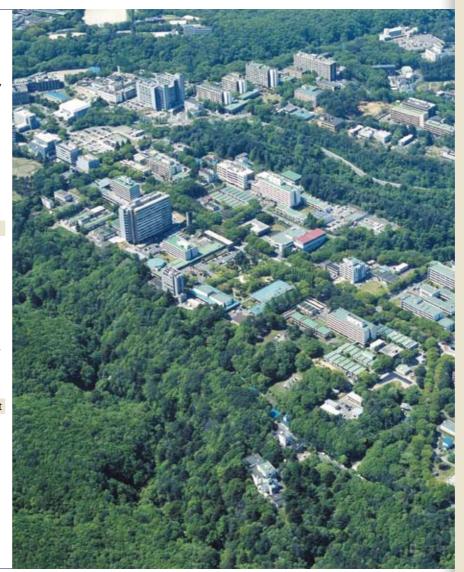
1.Tohoku University

- 2. Tokyo University
- 3. Keio University
- 4. Ritsumeikan University
- 5. Tsukuba University

Academic and Personal Development

1.Tohoku University

- 2. Keio University
- Tokyo University Waseda University
- 5. Tsukuba University



Choose from 15 Future Global Leadership courses

The Future Global Leadership (FGL) program offers courses taught entirely in English. Tohoku University is establishing 15 of these courses (3 undergraduate, 12 graduate). In this booklet we would like to share with you some reasons why you should choose Tohoku University, introduce the pleasant and rewarding student life waiting for you here in Sendai, and provide some information to help you choose the course that is right for you.

ection 1 >	Welcome to Tohoku University	2
ection 2>	Reasons to choose Tohoku University	4
	Reason $\ensuremath{ \mathbb{O}}$ At the heart of the global network	4
	Reason $\ensuremath{\mathfrak{D}}$ An international center for leading education and research $\cdots\cdots$	6
	Reason ③ At the global intellectual forefront······	8
ection 3>	Tohoku University's FGL15 courses	
	Future Global Leadership at Tohoku University	10
	The five campuses of Tohoku University	12
	Advanced Molecular Chemistry Course	14
	International Mechanical and Aerospace Engineering Course	
	Undergraduate Course IMAC-U	
	Applied Marine Biology Course ·····	16
	International Program in Economics and Management	17
	International Graduate Program for Advanced Science	18
	Network Medicine Course and Basic Medicine Course	19
	Interface Oral Health Science Course	20
	International Mechanical and Aerospace Engineering Course	
	Graduate Course IMAC-G······	21
	International Materials Science and Engineering Course	22
	International Doctoral Program in Engineering, Information Science	es
	and Environmental Studies ·····	
	International Graduate Program in Language Sciences ······	24
	Information Technology Course	25
	International Program for Environmental Sustainability Science ···	
	International Post-Graduate Program in Human Security ······	27
ection 4>	Reasons to choose Tohoku University	
	A rewarding and fulfilling student life	28
	A wide range of extra-curricular activities	30
ection 5>	Life in Sendai	
	Sendai, the 'city of trees'	
	The four seasons natural heauty serone surroundings	2/

University Network Across the Globe

Tohoku University, as a member of the APRU (Association of Pacific Rim Universities, involving 42 universities across 16 countries), TIME (Top Industrial Managers for Europe) and AEARU (The Association of East Asian Research Universities) academic networks, is actively involved in building links and international cooperative working practices with universities all over the world. Furthermore, we have cooperation agreements for academic collaboration and exchange involving both students and research staff with 134 institutions in 26 countries and regions at university level and a further 307 institutions across 41 countries and regions at the departmental level.



Overseas Research and Education Centers

Tohoku University has 15 overseas offices around the world. They support the development of academic networks and work for the encouragement and invigoration of international exchange.

- 1) Tohoku University China Office, Beijing, China
- 2 Tohoku University US Office, Los Altos, USA
- 3 Siberian Branch of Russian Academy of Sciences (Novosibirsk Science Center) Siberia Liaison office of CNEAS
- (4) University of Cambridge (Department of Materials Science and Metallurgy) IFCAM Cambridge Office
- ⑤ The University of New South Wales (International Office) Tohoku University Australia Liaison Office
- Harvard University (Division of Engineering and Applied Sciences) IFCAM Harvard Office
- 7 Moscow State University (Faculty of Physics) Tohoku University Russia Liaison Office
- ® Institute for Materials Research, Royal Institute of Technology (Department of Materials Science and Engineering) Sweden, IFCAM Stockholm Office
- Stanford University (Geballe Laboratory for Advanced Materials) IFCAM Stanford Office
- ① Syracuse University (L. C. Smith College of Engineering and Computer Science) Institute of Fluid Science Syracuse
- Worea Advanced Institute of Science and Technology (Department of Mechanical Engineering) Tohoku University Korea Liaison Office
- (3) Institut National des Sciences Appliquées de Lyon(Materials Science and Physical Metallurgy Laboratory) Tohoku University Lyon Liaison Office
- (4) The Research Institute for Tropical Medicine, Philippines: Center for Emerging and Re-emerging Infections
- (§) Eastern Visayas Regional Medical Center, Philippines: Center for Emerging and Re-emerging Infections Tacloban Office

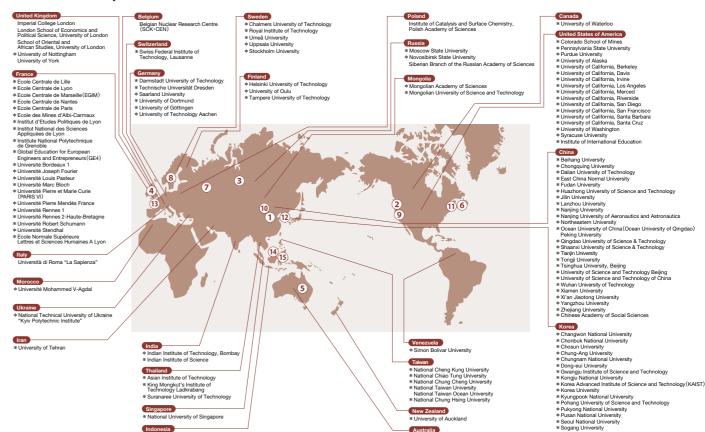


Tohoku University China Office,



Korea Advanced Institute of Science and Technology

■ Tohoku University's Global Network (as of May 2009)







* Gadjah Mada University

* Institut Teknologi Randung * University of Indonesia

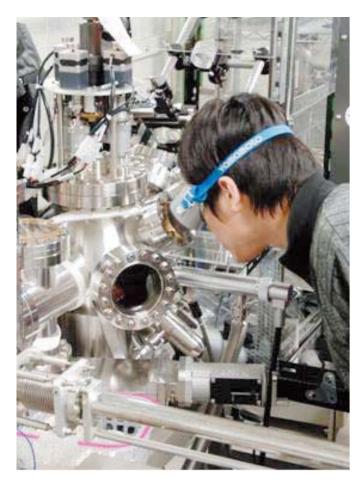


* Australian National University

* University of Sydney

Yeungnam University

* Yonsei University



One of Japan's Top-Five WPI-Centers

The Ministry of Education, Culture, Sports and Technology (MEXT) launched the "World Premier International Research Center Initiative" (WPI) in order to promote world-leading research in Japan. Our proposal for establishing the WPI Advanced Institute for Material Research (WPI-AIMR) was accepted as one of the five WPI Centers in Japan and the project commenced in 2007.

The WPI-AIMR has invited top researchers from the fields of materials science, physics, chemistry, precision mechanical engineering and electronic/informational engineering in order to conduct interdisciplinary research which implements new innovative methods of atomic and molecular control. The center is committed to the creation of new materials and compounds, developing devices based upon new fundamental paradigms; it also promotes the application of research projects in materials and system architecture which lead directly to improvements in society; thus exhibiting the qualities necessary for becoming a world-leading international center of materials research.





Tohoku University's 12 Global Centers of Excellence (GCOE) Programs for the Promotion of International Research and Education in Japan

The "Global Centers of Excellence (GCOE) Program" was established by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) to further strengthen the foundations of research in Japan and foster highly creative researchers who become internationally leading scholars in their respective academic fields. Currently, Tohoku University hosts the following 12 GCOE-Programs:

- ◆ Basic & Translational Research Center for Global Brain Science (Prof. Noriko Osumi, Neuroscience)
- This program promotes research on "Genomic Behavioral Neuroscience", "Embodied Cognitive Neuroscience" and "Interdisciplinary Brain Science."
- ♦ International Center of Research and Education for Molecular Complex Chemistry
- (Prof. Masahiko Yamaguchi, Chemistry)
- This program is aimed at proposing various research studies of larger molecular systems ranging from 10nm to 0.1 mm by establishing giant molecules and complex systems.
- ◆ Materials Integration International Center of Education and Research (Prof. Takashi Goto, Materials Science)
- This program focuses on the advancement of four research fields: (1) infrastructural and bio-materials, (2) electronic materials, (3) energy and environment-related materials, and (4) basic materials science.
- ◆ Center of Education and Research for Information Electronics Systems (Prof. Fumiyuki Adachi, Electronical and Electronic Engineering) This program focuses on a wide range of collaborative NT/IT research from devices to information systems for the realization of human-centered global communication networks.
- ◆ Global Nano-Biomedical Engineering Network Center (Prof. Takami Yamaguchi, Biomedical Engineering)
- The program aims at the promotion of new scientific techniques in the field of nanobiomedical engineering and internationally organized education and research.
- ◆ Global COE for Conquest of Signal Transduction Diseases with "Network
- (Prof. Yoshitomo Oka, Internal Medicine, Diabetes and Metabolism) The program develops integration models at multiple levels searching for unknown linkages among diseases. It works toward a "Diseasome", and develops innovative diagnostic, therapeutic, and preventive strategies based on the understanding of signal network systems.

- ◆ Weaving Science Web beyond Particle Matter Hierarchy (Prof. Kunio Inoue, Physics)
- Based on the concept of "Science Webs" this program enhances the contribution of mathematics and the integration of sciences such as chemistry and biology with philosophy to develop an understanding of the complex interconnections between the material hierarchies in the universe.
- ◆ Global Education and Research Center for Earth and Planetary Dynamics (Prof. Eiji Ohtani, Earth and Planetary Science)
- This program focuses on research in earth and planetary dynamics and earth environmental change through an interdisciplinary approach.
- ◆ World Center of Education and Research for Transdisciplinary Flow Dynamics (Prof. Shigenao Maruyama, General Engineering)
- Through the integration of different academic fields, and intercultural cooperation. this program aims at the development of new fields of trans-disciplinary flow dvnamics.
- ◆ Center for the Study of Social Stratification and Inequality (Prof. Yoshimichi Sato, Sociology)
- This program promotes international research on the social mechanisms that produce disparity, advances the study of the affects of disparity, and makes policy recommendations to reduce disparity.
- ◆ Gender Equality and Multicultural Conviviality in the Age of Globalization (Prof. Miyoko Tsujimura, Law and Politics)
- This program aims to establish a world-class network for education and research on gender equality and multicultural conviviality and to create interdisciplinary approaches to social sciences.
- ◆ Center for Ecosystem Management Adapting to Global Change (Prof. Tohru Nakashizuka, Environmental Science)
- This program proposes a new research domain which incorporates the ecosystem principle, ecosystem technology and the socio-economic system for the adaptation of ecosystems to the unavoidable global environmental change.





The University Professor System

The research and education efforts of Tohoku University enjoy the support and participation of "University Professors"; researchers and educators who have received the highest levels of international acclaim.

• Dr. Ahmed H. Zewail

(Professor, California Institute of Technology, USA, received the Nobel Prize in Chemistry for his studies of the transition states of chemical reactions using femtosecond spectroscopy) April-July 2005

Dr. Dan Shechtman

(Professor, Israel Institute of Technology, Israel) July-September 2006

(President of Tohoku University) March 2007-March 2012

• Dr. Gavin Brown

(President of the Royal Society of Australia, Australia) September-October

Dr. Peter Grünberg

(Jülich Research Centre, Germany, received the Nobel Prize in Physics for his discovery of Giant Magnetoresistance) October 2009-February 2010 (planned)







Dr. Peter Grünberg

■ The Distinguished Professor System

In 2008 Tohoku University instituted the position of Distinguished Professor to recognize and support professors who play a leading role in education,









Kawashima

Prof. Masahiro

Hiroshi





Maekawa

(Institute for



















Katsutoshi

Mizuhara















research and in contributing to society. The 30 current holders of this position have exemplified academic commitment to "challenge" "creation" and "innovation", and represent the very best intellectual traditions of Tohoku University.

















Section 3 -> Tohoku University's FGL15 courses

The Future Global Leadership (FGL) program at Tohoku University offers high quality learning and research opportunities in an ideal campus environment for students who aspire to one day take on key international leadership roles.

We offer

- a complete package which meets all international students'
- comprehensive graduate and undergraduate programs taught in English
- high quality Japanese language training within each curriculum
- on-site admission services and pre-enrolment support
- career support in the fields of domestic and international business and academia
- President Fellowship and housing for FGL undergraduate and
- a campus environment where both contemporary and traditional Japanese culture richly blend with the natural beauty of the area

FGL Office, Tohoku University

Phone +81-(0)22-795-3242

E-mail tohoku-fgl@bureau.tohoku.ac.jp

URL http://www.fgl.tohoku.ac.jp

>> Undergraduate Courses

- Faculty of Arts and Letters
- School of Dentistry
- Faculty of Education
- Faculty of Pharmacy and Pharmaceutical
- School of Law Faculty of Economics
- Sciences School of Engineering
- Faculty of Science School of Medicine
- Faculty of Agriculture

>> Graduate Schools

- Graduate School of Arts and Letters
- Graduate School of Education
- Graduate School of Law
- Graduate School of Economics and Management
- Graduate School of Science
- Graduate School of Medicine
- Graduate School of Dentistry
- Graduate School of Pharmaceutical Sciences
- Graduate School of Engineering
- Graduate School of Agricultural Science
- Graduate School of International Cultural Studies
- Graduate School of Information Sciences
- Graduate School of Life Sciences
- Graduate School of Environmental Studies
- Graduate School of Biomedical Engineering
- Graduate School of Educational Informatics, Education Division
- Law School
- School of Public Policy
- School of Accounting

() indicates the leading department for the courses taught in English. Our 15 courses taught in English The colored text indicates the currently started courses while the other entries show the courses which will be started

between 2010 and 2012.

>> Undergraduate Courses

- Advanced Molecular Chemistry Course (Faculty of Science)
- International Mechanical and Aerospace Engineering Course (School of Engineering)
- Applied Marine Biology Course (Faculty of Agriculture)

>> Graduate Courses

- International Program in Economics and Management (Graduate School of Economics and Management)
- International Graduate Program for Advanced Science (Graduate School of Science)
- Network Medicine Course (Graduate School of Medicine)
- Basic Medicine Course (Graduate School of Medicine)
- Interface Oral Health Science Course (Graduate School of Dentistry)
- International Mechanical and Aerospace Engineering Course (Graduate School of Engineering)
- International Materials Science and Engineering Course (Graduate School of Engineering)
- International Doctoral Program in Engineering, Information Sciences and Environmental Studies (Graduate School of Engineering, Graduate School of Information Sciences, and Graduate School of Environmental Studies)
- International Graduate Program in Language Sciences (Graduate School of International Cultural Studies)
- Information Technology Course (Graduate School of Information Sciences)
- International Program for Environmental Sustainability Science (Graduate School of Environmental Studies)
- International Post-Graduate Program in Human Security (Graduate School of Medicine, Graduate School of Environmental Studies, Graduate School of Agricultural Science, Graduate School of International Cultural Studies)

Section 3 >>> Tohoku University's FGL 15 courses



Academic Calender

The academic year at Tohoku University is divided into spring and fall semesters. The annual vacations consist of around 2 months over the summer, 1 month in spring and about a week at New Year.

Spring Semester

April 1, 2010 - September 30, 2010

Fall Semester

October 1, 2010 - March 31, 2011

(FGL) 15 courses allow students to study and undertake research in the unique academic distinct campuses.





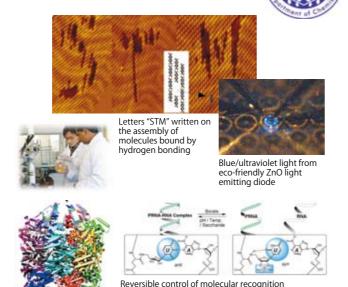
ADVANCED MOLECULAR CHEMISTRY COURSE

Tohoku University will start an undergraduate program taught in English in the Department of Chemistry from the fall of 2010.

The Department of Chemistry at Tohoku University is the largest chemistry department in the nation, and offers a highly conducive environment for research and education. The past and current members of the Department are instilled with a strong desire to investigate unknown areas, and have left a legacy of important work in their respective fields.

The **Advanced Molecular Chemistry Course** will offer the comprehensive curriculum in chemistry and materials science developed at the Department in collaboration with two research institutes, **Institute for Materials** Research and Institute of Multidisciplinary Research for **Advanced Materials.**

Tohoku University provides pre and post-enrollment support, Japanese language training and career support for those entering the Japanese or international business worlds, as well as support for those pursuing careers in academia. The University can provide Presidential Scholarships available to both graduate and undergraduate students.



> Degree offered Bachelor of Science

> Application Deadline To be announced

> Campus Kawauchi/ Katahira/ Aobayama

Contact Details

Address Department of Chemistry Aoba-ku, Sendai 980-8578, JAPAN

E-mail tohoku-fgl@bureau.tohoku.ac.jp

Website http://www.chem.tohoku.ac.jp/

INTERNATIONAL MECHANICAL and AEROSPACE **ENGINEERING COURSE (IMAC-U) Undergraduate Course IMAC-U**

Follow Your Dreams With Us

Fundamental and cutting-edge knowledge

IMAC-U is an international undergraduate course in the department of Mechanical and Aerospace Engineering, School of Engineering. The department consists of more than 100 laboratories studying fluid dynamics, thermal engineering, materials engineering, micro/nanotechnologies, aerospace engineering, robotics, biomedical engineering, information science,

quantum science and energy, and environmental studies etc. Students will have excellent opportunities to study fundamental and cutting-edge knowledge and skills in mechanical engineering from top-level professors.

Connecting to international graduate course

IMAC-U directly connects to the international graduate course (IMAC-G). You can finish the 4-year undergradu-

ate course in 3 or 3.5 years and enroll in **IMAC-G** immediately if you have excellent grades in IMAC-U. High quality research in the graduate course will enable you to gain a PhD







> Courses Mechanical Systems and Design Nanomechanics Aerospace Engineering Quantum Science and Energy Engineering Bioengineering and Robot Systems **Environment and Energy Engineering**

- > Degree offered Bachelor of Engineering
- > Campus Aobavama
- > Application Deadline To be announced

Contact Details

Address School of Engineering

6-6 Aramaki-Aza-Aoba, Aoba-ku, Sendai 980-8579, JAPAN

E-mail imac-u@mech.tohoku.ac.jp

Website http://www.mech.tohoku.ac.jp/e

APPLIED MARINE BIOLOGY COURSE

The Challenge of Innovation in Marine Science

The Applied Marine Biology Course will be established in 2010 in the Faculty of Agriculture, Tohoku University as Part of the "Future Global Leadership" program funded by the MEXT Global 30 scheme. The new course provides all lectures in English for international students who wish to study for a bachelor's degree in Agricultural Science.

Students can take classes in "general education" and "professional education" for four years. Students are affiliated to one of seven laboratories in The Marine Biology Group to receive practical education in the final year and study cutting-edge marine biology with the top-level scientists in the laboratories.

The seven laboratories focus on, 1) molecular reproductive endocrinology and innate immune systems of bivalve mollusks and fish, 2) ecology of coastal water and estuaries, 3) community ecology and physiological ecology in subtidal rocky communities, 4) seafood quality and biologically functional substances from marine organisms, 5) biology and ecology of marine organisms from bacteria to mesozooplankton, 6) genetics and breeding science of fish and molecular mechanisms of fish development based on bioinformatics, and 7) sustainable yield and conservation of marine organisms.











- ➤ Degree offered Bachelor of Agricultural Science
- > Campus Amamiya
- > Application Deadline To be announced

Contact Details

Address Graduate School of Agricultural Science

1-1 Amamiya-machi, Tsutsumidori, Aoba-ku, Sendai 981-8555, JAPAN

E-mail kokusai@bios.tohoku.ac.jp

Website http://www.agri.tohoku.ac.jp/index.html

INTERNATIONAL PROGRAM in ECONOMICS and MANAGEMENT

Acquire the Skills to Improve Society

The International Program in Economics and Management (IPEM), exclusively taught in English, was developed as part of the "Future Global Leadership" program at Tohoku University. IPEM offers high quality learning and research opportunities for students who aspire to take on a key international leadership role in the area of economics and management.

The program offers lectures, seminars, and workshops in English in a variety of specialized areas that are designed to equip students with advanced knowledge and skills in economics and management. Our extensive curriculum enables students to choose from as many as 30 fields of study taught by our internationally renowned faculty.

The program also provides practical classes such as Business Communication and Career Development while collaborating with the Japanese Language Program offered through the Center for International Exchange. Students who complete the program will earn a master's degree (MA in Economics / MA in Management) or a doctoral degree (PhD in Economics / PhD in Management).







- ➤ **Degrees offered** Master of Arts in Economics / Management

 Doctor of Philosophy in Economics / Management
- > Campus Kawauchi
- > Application Deadline March 31, 2010 for Fall 2010

Contact Details

Address Graduate School of Economics and Management 27-1 Kawauchi, Aoba-ku, Sendai 980-8576, JAPAN

E-mail ipem@econ.tohoku.ac.jp

Website http://www.econ.tohoku.ac.jp/econ/english/index.html

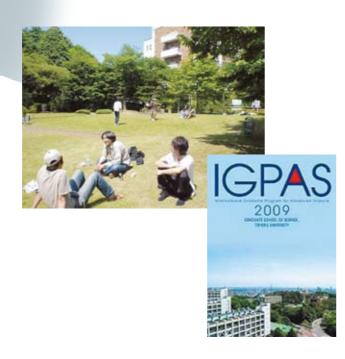
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INTERNATIONAL GRADUATE PROGRAM for ADVANCED SCIENCE (IGPAS)

Excellence in Research and Innovation

The International Graduate Program for Advanced Science (IGPAS) is an interdisciplinary graduate program for international students founded in 2004 as the first graduate program in English taught at a Japanese national university. IGPAS is a 5-year graduate program consisting of a 2-year master's program and a 3-year doctoral program. IGPAS students are affiliated to one of six departments: Chemistry, Mathematics, Astronomy, Physics, Geophysics, and Earth Science. All of the departments are part of Global Center of Excellence (GCOE) programs. The IGPAS academic year starts in October only. The Graduate School of Science will admit annually up to 20 students to the master's and 20 students to the doctoral programs of IGPAS.

IGPAS has attracted attention for its interdisciplinary education as well as availability of financial support. We have proudly reserved 8 Japanese Government (MEXT) Scholarships for master's students and offer fellowship (IGPAS-SDC) for 2 doctoral students (as of 2009). Please visit our website and get more information before contacting the Academic Affairs Section for IGPAS.



- > Degrees offered Master of Science

 Doctor of Science
- > Campus Aobayama
- > Application Deadline December 18, 2009 for Fall 2010

Contact Details

Address Academic Affairs Section for IGPAS, Graduate School of Science 6-3 Aramaki-Aza-Aoba, Aoba-ku, Sendai 980-8578 JAPAN

E-mail direct@mail.sci.tohoku.ac.jp

Website http://www.sci.tohoku.ac.jp/english/2nd/igpas.html

NETWORK MEDICINE COURSE and BASIC MEDICINE COURSE

Committed to Innovation in Medical Sciences and Therapeutics

The Graduate School of Medicine will accept FGL students from 2012. The information below provides a general introduction to the Graduate School of Medicine rather than specific details of the FGL courses.

Tohoku University School of Medicine traces its history as far back as 1872. The Graduate School of Medicine is composed of three courses; Medical Sciences, Disability Sciences, and Health Sciences.

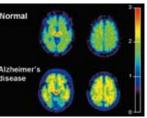
The staff and faculty of the school, recruited from among the best researchers in the field, have research interests in areas covering almost every aspect of medicine. More than 200 students are admitted to our graduate programs annually. We are proud of the contribution our research has made to the medical sciences including many achievements of global significance. The Graduate School of Medicine is characterized by "diversity, flexibility, and potentiality".

Diversity: The Graduate School of Medicine is not only for medical students; we are host to people of diverse ages and social/academic backgrounds. We have graduate students from other fields of study including agriculture, natural sciences, life sciences, engineering, and even the arts. Some bring with them a rich variety of work and social experience from outside of the university environment.

Flexibility: The Graduate School offers instruction in an extremely broad range of areas within the field of medicine. The curriculum is designed to provide the flexibility necessary to accommodate and encourage the research interests of our graduate students.

Potentiality: Having completed studies in the Graduate School, there will be opportunities for employment in and active contribution to a huge range of fields.





- > Degrees offered Master of Medical Science

 Doctor of Philosophy (Medical Science)
- > Campus Seiryo
- > Application Deadline To be announced

Contact Details

Address Graduate School of Medicine

2-1 Seiryo-machi Aoba-ku Sendai, Miyagi 980-8575, JAPAN

E-mail m-daigakuin@bureau.tohoku.ac.jp

Website http://www.med.tohoku.ac.jp/english/

INTERFACE ORAL HEALTH SCIENCE COURSE

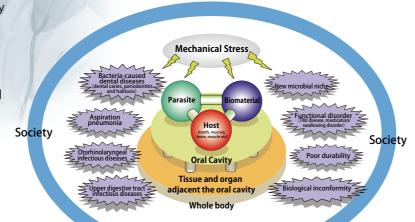
Interface Oral Health Science is a new concept of dentistry, designed to maintain and establish healthy oral cavities, which was originated, developed and promoted by the Tohoku University Graduate School of Dentistry.

To maintain a healthy oral cavity, it is essential to utilize both biological and biomaterial sciences among others in constructing complex shapes and functions, so that the oral cavity (host tissue) can maintain harmony with parasitic microorganisms, biomaterials and mechanical stress over a whole lifetime.

In the practice of Interface Oral Health Science, molecular biology, cellular biology, microbiology, immunology, material science, biomechanics and social science, as well as translational and clinical research need to be integrated to establish leading-edge remedial technologies.

The priority research projects are in the following 4 fields:

- 1. Highly-functional biomaterials
- 2. Tissue regeneration
- 3. Host-parasite interaction
- 4. Biomechanics



Healthy oral function is achieved by the biological and biomechanical harmonization of interfaces among host tissue, parasites and biomaterial. Oral health is promoted by interaction with society.

- > Degree offered Doctor of Philosophy (Dental Science)
- > Campus Seiryo
- > Application Deadline July 31, 2010 for Fall 2010

Contact Details

Address Graduate School of Dentistry

4-1 Seiryo-machi, Aoba-ku, Sendai 980-8575, JAPAN

E-mail den-kyom@bureau.tohoku.ac.jp

Website http://www.ddh.tohoku.ac.jp/english_graduate/index.html

INTERNATIONAL MECHANICAL and AEROSPACE ENGINEERING COURSE (IMAC-G) Graduate Course IMAC-G

Follow Your Dreams With Us

Conducting cutting-edge research with top-level professors IMAC-G is an international graduate course in the Graduate School of Engineering. Students are affiliated to one of the five departments in the Graduate School of Engineering. The departments consist of more than 80 laboratories studying fluid mechanics, thermal engineering, materials engineering, micro/nanotechnologies, aerospace engineering, robotics,

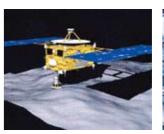
biomedical engineering, information science, quantum science and energy etc. Prospective students will have excellent opportunities to study fundamental engineering and conduct cutting-edge research with the advice of top-level researchers.

Scholarships opportunities

IMAC-G has proudly reserved positions on the Japanese government scholarship for master's students. You can apply for other scholarships after enrollment. A tuition reduction scholarship system is also available in Tohoku University.

Office for Promotion of Engineers Network (OPEN)

OPEN supports your job hunting in Japan. The employment prospects of our graduates are significantly enhanced by our high level research activities and the strong connections our departments have with industry.









- Departments Mechanical Systems and Design
 Nanomechanics
 Aerospace Engineering
 Bioengineering and Robotics
 Quantum Science and Energy Engineering
- ➤ **Degree offered** Master of Engineering

 Doctor of Philosophy (Engineering)
- > Campus Aobayama
- > Application Deadline To be announced

Contact Details

Address Graduate School of Engineering

6-6 Aramaki-Aza-Aoba, Aoba-ku, Sendai 980-8579, JAPAN

E-mail imac-g@mech.tohoku.ac.jp

Website http://www.mech.tohoku.ac.jp/e

INTERNATIONAL MATERIALS SCIENCE and ENGINEERING COURSE

The graduate program of the International Materials Science and Engineering Master course (IMSE) was established in October 2009. The main goal of IMSE is to cultivate global-minded engineers and leaders who can take up active roles in the development of cutting-edge technologies based on materials science and engineering. As one of the FGL courses, IMSE is aimed at enthusiastic global-minded international students who aspire to take on key international leadership positionroles in their futures. All lectures in IMSE can be taken in English.

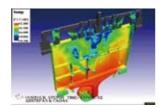
The following three departments are participating in IMSE. Candidates choose a department for enrollment from these three departments: Metallurgy, Materials Science and Materials Processing. Institutes related to IMSE include the Institute for Materials Research (IMR), Institute of Multidisciplinary Research for Advanced Materials (IMRAM) and New Industry Creation Hatchery Center (NICHe). Graduate students can choose from a wide range of course subjects offered by departmental and research institute staff. Students select a thesis supervisor from either departmental or research institute staff. Students initially enroll in the IMSE masters program, but many will wish to take a longer perspective on their research, conducting cutting-edge research throughout the graduate program. An International Doctoral Program is also provided in each departments.

The IMSE academic calendar starts in October. Students are screened by the an entrance examination held in the enrollment year. The examination is held not only in Japan but also in a number of overseas locations. This will make the application process simpler for students outside of Japan. The number of students accepted annually is approximately 10.

IMSE has been assigned priority positions for the receipt of Japanese government scholarships, or MEXT scholarships, by University recommendation. Furthermore, foreign students with excellent grades have opportunities to receive a scholarship provided by the president of Tohoku University. There are also opportunities for the students in the master's program to be employed as teaching assistants (TAs).



Development of high performance fuel cell stack



Computer aided engineering (CAE) for novel casting technology



Compact and frequency tunable high

- > Degree offered Master of Engineering
- > Campus Aobayama
- > Application Deadline To be announced

Contact Details

Address Graduate School of Engineering

6-6 Aramaki-Aza-Aoba, Aoba-ku, Sendai 980-8579, JAPAN

E-mail eng-in@bureau.tohoku.ac.jp

Website http://www.eng.tohoku.ac.jp/english/admission/pdf/ap_imse-2009.pdf

INTERNATIONAL DOCTORAL PROGRAM in ENGINEERING, INFORMATION SCIENCES and ENVIRONMENTAL STUDIES

The International Doctoral Program in Engineering, Information Sciences and Environmental Studies is an interdisciplinary doctoral program in the Graduate School of Engineering, Graduate School of Information Sciences, and Graduate School of Environmental Studies. The Program was launched in 2001 through the financial support of the Ministry of Education, Culture, Sports, Science and Technology.

The Program offers courses in English for international students who are working foward doctoral degrees from one of the above Graduate Schools. Students are affiliated to one of 22 departments in five groups: Environmental Engineering, Information and Communications, Medical Engineering, Energy, and Materials. Students will have excellent opportunities to study in the world's best experimental facilities and conduct cutting-edge research with top-level scientists at Tohoku University.

The program has proudly reserved positions on the Japanese government scholarship for its doctoral students since its foundation, and in 2009, Premium Doctral Scholarships (PDS) began in cooperation with the Institute for International Advanced Research and Education (IIARE) of Tohoku University. Students on PDSs benefit from fellowship at IIARE, which promotes interdisciplinary research of the highest international standard.





- ➤ Degrees offered Doctor of Philosophy (Engineering)

 Doctor of Philosophy (Information Sciences)

 Doctor of Philosophy (Environmental Studies)
- > Campus Aobayama
- > Application Deadline To be announced

Contact Details

Address c/o Graduate School of Engineering

Aramaki Aza Aoba 6-6-04, Aoba-ku, Sendai 980-8579

TEL +81-22-795-5820 FAX +81-22-795-5824

Website http://www.eng.tohoku.ac.jp/english/index-e.php

http://www.eng.tohoku.ac.jp/english/program/?menu=itn

INTERNATIONAL GRADUATE PROGRAM in LANGUAGE SCIENCES

An Invitation to the Integrated Science of Language, the Brain and Cognition

The aim of this program is to promote interdisciplinary education and research concerning human language from multiple perspectives of linguistics, psychology, brain science and information science. Based on recent developments in linguistics and other relevant disciplines, the program seeks to comprehensively understanding of issues associated with linguistic communication, language acquisition and loss, language and brain, and natural language processing. The program will be conducted in collaboration with the Research Center for Language, Brain and Cognition (LBC).

Research Center for Language, Brain and Cognition (LBC)

The purpose of the LBC Center is to found a new research area targeted to aimed at uncovering the activated language mechanisms that are activated in the human brain, hence revealing processes of language acquisition, operation, and loss of communication between humans. Furthermore, it is targeted to shall apply the technology toward human-to-machine interaction. We will consider the nature of humanity in relation to language activities and expect to found a new research field by nurturing young scholars in those academic fields that integrate the humanities and sciences.





- > Degree offered Master of Arts in International Cultural Studies
- > Campus Kawauchi
- > Application Deadline TBA

Contact Details

Address Graduate School of International Cultural Studies
41 Kawauchi, Aoba-ku, Sendai 980-8576, JAPAN
TEL +81-22-795-7556 FAX +81-22-795-7583

E-mail int-kkdk@bureau.tohoku.ac.jp

INFORMATION TECHNOLOGY COURSE

Education and Research in Advanced Information Technology

The Information Technology Course is an advanced graduate program in the Graduate School of Information Sciences (GSIS). GSIS was established in April 1993 with the goal of promoting interdisciplinary research and education in both the fundamentals and frontiers of the information sciences.

Interdisciplinary research necessarily requires diverse variation of academic backgrounds among the teachers, which is a notable feature of this Graduate School. GSIS consists of four departments: Computer and Mathematical Sciences, System Information Sciences, Human-Social Information Sciences, and Applied Information.

The Education and Research activities related to the Information Technology Course cover the following areas including but not limited to: Computation Science, Software Science, Firmware Science, Computer Architecture, VLSI System, Communication Theory, Information Security, Information Processing Algorithms, Intelligent Systems, Intelligent Robotics, Communication Technology, and Information Networks.

Students will have excellent opportunities to study advanced information technology and conduct cutting-edge research with top-level teachers currently working at Tohoku University.



- > Degrees offered Master of Information Sciences

 Doctor of Information Sciences
- > Campus Aobayama
- > Application Deadline To be announced

Contact Details

Address Graduate School of Information Sciences

6-3-09 Aramaki-Aza-Aoba, Aoba-ku, Sendai 980-8579, JAPAN

E-mail is-kyom@bureau.tohoku.ac.jp

Website http://www.is.tohoku.ac.jp/index-e.html

INTERNATIONAL PROGRAM for ENVIRONMENTAL SUSTAINABILITY SCIENCE (IPESS)

Excellence in Research and Innovation for Environmental Sustainability

The International Program for Environmental Sustainability Science (IPESS) is one of the programs offered under the "Future Global Leadership" program at Tohoku University. It is organized by the Graduate School of Environmental Studies (GSES).

The main aim of this program (IPESS) is to nurture environmental experts and leaders who can take on active roles in the development of "Sustainability Sciences" involving advanced high-technology and policy planning and management at both domestic and international levels to meet the needs of society at present as well as in the foreseeable future.

Spring semester is from April 1 to September 30 and fall semester is from October 1 to March 31. With more than 20 subjects related to environmental studies taught in this program, students can gain a broad knowledge of the environmental sciences. The medium of instruction is English.

International candidates who plan to become actively involved in environmental issues are considered for admission.

Adequate financial support will be offered taking into consideration the economic situation of students and their home countries.



Main building of GSES



Hydrogen generation experiment using solar light

Degrees offered Master of Environmental Studies Doctor of Philosophy (Environmental Studies) or Doctor of Philosophy (Interdisciplinary Studies) * * Graduate students can select either degree.

- > Campus Aobayama
- ➤ Application Deadline January 2010 for Fall 2010 / July 2010 for Spring 2011

Contact Details

Address Graduate School of Environmental Studies

6-6-20 Aramaki-Aza-Aoba, Aoba-ku, Sendai 980-8579, JAPAN

E-mail kyom@mail.kankyo.tohoku.ac.jp

Website http://www.kankyo.tohoku.ac.jp/en/g30.html

INTERNATIONAL POST-GRADUATE PROGRAM in HUMAN SECURITY

Tohoku University started an innovative multidisciplinary program entitled 'International Post-Graduate Program in Human Security' in April 2005. This is a joint educational program organized by the Graduate Schools of Agricultural Science, Medicine, International Cultural Studies and Environmental Studies, incorporating their rich experiences in academic research and international cooperation.

This program is composed of 4 programs, "Food & Agriculture for Human Security", "Public Health Sciences for Human Security", "Human Security and Society", and "Human Security and Environment". Each graduate school provides curricula for understanding intricate structure of various problems spreading to the areas of Food, Health, Environment, and Regional Community.







Fears of food shortage, lack of nutrition, deterioration in public health and environment, social conflicts, lack of education etc. hamper people's ability to live their lives in safety and dignity.

With the goal of contributing to true 'Human Security', this program is designed to educate the current and next generations of leaders and experts who can contribute to the reduction of human insecurity on the international and domestic levels.

- ➤ **Degrees offered** Master /Doctoral degree of the relevant graduate school
- **Campus** Four campuses of participating schools
- ➤ **Application Deadline** December 2009 for Spring 2010 / July 2010 for Fall 2010

Contact Details

Address Graduate School of Agricultural Science

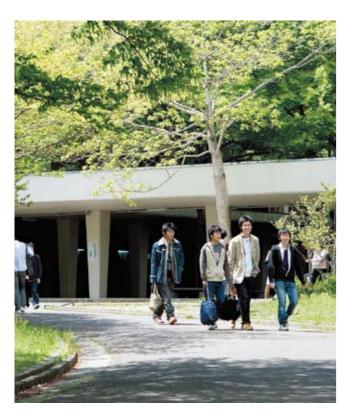
1-1 Amamiya-machi, Tsutsumidori, Aoba-ku, Sendai 981-8555, JAPAN

E-mail human security@bios.tohoku.ac.jp

Website http://www.human-security.jp

Reasons to choose Tohoku University

If we have convinced you to study at Tohoku University and you have found the course which fits your academic interests, then you may be concerned about the practical side of your choice; your student life at Tohoku University and in Sendai. Be confident that Tohoku University and Sendai will offer you the best of student support.



Tohoku University is host to more than 1,300 international students Number of International Students

Currently, 1,346 international students are engaged in study and research at Tohoku University (as of May 1, 2009). The city of Sendai hosts more than 2,000 students from overseas. Given this large number of international students, Tohoku University and Sendai offer an international atmosphere in which you have not only the opportunity to speak in your native language but also to study in a pleasant and safe environment.

(as of May 1, 2009)					
	China	608			
	South Korea	200			
	Taiwan	47			
	Other Asian Countries	256			
	Near and Middle East	33			
	Africa	34			
	Oceania	2			
	North America	39			
	Latin and South America	40			
	Europe	87			
	Total	1.346			

Learn Japanese at Tohoku University with the Special Japanese Language Program

With all courses offered in the FGL program taught in English, all students with good English language skills can be confident that they will be able to follow the classes. However, in order to improve the Japanese language and academic skills of our international students Tohoku University provides free Japanese language classes. These classes are designed to support you in your daily life in Japan and will help you to participate in non-English courses, to understand Japanese texts, and to take part in extra-curricular activities while also contributing to your career development and employability.

Tutor system to support international students

The tutor system is designed to help international students to adapt smoothly to Japanese language and culture, and to help them make the most of their time at the University. A Japanese student is appointed to support the newly arrived international student in their daily life, and introduce Japanese culture, history, language and customs to them.

Student dormitories and housing in Sendai

Tohoku University offers its international students the opportunity to apply for a room at the University's "Tohoku University International House" and the "University House Sanjo". Daily exchange with Japanese students living in the University House Sanjo offers international students a great opportunity to blend into the student life at Tohoku University and Sendai. For those who have not been able to obtain a place in one of the dormitories, Tohoku University's International Center will offer helpful support in finding appropriate housing.





Scholarships for international students

Prospective students of Tohoku University may apply for a Japanese Government Scholarship (Monbukagakusho: MEXT) or financial aid provided by JASSO (Japan Student Services Organization) to privately financed international students. Additional to these scholarship programs, students may also apply to scholarships provided by private organizations. The Miyagi International Association provides loans to international students facing financial hardship.

Counseling room for international students

The International Exchange Center of Tohoku University offers students the opportunity to receive individual counseling on problems involving life in Sendai, health, or questions related to the daily life of international students or study and research at Tohoku University.

Student international exchange activities

The campus is a vibrant place for international exchange, from activities organized by student groups to everyday interaction between students. The @home group is very active in creating opportunities for international students and



Japanese students to interact. Another major contributor to student international exchange is TUFSA (Tohoku University Foreign Students Association), an organization with over 40 years of history responsible for the annual Tohoku University International Festival, a popular event which draws huge crowds every year.



Reasons to choose Tohoku University



Tohoku University's Extensive Campus

Tohoku University occupies 3,100,000m (which excludes the various research facilities outside of Sendai). The University campuses are conveniently located near the city center and easily accessible by public transport.



The Construction of the New University Campus

As part of the university's effort to renovate the campus environment marking the 100th anniversary of Tohoku University, the plans for the construction of new campus facilities located on Mt. Aobayama are proceeding. Current prospective students may look forward to experiencing these new facilities during their time at Tohoku University.



Tohoku University's Study and Research Environment

As a student at Tohoku University you will be able to use the various university and national research facilitates such as the University Library, the Tohoku University Museum, the Tohoku University Botanical Garden, or the Tohoku University Archive. Moreover, as a student of astronomy you may also have the opportunity to use the Mauna Kea observatory. The Kawauchi "Hagi Hall" is available for extracurricular activities such as concerts, plays and exhibitions.



The new Kawauchi Welfare Hall opens 2010



Tohoku University Centennial Hall



Tohoku University Botanical Gard



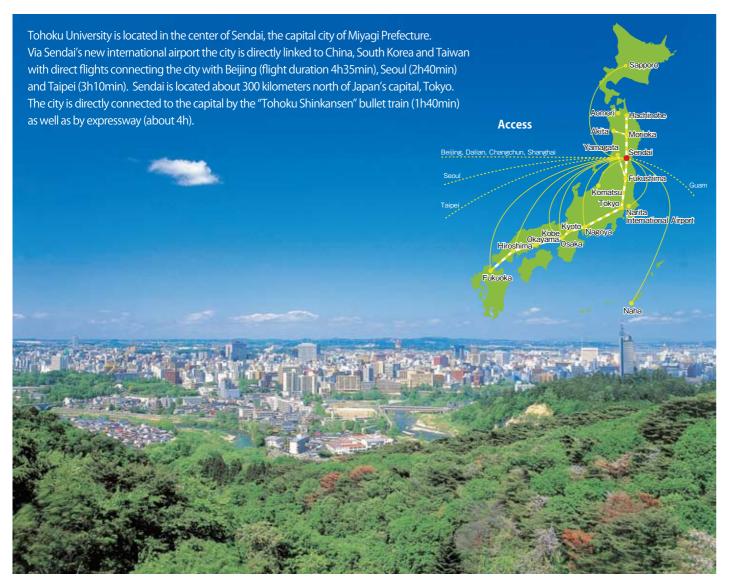
University Library



Tohoku University Museum



Section 5 >>> Life in Sendai



The history of Sendai

The history of Sendai dates back to 1602 when Masamune Date chose the area for the location of his castle. The city lies in a large plain alongside a low mountain, Aobayama, part of the Ou Mountain range. The Hirose river runs along the skirts of the mountain, and Sendai Bay opens out into the Pacific Ocean. It was here that the castle town of Sendai was founded. In early modern Japan, Sendai was one of the largest cities in the whole country. Today, the Kawauchi Campus of Tohoku University is located near the old castle's ruins, with old stone walls and monuments telling the story of Sendai's rich history.



The remains of Aoba Castle



Sendai Jazz Festiv





Tanahata Festival



Yosakoi

Sendai, an urban and modern 'city of trees'

Sendai is well known as the "Mori no Miyako" (city of trees), as most of the major streets and avenues in the city are lined with zelkova trees. With its various industrial and residential areas located in its outskirts, and surrounded by mountains, rice fields and the ocean, Sendai is with its estimated population of 1 million a city in which industry and culture live side by side



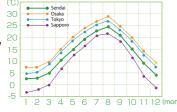
Jozenji-dori

Section 5 >>> Life in Sendai

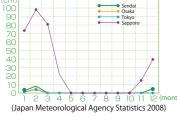
The temperature is not too hot but allows for pleasant summers at the beach.

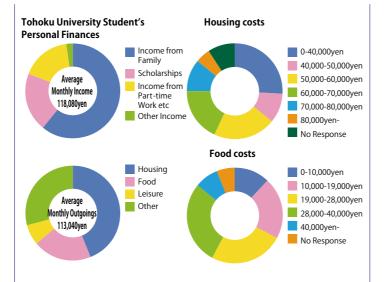
While the winter in Sendai brings with it little snow, the mountains surrounding the city offer opportunities for great skiing. Living in Sendai, students can experience the beauty of the four seasons, with beaches a 30 minute drive away, and ski resorts as well as many onsen (hot springs) nearby. With only a few days in summer reaching 30°C and a winter with few days colder than minus 5°C and little snow, Sendai is characterized by a very moderate climate.











Sendai offers you affordable accommodation and daily living.

Sendai prides itself on being able to offer its residents an affordable living environment for their work and study. Given its distance from the metropolitan area of Tokyo, housing and other living expenses are relatively low in Sendai making the city a good choice economically.



Sendai's museums and sports arenas

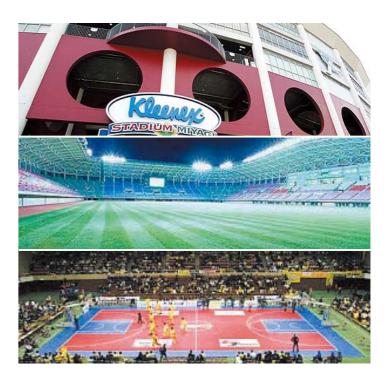
The city of Sendai offers its guests and residents a broad variety of cultural activities. The games of the city's own professional baseball, soccer, and basketball teams are among the most popular events. There is an impressive variety of museums, galleries and concert halls; Sendai offers rich collections of art from around Japan and overseas.

Multicultural city with a wide variety of international activities and support

The city of Sendai hosts around 9,800 international residents. To support these residents, the Sendai International Relations

Association (SIRA) promotes broad international cultural exchange services and activities including seminars on Japanese language and culture, consultation and interpretation support (English, Chinese, Korean, Tagalog, and Portuguese). The local people are very welcoming and helpful!





A warm welcome to the "academic city" of Sendai

The city is home to more than 30,000 university students of Tohoku University and other universities in Sendai. Since the founding of Tohoku University in 1907 and the subsequent establishment of a large number of other universities, Sendai has come to be known as an academic city (gakuto) with the city's residents offering its students a warm welcome. Sendai is characterized by a unique student atmosphere with fashion and art being a vital part of the city life. Tohoku University hopes to provide its students with a relaxing and balanced atmosphere for their study and development.



 34

FGL Office



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