





## Academic Charter

Appreciating the intrinsic role and historical and social mission of universities, Nagoya University, as a seat of learning, hereby defines its fundamental principles of scholarly activity.

Nagoya University maintains a free and vibrant academic culture with the mission of contributing to the well-being and happiness of humankind through research and education in all aspects of human beings, society, and nature. In particular, it aspires to foster the harmonious development of human nature and science, and to conduct highly advanced research and education that overlook the broad sweep of humanities, social and natural sciences. Towards this goal, Nagoya University endeavours to implement a variety of measures based on the fundamental objectives and policies outlined below, and to unremittingly carry out its responsibilities as a pivotal university.

### 1 Fundamental Objectives: Research and Education

1 Nagoya University, through creative research activity, shall pursue the truth and produce results of scholastic distinction on the international stage.

2 Nagoya University, through an education that values initiative, shall cultivate courageous intellectuals endowed with powers of rational thought and creativity.

### 2 Fundamental Objectives: Contribution to Society

1 Nagoya University, in spearheading scientific research, and through the cultivation of human resources capable of exercising leadership both in the domestic and international arenas, shall contribute to the welfare of humanity and the development of culture, as well as to global industry.

2 Nagoya University shall put to good use the special characteristics of the local community and, through multi-faceted research activities, contribute to the development of the region.

3 Nagoya University shall promote international academic co-operation and the education of foreign students, and contribute to international exchange, especially with Asian nations.

### 3 Fundamental Policies: Research and Education System

1 Nagoya University shall study the various phenomena of the humanities, society and nature from an all-inclusive viewpoint, respond to contemporary issues, and adjust and enrich its education system to generate a new sense of values and body of knowledge founded on humanity.

2 Nagoya University shall provide for an education system that rightly inherits and develops intellectual resources cultivated in the world's intellectual traditions, and promote educational activity that is both advanced and innovative.

3 Nagoya University, through the active dispatch of information and exchange of personnel, and interinstitutional co-operation in Japan and abroad, shall shape the international foundation of academic culture.

### 4 Fundamental Policies: University Administration

1 Nagoya University shall at all times support scientific enquiry based on the autonomy and initiative of its members, and guarantee freedom of academic research.

2 Nagoya University shall require its members to participate in the drafting and implementation of both ideals and objectives related to research and education, as well as administrative principles.

3 Nagoya University, in addition to promoting autonomous assessment and evaluation from its members with regard to research, education and administrative activity, shall actively seek critical appraisal from external authorities, and aspire to be an accessible university.

\*This is a provisional translation and subject to change.

## CONTENTS

02 Greetings from the President

04 Excellence in Research Fostered by a Free and Vibrant Academic Culture

16 Nurturing Future Global Leaders

32 International Cooperation

36 Global Network

46 Nagoya University Outline



## Greetings from the President

Nagoya University has a history of 144 years, with its roots in a temporary medical school/hospital established in 1871. Once the last university to become a Japanese Imperial University in 1939, our University has since then continued to achieve significant growth. We've maintained a tradition of having a free and vibrant academic culture, and after setting a high basic objective in the 2000 Nagoya University Academic Charter, we have worked hard to achieve that objective. The fact that 6 out of the 16 Japanese Nobel laureates who were awarded in the 21st century clearly shows that our research abilities are top class on a global scale. Nagoya University, throughout its long history, has produced many leaders in various areas of society and introduced them to the world, and thus contributed to the development and growth of not only Japan but also the world.

In recent years, our university has been focusing on further strengthening our research and educational abilities while simultaneously investing our full efforts towards internationalization, gender equality, and social contribution. In regards to internationalization, we are taking 3 different approaches. The first is to move away from a one-dimensional perspective focusing on the West towards a multi-dimensional perspective. Asia is the highest priority area. The second is the invigoration of bilateral student exchange, and the third is strengthening English education in support of internationalization. Talented individuals from around the world have gathered in our campuses, forming an environment in which students or researchers can interact with each other on a daily basis.

In addition, in regards to gender equality, our university has not only established nursery care facilities, but also pioneered the establishment of Afterschool programs for elementary school children ahead of the national universities around the country. By supporting and expanding the scope of employment of female researchers, we have been attracting talented female researchers from around the country. As the result, Nagoya University was selected, as the only Japanese university, to be one of 10 universities around the world by UN Women to support the HeForShe Campaign.

Meanwhile, much has been expected of us as the core university within an area with the highest concentration of the manufacturing industry. To meet and exceed those expectations, we have cooperated closely with the government, local governments, private industries, other universities, and citizens to pursue various collaborative projects in order to create a vigorous community that is prepared to greet the future and to promote exchange with the world. Moreover we have introduced new systems for these several years and achieved great results.

Our university is a future-oriented university. And our goal is to foster human resources who have high aspirations to contribute to society, have deep specialty and broad perspectives, and are able to exhibit leadership in various fields. Innumerable challenges may await us on our path to the future, but I believe from the bottom of my heart that, together with various people from our society, we will be able to continue moving forward with courage and contribute to creating a Japan, and furthermore a world, that is bright and full of hope.

### Dr. Seiichi MATSUO

1981 M.D., Ph.D., Nagoya University  
1986 Research Associate, School of Medicine, Nagoya University  
1997 Associate Professor, School of Medicine, Nagoya University  
2002 Professor, Graduate School of Medicine, Nagoya University  
Director, Clinical Department of Nephrology,  
Nagoya University Hospital  
2004 Vice-Director, Nagoya University Hospital  
2007 Director, Nagoya University Hospital  
2009 Vice-President, Nagoya University  
2015 President, Nagoya University

Area of Expertise  
General internal medicine (including psychosomatic medicine)  
Kidney internal medicine



Dr. Seiichi MATSUO  
President  
Nagoya University

## Nagoya University Matsuo Initiatives for Reform, Autonomy and Innovation 2020

### Education

By promoting a world-class education, we aim to foster courageous intellectual leaders that can contribute to human well-being. We are changing the relationship between Nagoya University and secondary schools.

- **Admitting excellent students**  
Improving admission system and establishing admission center
- **Reforming three policies**  
Degree conferment, curriculum design & student admissions
- **Improving international compatibility of educational system**  
Introducing quarter system and international joint degree programs

### International

We are developing a university that attracts the best students, faculty & staff from around the world & contributes to creating a more sustainable society. In particular, we seek to work closely with countries in Asia.

- **By 2020**
  - Increasing number of international students to 3000
  - Increasing internationally experienced faculty members to 650
  - Increasing domestic students studying abroad to 1000
- **Increasing international students enrolled in English-taught curriculum & number of English-taught courses**  
i.e. G30 NEXT
- **Implementing strategies with focus on Asian countries**  
i.e. Asian Satellite Campus & ASEAN Net PLUS

### Organizational Management

- **Reforming structures of Schools/Graduate Schools**  
Strengthening education and research activities through comprehensive evaluation of the fields of engineering, informatics, humanities & social sciences
- **Strengthening financial base**  
Raising 10 billion yen fund by 2021, increasing competitive funding, promoting joint research projects through industry-academia collaboration & strengthening hospital activities
- **Improving university-wide communication to more effectively & flexibly assign resources**
- **Collaborating with Asia and wider world to promote gender equality on campus**  
Establishing Gender Equality Promotion Center, increasing female faculty members to 20% & promoting women in leadership positions

### Research

Inspired by our Nobel laureates, we are committed to the creation & discovery of knowledge through research.

- **Supporting frontier research led by**
  - "Institute for Advanced Research" for basic research
  - "Institute of Innovation for Future Society" for practical research
  - "ITbM" for WPI program
- **Establishing new research centers**  
i.e. WPI-Next
- **Recruiting, retaining & supporting most talented faculty & fostering world-class researchers**  
Greater support for women, non-Japanese & early-career

NU MIRAI  
2020

### University-Industry Collaboration

As a core university located in one of the world's most dynamic industrial clusters, we conduct research and pursue innovation that contributes to value creation for betterment of society.

- **Establishing a new "industry-academia-government collaboration" to implement open innovation**  
Establishing new research center on gallium nitride (GaN) & "Future Integrated Electronics Research Center"
- **Fostering people who contribute to society**  
Increasing entrepreneurial education & industry-academia collaboration
- **Increasing regional resilience for safety & disaster relief**  
Establishing Disaster Mitigation Research Center & new model for industry-academia-government-civil society collaboration

# Excellence in Research Fostered by a Free and Vibrant Academic Culture



Six Nobel Laureates Demonstrate Nagoya University's World-class Research Excellence



New Flagship Research Initiatives

Institute of Materials and Systems for Sustainability (IMaSS)

Institute of Transformativ Bio-Molecules (ITbM)

National Composites Center (NCC)

Selection for the Program for Promoting the Enhancement of Research Universities - Top Four Highest Ranking Institutions -

Innovation Hub for a "Mobility Society" (Nagoya COI) - Leads to an Active and Joyful Life for Elderly -

Green Mobility Research Institute (GREMO)

Disaster Mitigation Research Center (DMRC)

自由闊達な空気が生む際だつ研究力

## Six Nobel Laureates Demonstrate Nagoya University's

## World-class Research Excellence



**Dr. Isamu AKASAKI**

1959  
Research Associate, School of Engineering,  
Nagoya University

1964  
Ph.D., Nagoya University

1992  
Emeritus Professor, Nagoya University

2004-  
University Professor, Nagoya University



**Dr. Hiroshi AMANO**

1983  
Graduated from School of Engineering,  
Nagoya University

1988  
Ph.D., Nagoya University

2010-  
Professor, Graduate School of Engineering,  
Nagoya University

Since entering the 21st century, 16 Japanese researchers have received a Nobel Prize. Among these, six are graduates of or have been affiliated with Nagoya University as faculty members during their career. This number of Laureates is the highest in Japan.

It is said that the main reason for Nagoya University's surge of progress in this area is its free and vibrant academic culture. Of the seven former imperial universities, Nagoya University was founded last. Faculty at that time came to Nagoya from all over Japan; they helped students and young researchers pursue their research freely, and this academic culture has been inherited by today's generation.

We will now give an introduction of each Laureate as follows.

### Nobel Prize in Physics, 2014

In October 2014, the Royal Swedish Academy announced its awarding of the Nobel Prize in Physics to Dr. Isamu Akasaki, Dr. Hiroshi Amano and Dr. Shuji Nakamura for the invention of the efficient blue light-emitting diode (LED), which enables bright and energy-saving white light sources. In the spirit of Alfred Nobel, the Prize rewards inventions of great benefit to mankind and, indeed, the blue LED has led to the revolution of indoor and other lighting by making this kind of white light possible. With the advent of LED lamps, lightbulb technology has made a quantum leap not only in energy efficiency but also in durability.

Dr. Akasaki began his career in academia as a Research Associate at the Nagoya University School of Engineering in 1959, eventually advancing to Associate Professor while working on his PhD from Nagoya University, which he obtained in 1964. Following this, he worked in the private sector before returning to Nagoya University as Professor of Engineering in 1981. Dr. Akasaki moved on to the neighboring Meiji University in 1992, but in December 2004 was reappointed by Nagoya University as a Distinguished Professor.

Dr. Hiroshi Amano graduated from the Nagoya University School of Engineering in 1983 and, after obtaining his PhD in 1988, was appointed Research Associate at Nagoya University, advancing to Assistant Professor. He then joined Dr. Akasaki as a Professor at Meiji University, before returning to Nagoya University's Graduate School of Engineering.



Blue Light-emitting Diode (LED) on Toyoda Auditorium Clock



Alexander Mahmoud ©Nobel Media AB



### Nobel Prize in Chemistry, 2001

In October 2001, the Royal Swedish Academy announced its award of the Nobel Prize in Chemistry to Dr. Ryoji Noyori and Dr. W. S. Knowles (USA) for their work on chirally catalyzed hydrogenation reactions, and to Dr. K. B. Sharpless (USA) for his work on chirally catalyzed oxidation reactions. Their research – an important topic of study in the 20th century – enabled Dr. Noyori and his fellow laureates to realize their dream of making possible the artificial and preferential production of enantiomers. Enantiomers are molecules existing in many organic compounds that are mirror images of each other but not identical, i.e., with a right- and left-side relationship but with each side having a different character. While one side could become a promising medicine, the other could equally become a dangerous toxin. It has therefore become a major issue in chemistry to find ways to preferentially produce right- and left-side products. Dr. Noyori's research makes it possible to artificially produce right- and left-side molecules using catalysts. This research has tremendous potential in the creation and production of medicines, aromatic chemicals, and materials in harmony with the natural environment.

In 1957, Dr. Noyori entered the Undergraduate School of Industrial Chemistry, Faculty of Engineering at Kyoto University, and later was appointed associate professor at Nagoya University, involved in synthetic organic chemistry. After switching his research base from Nagoya University to Harvard for postdoctoral work, he returned to Nagoya University and became a full professor in 1972. The research contacts he made with many renowned chemists offered him expanded opportunity to continue his search for the development and application of new methodologies in the field of organic chemistry. Presently, Dr. Noyori is an organic chemist based at Nagoya University and Director-General of the Center for Research and Development Strategy (CRDS), Japan Science and Technology Agency (JST) and continues to realize remarkable achievements in the field of organic chemistry through his collaborations with numerous researchers worldwide.



**Dr. Ryoji NOYORI**

1967  
Ph.D., Kyoto University

1968  
Associate Professor of Chemistry,  
Nagoya University

1997-1999  
Dean, Graduate School of Science,  
Nagoya University

2003-  
University Professor,  
Nagoya University



**Dr. Toshihide MASKAWA**

1962  
Graduated from School of Science,  
Nagoya University

1967  
Ph.D., Nagoya University  
Research Associate,  
School of Science,  
Nagoya University

2007-  
Distinguished Invited  
University Professor,  
Nagoya University

2009-  
University Professor,  
Nagoya University



**Dr. Makoto KOBAYASHI**

1967  
Graduated from School of Science,  
Nagoya University

1972  
Ph.D., Nagoya University

2008-  
Distinguished Invited  
University Professor,  
Nagoya University

2009-  
University Professor,  
Nagoya University



**Dr. Osamu SHIMOMURA**

1960  
Ph.D., Nagoya University

1963  
Associate Professor,  
School of Science,  
Nagoya University

2008-  
Distinguished Invited  
University Professor,  
Nagoya University

2009-  
University Professor,  
Nagoya University



Dr. Maskawa and Dr. Kobayashi while attending graduate school



At a party hosted by Theoretical Particle Physics Group (E-ken), Graduate School of Science



At the 3rd Yoshimasa Hirata Memorial Lecture

### Nobel Prize in Physics, 2008

In October 2008, the Academy announced its award of the Nobel Prize in Physics to three esteemed scientists: Yoichiro Nambu (USA), and Nagoya University graduates Toshihide Maskawa, a Distinguished Invited University Professor at Nagoya University, professor emeritus at Kyoto University, and professor of physics at Kyoto Sangyo University, and Makoto Kobayashi, professor emeritus at the High Energy Accelerator Research Organization (KEK). The two Nagoya University scientists received the Nobel Prize for forecasting, over three decades ago, "the discovery of the origin of the broken symmetry which predicts the existence of at least three families of quarks in nature." In 1972, the two presented their Kobayashi-Maskawa theory, which states that CP symmetry violation can be explained with six types of quarks, one of the subatomic particles that constitute matter. This theory was proved in 1995 with the discovery of the sixth quark, known as the top quark. Among the numerous theories attempting to explain CP symmetry violation, the Kobayashi-Maskawa theory remains the most concise and well-formed, and today is one of the key components of the standard model of particle physics.

Professor Maskawa graduated from Nagoya University's School of Science in 1962. After completing his doctoral course in science in 1967, he continued his career as a research associate in the science department, then as a professor of the Institute of Nuclear Study at the University of Tokyo and later as a professor at Kyoto University's Yukawa Institute for Theoretical Physics (YITP). In 2003, he became a professor at Kyoto Sangyo University's Faculty of Science, and in October 2007 was appointed Distinguished Invited University Professor at Nagoya University.

Professor Kobayashi graduated from Nagoya University in 1967 and, after completing his doctoral course in science in 1972, became a research associate at Kyoto University's Faculty of Science. He later became a professor at KEK, the High Energy Accelerator Research Organization, and then director of the Institute of Particle and Nuclear Studies at KEK before becoming a professor emeritus at the same institute.

### Nobel Prize in Chemistry, 2008

It was great news in October 2008 when organic chemist and marine biologist Professor Osamu Shimomura from Nagoya University was announced as one of three distinguished scientists to receive the 2008 Nobel Prize in Chemistry, sharing it with Martin Chalfie of Columbia University and Roger Y. Tsien of the University of California, San Diego. They received this award for the discovery and development of the green fluorescent protein, GFP. Professor Shimomura was the first to discover and successfully refine GFP in luminous jellyfish. Using this GFP as a marker, it is now possible to directly observe protein behavior in living cells. This significantly contributes to the development of molecular biology and biosciences.

Professor Shimomura spent two and a half years at Nagoya University's School of Science as a research student and received his PhD in Sciences in 1960. In that same year, he went to Princeton University as a Fulbright scholar, then returned to Japan and for two years beginning in 1963 was an associate professor in the School of Science at Nagoya University. Today he is a professor emeritus at Marine Biological Laboratory (MBL) in Woods Hole, Massachusetts and Boston University Medical School.



# New Flagship Research Initiatives

## Institute of Materials and Systems for Sustainability (IMaSS)



### About IMaSS

In order to contribute toward the realization of an enriched, environment-compatible future society amidst global-scale environmental and resource-related restrictions, Institute of Materials and Systems for Sustainability, IMaSS, will focus on research fields ranging from technology of materials to that of systems.

We established two research centers in FY 2015: the Center for Integrated Research of Future Electronics (CIRFE), where researchers are working to develop power devices for reducing electric power consumption, and the Advanced Measurement Technology Center (AMTC), where electron microscopes and other facilities are employed for new developments in the basic sciences. Researches at CIRFE are expected to develop new power devices with gallium nitride semiconductor through joint research in collaboration with research consortiums throughout Japan.

### IMaSS's new building complex

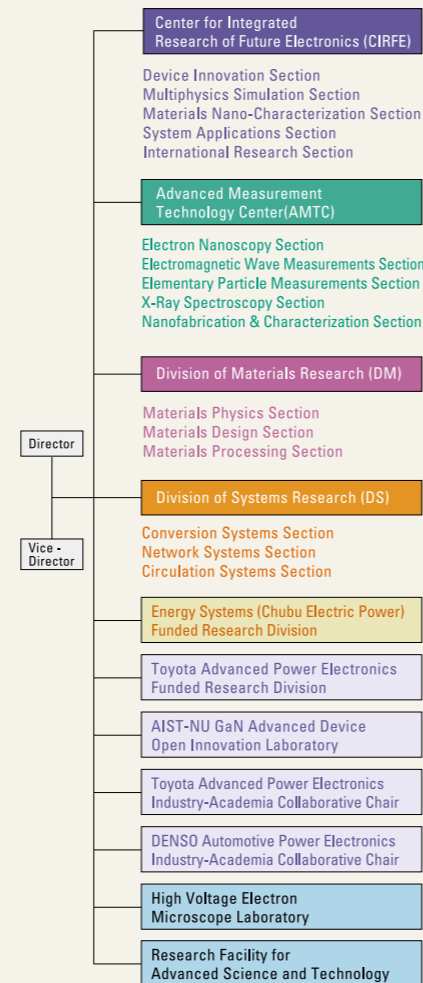


IMaSS opening ceremony (2016/06/23)

Division of Materials Research (DM), Division of Systems Research (DS), Funded Research Division and Industry-Academia Collaborative Chair are engaged in fundamental research on elemental technologies including advanced materials and devices, and also system technologies toward practical deployment in society.

IMaSS staff will cooperate with other researchers both within and beyond the University to develop materials that revolutionize lifestyles. Such collaborative activities will also contribute to the education and training of graduate students, and young researchers beyond campus boundaries.

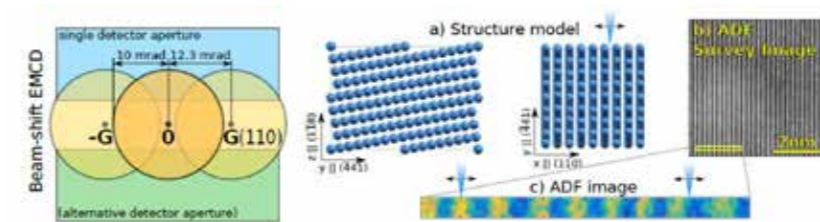
### Organization chart



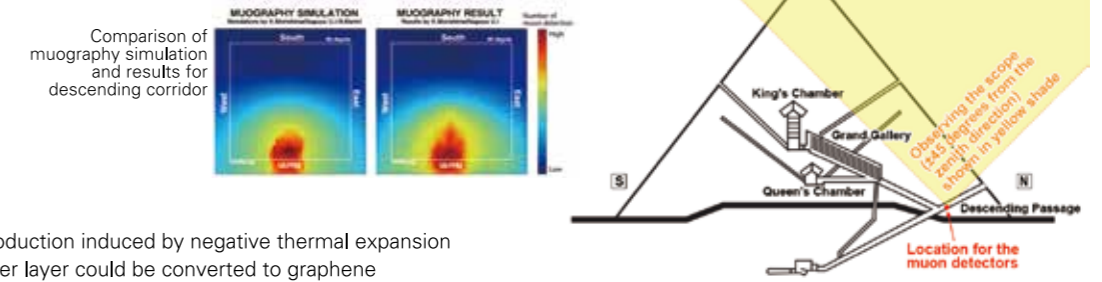
## Topics of academic year 2016

### Research News

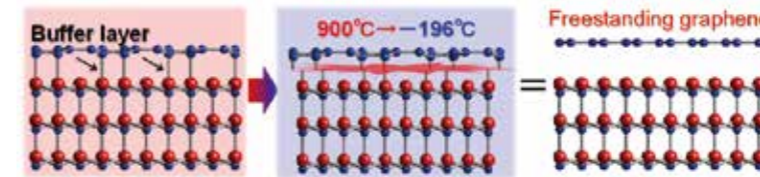
IMaSS successfully developed a method measuring the local magnetic moments with atomic-plane resolution. - A world record in spatial resolution for measuring the magnetic moments of a ferromagnetic material. -



Khufu's Great Pyramid's Hidden Void revealed using cosmic rays scanning techniques.



Graphene production induced by negative thermal expansion - Carbon buffer layer could be converted to graphene by rapid-cooling from 900°C to -196°C -

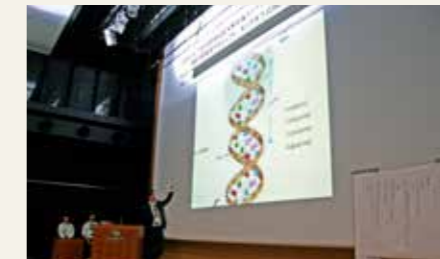


Emulsion film setup in the descending corridor

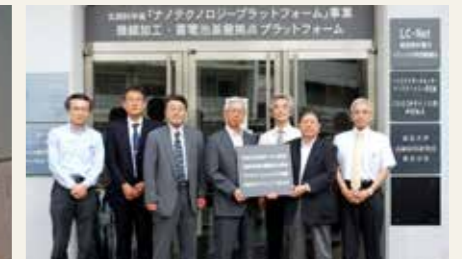
### Project

#### Life Innovation Materials Project

Joint Research Project on Life Innovation Materials between Six Universities: Nagoya U., Tohoku U., Tokyo Inst.Technol.,Tokyo Med. Dental U., Waseda U., and Osaka U.



Life Innovation Materials Project kick off forum (2016/07/08)



Tokyo branch opening commemoration (2016/08/03)

### Consortium

#### GaN Research Consortium

The GaN Research Consortium was established on October 1, 2015 to achieve world-leading energy-saving innovations with a central focus on gallium nitride (GaN) materials, thanks to their contributions toward greater energy conservation. It was established as a joint-creation, open-innovation venue that seamlessly integrates participating organizations via industry-academia-government collaboration. By contributions toward the sustainable development of Japan as a nation, as well as growth and advancements at member institutions, and by providing practical education through a venue for joint creation, this Consortium combines highly specialized knowledge with an all-encompassing viewpoint and focuses on the fostering of young, twenty-first-century researchers and technical experts who engage in scientific research for the good of society as a whole.



Prototype of Blue LED



## New Flagship Research Initiatives

### Institute of Transformative Bio-Molecules (ITbM)



ITbM's Mix-Lab



Logo of ITbM

#### Institute of Transformative Bio-Molecules (ITbM)

The Institute of Transformative Bio-Molecules (ITbM) was launched at Nagoya University in December 2012 and is supported by the World Premier International Research Center Initiative (WPI), the flagship program of the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

#### What is WPI?

The WPI program provides priority support for projects aimed at creating top world-level research centers staffed at their core with the world's most leading researchers. The WPI was established in 2007, and six WPI institutes were selected and established; The University of Tokyo (Math/Physics/Universe), Kyoto University (Cell/Materials), Osaka University (Immunology), Tohoku University (Math/Materials), National Institute for Materials Science (Nanotechnology), and Kyushu University (Energy). In 2012, the WPI was expanded by three center projects, and Nagoya University's ITbM (Synthetic Chemistry/Plant-Animal Biology) was selected together with the Tokyo Institute of Technology (Earth-Life Science) and the University of Tsukuba (Sleep Medicine).

#### Changing the world with molecules

Molecules are small but essential parts of all life on the planet. Molecules are groups of atoms chemically bound together that behave as a single unit. They are central to the operation of many industries, including pharmaceuticals, agrochemicals, electronic materials, solar cells, displays, petrochemicals, automotive manufacturing, plastics and many other sectors. Molecules have the power to change the way we do science and the way we live. By merging synthetic chemistry, catalysis chemistry, systems biology, and plant/animal science, which are the strengths of Nagoya University, ITbM aims to create cutting-edge molecular science with potentially significant societal impact.

#### ITbM: The first international institute merging synthetic chemistry and plant/animal biology

The goal of ITbM is to create a new interdisciplinary field of research through the collaboration of cutting-edge molecular synthetic chemistry and animal/plant biology,



From left to right in the front row: Profs. Keiko Torii (University of Washington, U.S.A.), Jeffrey W. Bode (ETH-Zurich, Switzerland), Kenichiro Itami (Director), Cathleen M. Crudden (Queen's University, Canada), Stephan Irlé, Takashi Ooi, From left to right in the back row: Profs. Florence Tama, Tetsuya Higashiyama (Vice-Director), Toshinori Kinoshita, Takashi Yoshimura, Shigehiro Yamaguchi (Vice-Director), Wolf Frommer (Stanford Univ./Carnegie Institute, U.S.A.), Steve A. Kay (University of Southern California, U.S.A.)



ITbM's new building

and to deliver bio-molecules that have a major impact on people's lives. Such innovative molecules are defined as "transformative bio-molecules".

Many transformative bio-molecules have been developed up to now. A few examples of molecules that have changed the world include the antibiotic, penicillin; the anti-influenza drug, Tamiflu; the revolutionary bio-imaging tool, green fluorescent protein (GFP); and the potential next generation solar cell material, fullerene. Extensive collaborations between chemists, biologists and theoretical scientists are ongoing at ITbM to generate a new research area on the boundaries of chemistry and biology. This new area of research will address urgent social issues regarding the environment and food production, along with advances in medical technology.

#### Ambitious, full-scale international collaboration of synthetic chemists, plant/animal biologists, and theoreticians

ITbM's team of PIs is an innovative mix of chemists and biologists from Japan and abroad, chosen for their excellence in science, diversity, commitment to the project and consideration for the sustainability of the Institute. With the average age of the founding PIs at 43, they will be highly active throughout the duration of the project and well beyond the 10 year funding envelope.

#### ITbM's new building

ITbM's new building officially opened in April 2015, and directly reflects the Mix-Lab concept, where new interdisciplinary research is initiated by removing the barriers between research fields/groups and integrating people, ideas, equipment and research.

#### Mix-Lab concept

ITbM has set up "Mix-Labs", which are lab spaces where synthetic chemists and biologists work next to each other, along with theoretical chemists situated nearby to enable interactive discussions. This has led to effective mixing of research areas by integrating researchers from different disciplines into the same environment. The ITbM Research Award has also been established to acknowledge and provide funding for interdisciplinary research proposals by young ITbM researchers, which enhances further mixing of research areas.

The majority of the postdoctoral researchers at ITbM are from overseas and they are conducting research in the Mix-Labs with Japanese graduate students of Nagoya University. As a consequence, Japanese graduate students are able to experience an international research environment, whilst being in Japan. In addition, ITbM's Administrative Department consists of bilingual staff to effectively support overseas researchers, thus creating an international atmosphere.

#### Heading for tomorrow

The success of ITbM is considered crucial to further enhance the prestige and international visibility of Nagoya University, and also to reconstruct its research culture. ITbM will establish the "stage" on which researchers, sharing responsibility and project objectives, can talk about their dreams freely and can put their innovative ideas into practice immediately. What ITbM's future success brings will not be limited to innovations in bio-molecular research. With a diversity of researchers from different backgrounds, ITbM will accelerate the mixing/merging of people, ideas, and research, and also help nurture a new generation of scientists unrestricted by the bounds of traditional disciplines. This will surely have a positive influence on the way Japanese universities carry out research and education.

ITbM will connect molecules, create value, and change the world, one molecule at a time.



Aim of ITbM

#### I) Control of Biological Systems

- (a) Molecules that dramatically enhance plant growth
- (b) Molecules that improve animal reproduction innovatively
- (c) Molecules that overcome the genome barrier to produce novel crops

#### II) Visualization of Biological Systems

- (a) Targeting plant fertilization, embryogenesis, and animal season sensing
- (b) Highly efficient, full-color fluorescent molecules
- (c) Specific conjugation technologies for peptide labeling

#### III) Synthesis of New Bio-Functional Molecules

- (a) Catalysts activating C-H bonds for direct transformations of bio-molecules
- (b) Catalysts acting without heavy metals
- (c) Catalysts for protein ligation



ITbM members



## New Flagship Research Initiatives

### National Composites Center (NCC)



Figure 1 Hydraulic Press Machine



Figure 3 Lightning Strike Test Facility



National Composites Center - Jaaar



Figure 2 LFT-D Floor Panel



Figure 2 Sidesill Inner



Figure 2 Center Member, Rear Panel, Sidesill Outer

On April 1, 2012, the National Composites Center (NCC) was established at Nagoya University. Although the carbon fiber (CF) manufacturing industries in Japan are considered to be one of its strongest fields, holding a 70% share of the world market, we cannot necessarily state that Japanese carbon/polymer composite processing industries are sufficiently strong when compared with their European counterparts. In order to energize these composite processing industries and promote the innovation of related technologies, a budget for Nagoya University from the Ministry of Economics, Trades and Industries (METI) was approved in 2011, and installation operations for NCC began. The above figure shows the activities of NCC, focusing on automotive and aerospace industries, which are based in the Greater Nagoya Area and which lead the world in their respective fields.

A national project aiming at applying thermoplastic CFRP to automotive industries has already begun. 11 Japanese companies, including automotive, carbon fiber, and automotive parts companies, are participating in this project to develop a technology to manufacture large structures using thermoplastic CFRP produced by LFT-D (Long Fiber Thermoplastic-Direct) technologies, which will enable high productivity and low cost processes for future automotive industries. Figure 1 shows the hydraulic press machine (35,000kN) with twin extruder (LFT-D device). Figure 2 shows the full-scale LFT-D floor panel with upstanding webs and stiffeners manufactured using the hydraulic press. These results shown in Figure 2 indicate the advantages of the LFT-D technology, especially in comparison with conventional CF/thermoplastic technologies, which have difficulty making such three-dimensional complicated shape. The details of another project are now being defined, focusing on the development of composite structure evaluation technologies, especially for lightning tests on aircraft. Test facility is shown in Figure 3.

## Selection for the Program for Promoting the Enhancement of Research Universities

### - Top Four Highest Ranking Institutions -



The joint 12th International Society for Industrial Ecology (ISIE), Socio-Economic Metabolism section conference and the 5th ISIE Asia-Pacific conference at Nagoya University



International Association for Cross-Cultural Psychology 2016 (IACCP2016) at Nagoya University



2nd International Conference on Photoalignment and Photopatterning in Soft Materials (PhoS2016) at Nagoya University



International Association for Cross-Cultural Psychology 2016 (IACCP2016) at Winc Aichi  
"Photography by Thaddeus Pope, IAFOR Media.  
Copyright © 2016 The International Academic Forum (IAFOR)"

Supported by the program for promoting the enhancement of research universities

The "Program for Promoting the Enhancement of Research Universities" is a program founded by MEXT (Ministry of Education, Culture, Sports, Science and Technology) to promote universities which are conducting outstanding world-class research. In FY2013, Nagoya University was selected as one of four leading institutions nationwide among the 22 chosen for this Program. Under the leadership of our president, NU is working to improve its research structure and environment in order to enhance its reputation as a world-class research university.

In FY2014, we established the "Cutting-edge International Research Unit", along with the "Young Researchers in New Fields Research Unit," through which international researchers will form a next-generation base for conducting the world's most advanced research. Both units are now fully operational, and the results were presented in FY2015.

Furthermore, in addition to strengthening systematic researcher support by the URAs (University Research Administrators), we are providing support towards hosting international conferences by hiring a full-time dedicated staff, as well as establishing an international conference subsidy system.

Through these advanced initiatives, NU, as a truly world-class research university, will continue its effort to promote this Program, with the objective of ranking within the top 100 in the Times Higher Education World University Rankings.



## New Flagship Research Initiatives

### Innovation Hub for a "Mobility Society" (Nagoya COI)

- Leads to an Active and Joyful Life for Elderly -

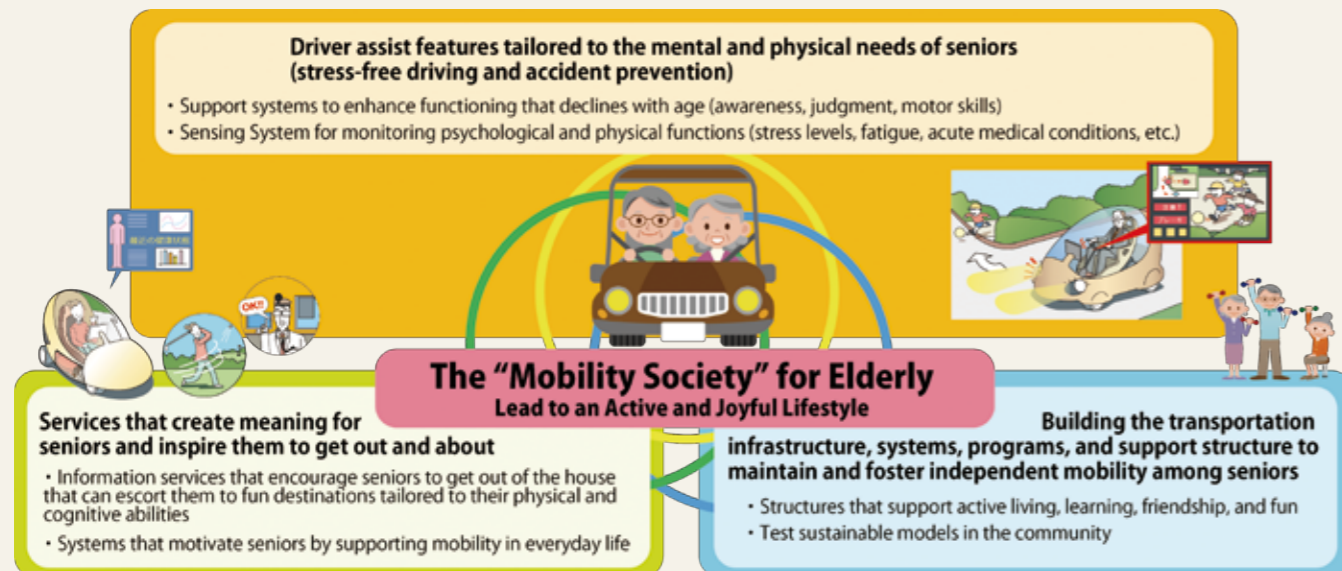


Fig.1 Nagoya COI's Future Vision of Mobility and Society



Intelligent Mobility



Autonomous driving tests on public roads



Smart chair and Walking-assistant robot  
Lifelog-based information stimuli / activity suggestion

Fig.2 Examples of Practical Applications

Japan has already shifted to become a super-aging society. In order to retain and enhance the sustainability of our society, it is important to encourage activities that can prevent the mental and physical depression of seniors. Mobility is not only limited to transportation or automobiles, but also represents the ability to move freely and safely when you wish to do so. Suitable mobility can help seniors to strengthen human communications and build up social connections and, finally, will lead to an active and happy life with strong bonds with the people around them.

Nagoya COI implements innovative technologies linked with social systems by combining leading concepts within a wide research area, including engineering, medical science, information science, neuroscience, and social innovation design science, as shown in Fig.1. To make a sustainable aged-society a reality, it is essential that seniors are able to lead active life styles regardless of age, region, or individual situations. One of the solutions towards the implementation of this goal is to create a method of transportation that provides seniors with the mobility they need to be able to move about on their own, without help from others. This mobility would lead to an increase in the activity levels of seniors, and also stimulate their social participation. It is the objective of our institute to achieve such a "Mobility Society for the Elderly which leads to an Active and Joyful Lifestyle".

Our main goals are to:

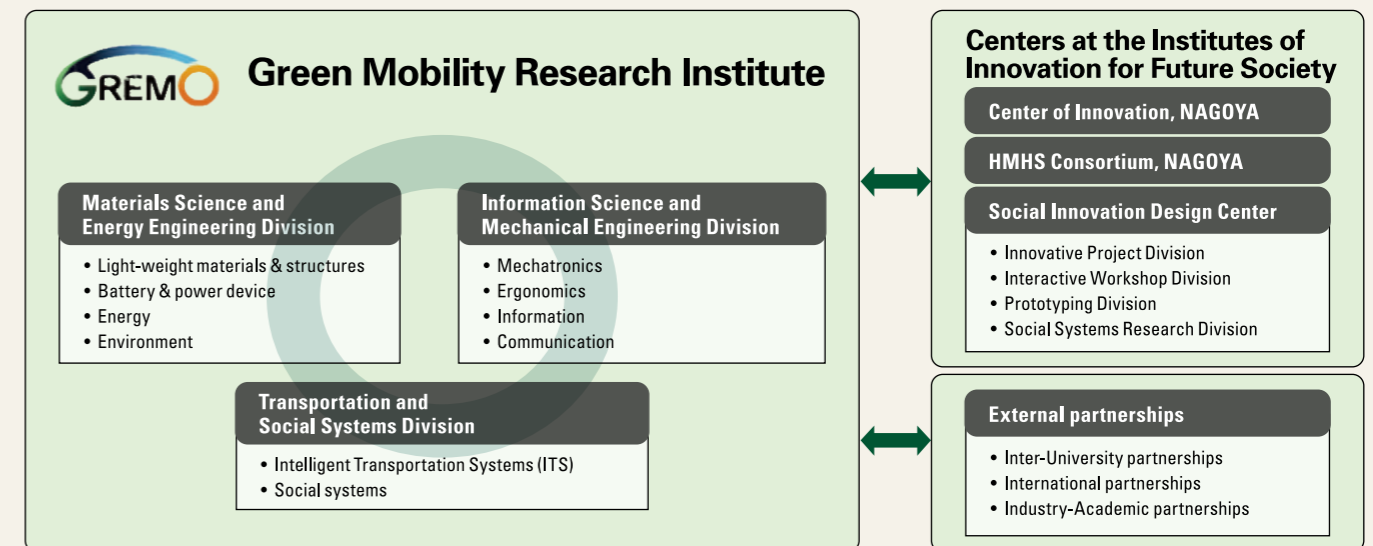
- Invent a vehicle which seniors find safe, comfortable, and fun to drive
- Create an information service which motivates seniors to be more socially active within their communities using that vehicle
- Establish a social structure that encourages seniors to actively participate in community activities and events

### Green Mobility Research Institute (GREMO)

On April 1, 2016, the Green Mobility Research Institute (GREMO) was founded in the Institutes of Innovation for Future Society at Nagoya University to expand the activities of its predecessor, Green Mobility Collaborative Research Center.

Due to the reorganization, six research fields in the predecessor, light-weight material & structure, battery & power device, energy & environment, mechatronics & ergonomics, information & communication and ITS & social system have been combined to three divisions of Materials Science & Energy Engineering, Information Science & Mechanical Engineering and Transportation & Social Systems.

The mission of GREMO is to realize a harmonic society between technology, humans and the environment through green innovation in the safe and secure transport means and systems. The establishment of GREMO has not only brought together different existing expertise in automotive research, but also an intimate global collaboration between industry, academic and government.



### Disaster Mitigation Research Center (DMRC)



The Disaster Mitigation Research Building

The Disaster Mitigation Research Center (DMRC) was founded in January 2012. Nagoya City and the surrounding Chukyo area are vulnerable to natural hazard risks due to the high possibility of large earthquakes along the Nankai Trough plate boundary. The Japanese government estimates the probability of the occurrence of the next large earthquake during the next 30 years as 70%, and the worst-case scenario predicts that economic losses will reach as much as 220 trillion yen. The area also has a history of destructive floods and storms. Since this area is the center of industrial production in Japan, these natural hazard risks may cause a serious crisis at a national level. The DMRC, which brings together experts with various backgrounds such as engineering, earth science, social science and humanities, promotes cooperative multidisciplinary research for developing a state-of-the-art disaster mitigation model and applying it to ensure safety and security of the local community. The DMRC provides a cooperative framework for local government, companies, and citizens to improve the preparedness of the local community for future natural hazards. In addition, the DMRC offers disaster mitigation training courses for local public officers and volunteers. The Gensaikan Building, where the DMRC is located, has an exhibition hall and a library, which are open to the public for self-learning about natural disasters and their mitigation.





Top Global University Project  
- An Asian Hub University Contributing  
to a Sustainable Society in the 21st Century -



The Development of Joint Degree Program



Asian Satellite Campuses  
- Transnational Doctoral Programs  
for Leading Professionals in Asian Countries -



The Nagoya University Global 30 International Programs  
- Undergraduate and Graduate Degrees Taught in English -



Fresh Insights, Intellectual Stimulation,  
and a Global Perspective through Student Exchange (NUPACE)



Nagoya University Summer Intensive Program (NUSIP)



Nagoya University Overseas Take-off Initiative (NU-OTI)



Nagoya University Short-Term  
Japanese Language Program (NUSTEP)



Program for Leading Graduate Schools  
- Five-Year Doctoral Programs for Training and Developing Future  
International Leaders -

Graduate Program for Real-World Data Circulation Leaders  
Women Leaders Program to Promote Well-being in Asia  
Integrative Graduate Education and Research Program in Green Natural Sciences  
The Program for Cross-Border Legal Institution Design  
Leadership Development Program for Space Exploration and Research  
PhD Professional Gateway to Success in Frontier Asia



Other International Programs



Promoting Gender Equality from Nagoya to the World!

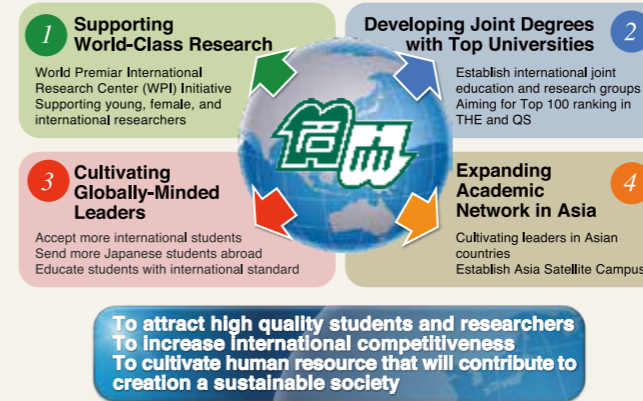
世界に通用する真のリーダーを育成

## Top Global University Project

- An Asian Hub University Contributing to a Sustainable Society in the 21st Century -

### Nagoya University : The Next 10-20 Years

#### World-Class Research University Asian Hub University



The environment surrounding Japanese higher education is entering a transition phase, with a decrease in working-age people due to declining birthrates and the ageing population, and the increasingly speedy globalization of economic and social activity. Japan's universities, which must live up to society's expectations as intellectual bases that drive the

growth of the nation, are strongly expected to gather outstanding researchers from around the world, and to nurture talented young professionals with an understanding of different cultures who will play active roles in and contribute to the solving of global-scale problems and building towards the future, as well as those who have a strong desire to actively make a contribution to regional communities while maintaining a global mindset. At the same time, our universities must make their presence felt in the international higher education community and work to rank alongside top universities worldwide.

Based on the Nagoya University ideals, NU is to implement the Top Global University Project; in terms of research its goal is the "enhancement of cutting-edge research at a world-class level", while in terms of education it aims to "become an attractive and global Nagoya University". Achieving these goals in the field of Asia, it is determined to become an "Asian hub university". By realizing these three goals, NU intends to play a role as a key university in Asia, which is working hard to build a sustainable world, and, by providing the strong spirit and ability needed to actually make a contribution to twenty-first-century human society, to be fully worthy of being called a top, world-class university. The project concept is as can be seen in the figures above and below.

### Top Global University Project: Operation Sheet

	2013	2014	2015	2016	2017	2018	2019
<b>Creative Scientific Research Unit</b>				3 units			3 units
				Expansion of YLC program (Special admission for female and international scholars) Financial Support for S-YLC scholars			
<b>Joint Degree</b>		2 units		5 units	7 units	10 units	12 units
		Adelaide Freiburg		Edinburgh Kasetsart etc.			
<b>Educational Reinvention</b>		Introduction of quarter system					
		Formulating basic outline		Syllabi of graduate program in Japanese and English			
		Numbering all courses					
<b>Inbound students and supports</b>	100	Improve and expand G30 programs		170			280
	850 courses	Expand English-taught courses					1000 courses
		Providing career counseling and support Increasing support in international dormitories Introduce new short term Japanese language program (NUSTEP)			Completion of International residence		
<b>Outbound students</b>	220	Develop "deposit system" for students to support their study abroad		400			650
<b>Asian Satellite Campus</b>		3 countries ( Mongolia, Cambodia, Vietnam )					
		3 countries ( Uzbekistan, Philippines, Laos )					
		Establishment of Nagoya University International Student Alumni Association Network					
	2013	2014	2015	2016	2017	2018	2019

Term of "Action Plan I" (2015-2017)



# The Development of Joint Degree Program

Nagoya University continuously aspires to improve the international compatibility of our education system with the aim of fostering global talent.

As part of such efforts, the Graduate School of Medicine, in collaboration with the University of Adelaide Faculty of Health Sciences, established Japan's first joint degree program through which a single degree is awarded conjointly with an overseas university ("International Collaborative Program in Comprehensive Medical Science between Nagoya University and University of Adelaide") in October 2015.

Shortly thereafter, in October 2016, the Graduate School of Science also established an international collaborative program with the University of Edinburgh College of Science and Engineering named "International Collaborative Programme in Science between the University of Edinburgh and Nagoya University", and in April 2017, the Graduate School of Medicine collaborating with the Lund University Faculty of Medicine will be launching a joint degree program titled the "International Collaborative Program in Comprehensive Medical Science between Nagoya University and Lund University". Each school has begun accepting outstanding applicants to enroll in the program.

In the joint degree program, students receive a single diploma with the names of both universities upon completion of the program and spend a predetermined period of time studying in both universities without extending their period of enrollment. This program strives to offer students high-quality educational opportunities by providing a mutually complementary education program that cannot be created within a single university or country.

Nagoya University's objective is to establish 10 to 20 international joint education programs with leading Western and Asian universities by 2020, and is currently pursuing the expansion of international joint education program partners primarily with top international universities who have a history of exchange with Nagoya University. By pursuing the establishment of joint degree programs and international joint research projects, Nagoya University aims to increase the number of international joint research articles produced and international faculty, establish an international joint research center, and rank within the top 100 of well-known ranking lists such as THE and QS.



The University of Edinburgh

## Action Plan

- Increase Number of International Joint Education and Research Units Aiming for Joint Degree Programs
  - 10 to 20 units university-wide with leading Western and Asian universities by 2020
  - Existing Joint Supervision Program / Double Degree Program
    - Joint Degree Program: Towards a curriculum with mutually complementary consistency
    - Proceed with supporting career paths as a world citizen for graduates
- Increase in number of international joint research articles and international faculty
- Stimulate the exchange of human resources with the establishment of joint education units as a foundation
  - Increase in number of international joint research articles and international faculty
- Aim to place in Top 100 of Rankings such as THE and QS
  - Enhance Nagoya University's reputation by increasing recognition among universities through international joint education programs
  - Stimulate the establishment of international research networks by virtue of acquiring accomplished international faculty

# Asian Satellite Campuses

## - Transnational Doctoral Programs for Leading Professionals in Asian Countries -

Programs Offered at a Glance					
	Graduate School of Law	Graduate School of Medicine	Graduate School of Bioagricultural Sciences	Graduate School of International Development	Graduate School of Environmental Studies
<b>Vietnam</b>	●	●			
<b>Cambodia</b>	●	●	●	●	
<b>Mongolia</b>	●	●			●
<b>Laos</b>	●	●	●		●
<b>Uzbekistan</b>	●	●			
<b>Philippines</b>			●	●	
<b>Myanmar</b>				○	

○ \*Program offered without Satellite Campus.



Inside a Satellite Campus class (Mongolia)

Up to now, Nagoya University has been actively nurturing talented young professionals from Asian countries through initiatives such as legislation-related professional development programs at the Center for Asian Legal Exchange (CALE), and the Young Leaders' Program (YLP) at its Graduate School of Medicine. Students graduating from NU have gone on to play active roles as government executives and potential executives for positions such as vice minister and bureau director in their various Asian countries.

Among those graduates who already hold master's degrees, some wish to study for a doctoral degree at an overseas university, so that they can further develop their policy-making skills in order to tackle the various issues Asian countries are dealing with; however, many graduates would find it difficult to study abroad again while remaining in their current jobs.

Based on their needs, NU has taken advantage of its great achievements and experience in the Asian region to date, and, from 2014, began the "Transnational Doctoral Programs for Leading Professionals in Asian Countries", which are targeted at executives from various Asian countries and enable them to get a doctoral degree without leaving their workplace for an extended period of time.

In these Programs, students are enrolled in a Nagoya University doctoral program (Final Three-year Program), and work towards a doctoral degree by receiving education both in Japan and at one of NU's Satellite Campuses. For the majority of the time they learn skills such as academic writing and get research guidance at the Satellite Campus established in their own Asian country, as well as receiving long-distance guidance using ICT from their academic advisor in Japan. In addition, there are fixed periods of "schooling", during which students will travel to Japan to receive intensive teaching and research guidance from their academic advisor directly. Through this system of education, students are able to enjoy the same high standard of education as they would on Nagoya University's home campuses, without having to be absent from their workplace for long periods of time.

These Programs are offered in seven countries, namely Cambodia, Laos, Mongolia, Myanmar, Philippines, Uzbekistan and Vietnam by five graduate schools: Law, Medicine, Bioagricultural Sciences, International Development and Environmental Studies.

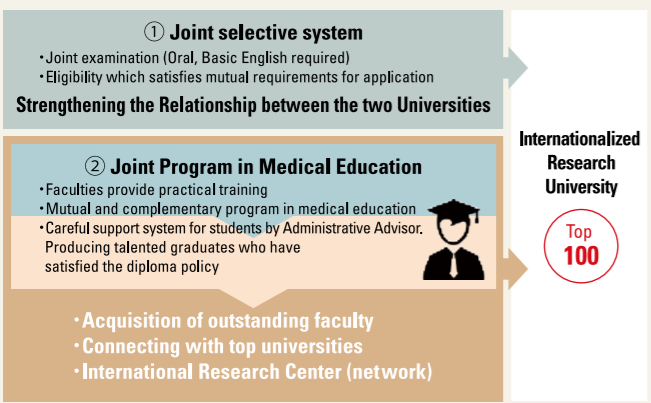


Uzbekistan Satellite Campus Opening Ceremony

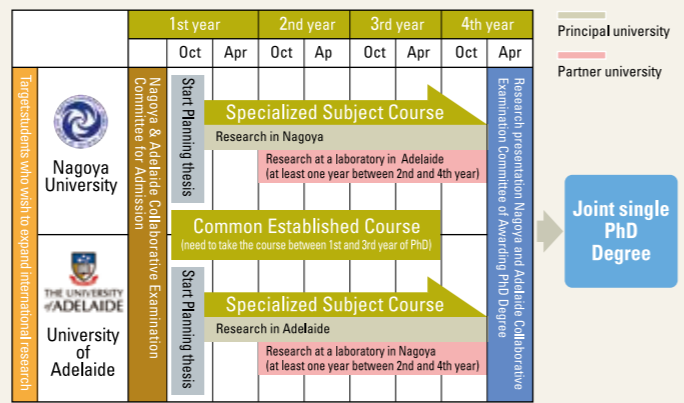


Tape Cutting at the Laos Satellite Campus Opening Ceremony

### International Joint Program in Medical Education between Adelaide and Nagoya System & Future Vision



### Outline of International Collaborative Program in Comprehensive Medical Science between Nagoya University and the University of Adelaide





# The Nagoya University Global 30 International Programs

## - Undergraduate and Graduate Degrees Taught in English -

The Nagoya University Global 30 International Program offers undergraduate and graduate full-degree programs taught in English. Since 2011, we have introduced 11 Undergraduate, 9 Master's, and 5 Doctoral programs to give students the chance to follow their academic interests, improve their language abilities, and hone their communications skills. All faculty teaching in the G30 programs are experts in their field. Small class sizes mean that instructors can provide students

with individual attention. The first and second year of the undergraduate curriculum includes Liberal Arts and Science courses that expose students to subjects outside their field. First year students also enroll in Japanese language classes. The second and third year offer laboratory courses, seminars and specialized courses to prepare students for their fourth year when they will study, research, and write their graduation thesis.

### Global 30 International Programs (Undergraduate)

Programs	Affiliated Schools
Automotive Engineering Program	• School of Engineering
Fundamental and Applied Physics Program	• School of Engineering • School of Science
Chemistry Program	• School of Science • School of Engineering
Biological Science Program	• School of Science • School of Agricultural Sciences
Program in Social Sciences	• School of Law • School of Economics
Japan-in-Asia Cultural Studies Program	• School of Humanities

### Global 30 International Programs (Graduate)

Programs	Affiliated Schools	Degree	
		Master's	Doctoral
Automotive Engineering Graduate Program	• Graduate School of Engineering	●	
Civil and Environmental Engineering Graduate Program	• Graduate School of Engineering	●	●
Physics and Mathematics Graduate Program	• Graduate School of Science • Graduate School of Mathematics	●	●
Chemistry Graduate Program	• Graduate School of Science • Graduate School of Engineering	●	●
Biological and Bioagricultural Sciences Graduate Program	• Graduate School of Science • Graduate School of Bioagricultural Sciences	●	●
Biological and Bioagricultural Sciences Graduate Program	• Graduate School of Medicine	●	
Medical Science Graduate Program	• Graduate School of Medicine		●
Graduate Program in Economics and Business Administration	• Graduate School of Economics	●	
Graduate Program in Linguistics and Cultural Studies	• Graduate School of Humanities	●	
Japan-in-Asia Cultural Studies Graduate Program	• Graduate School of Humanities	●	



## What is Special about the Global 30 International Programs?

### ✓ Academics

#### English-taught Curriculum

Nagoya University offers a selection of undergraduate and graduate programs fully taught in English. No Japanese language ability is necessary for admission.

#### Teaching and Training in Research Skills

Nagoya University is one of Japan's top research universities. Our faculty bring recent discoveries in their fields straight to the students. Small class sizes and laboratories emphasize critical thinking, hands-on research skills, and communication abilities.

#### Japanese Language Education

Although the G30 curriculum is in English, Nagoya University offers a Japanese language program for students from beginner to advanced.

### ✓ Admission

#### Online Application

Candidates for the G30 program apply online. Nagoya University evaluates applicants through document screening followed by interviews via video conference platforms.

### ✓ Finances

#### Non-discriminatory and Affordable Tuition Fees

International students at Nagoya University pay the same tuition fees as domestic students.

#### G30 Scholarship for Selected Students

Nagoya University selects a limited number of students for scholarships covering tuition fees and a living allowance.

### ✓ Student Life

#### Housing

Nagoya University guarantees a single room at the university dormitory for all first year students in the G30 programs.

#### On-Campus Cafeterias

On-campus cafeterias and cafes offer food to satisfy different tastes and dietary needs.

#### Academic Advising and Counseling

Specialized faculty, teaching assistants, research assistants and tutors help incoming students adjust to academic and daily life.

#### Career Support

The Career Services Office provides counseling and career path guidance for international students. Students may also join internship programs, corporate information sessions, company-student mixers, and job fairs.

#### Social Events

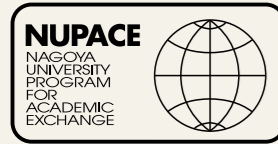
Throughout the academic year, Nagoya University provides opportunities for students, faculty, and the local community to meet and talk.



<http://admissions.g30.nagoya-u.ac.jp/en/>



## Fresh Insights, Intellectual Stimulation, and a Global Perspective through Student Exchange (NUPACE )



Established in February 1996, the Nagoya University Program for Academic Exchange (NUPACE) is an academic student exchange program through which international students enrolled at Nagoya University's partner institutions can study in Japan for four to twelve months. The program aims to foster friendships that extend beyond borders, internationalize through education, and motivate overseas students to pursue more extensive studies about Japan. The NUPACE academic year runs on a semester basis, and students can choose one of two admission periods: late September or early April. NUPACE offers a unique and flexible curriculum comprising Japanese language instruction, Japan area studies, and a wide range of courses in the student's major field of study, including those available through the G30 International Programs. Provided that they take at least fifteen credits per semester, students can design their own curriculum, balancing their interest in Japanese language and area studies with the desire to pursue their major or independent research. Guided research for graduate students is also available. Moreover, whilst a fully-developed, comprehensive English language program is provided, those students proficient in Japanese are eligible to register and earn credits for any course offered to degree-seeking students at Nagoya University. NUPACE has hosted a total of 1,748 international students from 129 institutions in 33 countries. It is renowned, in both domestic and international arenas, for its quality and leadership in exchange student education.



1 Hanabi 2 Having a fun time in Ohmeikan lobby 3 Field-trip to Meijimura

## Nagoya University Summer Intensive Program (NUSIP)



1 Visit to The Yokohama Rubber Co., Ltd. 2 Poster 3 Visit to Mitsubishi Motors Corporation 4 Special Lecture

With support and cooperation from the Japanese automotive industry and related enterprises, the Graduate School of Engineering offered a 6-week summer program entitled "Latest Advanced Technology & Tasks in Automobile Engineering," from June 15 to July 21, 2016 in which 38 overseas students and 13 Nagoya University students participated. Conducted entirely in English, the program was aimed at overseas students and Nagoya University students in engineering-related fields. The program's greatest feature was its exciting lectures from various viewpoints on state-of-the-art technologies in areas such as hybrid automobiles, fuel cells, environmental strategies, accident prevention, and expressway traffic. The lectures were conducted with support from some of the industry's leading technologists and researchers, as well as Nagoya University faculty members. Although of short duration, the program's objectives enabled overseas students to study some of the various fields that are particularly advanced in Japan, as well as increase their interest in this country and its culture. The program also enabled Nagoya University students to improve their English and communication skills and broaden their international horizons in conjunction with studies in their specialist fields. (Refer to: <http://www.engg.nagoya-u.ac.jp/en/nusip/index.html>)



## Nagoya University Overseas Take-off Initiative (NU-OTI)



1 Partner Institution : University of Iceland 2 Partner Institution : University of Leeds 3 Partner Institution : The University of Adelaide 4 Partner Institution : Peking University

### University-Wide Student Exchange Program

Over 180 universities/ institutions are possible exchange partners  
 Three internal selection rounds per year (June, November, February)  
 Duration of Exchange is one semester or one year

Participants join local students in taking classes in their field of study or other related areas of interest. As a representative of Nagoya University, participants must engage in their academic studies with a sincere attitude and are required to periodically submit a report during their exchange. Participants must plan ahead and consider their future plans. Those wishes to transfer credits must follow each departments' rules accordingly.

#### Merits

##### ○ Support from Study Abroad Office

Study Abroad Office support students participating in exchange by helping them choose their destination, preparing them for language requirements, providing various orientations and risk managements. Office can also advice students while they are on the program through e-mails.

##### ○ Tuition waiver

Nagoya University has established a mutual tuition fee waiver with most partner institutions. As long as students pay tuition to Nagoya University, they do not have to pay tuition at the destination university. Therefore, the costs of their exchange are less than a self-funded study abroad.

### Short Term Program

We also offer various short-term programs. Please refer to the website:  
<http://ieec.iee.nagoya-u.ac.jp/ja/abroad/program/tanki-tokubetsu.html>

## Nagoya University Short-Term

## Japanese Language Program (NUSTEP)

Established in February 2016, the Nagoya University Short-Term Japanese Language Program (NUSTEP) is an academic exchange program in which international students enrolled at Nagoya University's partner institutions study intermediate-level Japanese language in an intensive two-week program. Its purpose is to provide participants with the opportunity to improve their language skills and also learn about the culture and society of Aichi Prefecture. Some who enjoy their experience may return to Japan later either through a longer-term exchange program, like NUPACE, or enroll as a graduate student. During the program, participants study in the classroom from 8:45 am to 12:15 pm each day. In the afternoon, they join activities to experience local

society and culture including dressing in a kimono, writing Japanese calligraphy, attending a social event with Nagoya University students, and touring an automobile plant. Nagoya University faculty members also lecture participants on specialized subjects, host a workshop on exploring career options in Japan, and welcome participants to see some of the research conducted in on-campus laboratories. Moving forward, Nagoya University plans to offer admission to NUSTEP two times a year – once in February and once in July. This program will not only encourage cooperation between Nagoya University and its partner institutions, but also provide a new generation of students a small taste of what it is like to study in Japan.

### Schedule : February 9-23, 2017

	9(Thu)	10(Fri)	11(Sat)	12(Sun)	13(Mon)	14(Tue)	15(Wed)
8:45 ▶ 9:00	Housing Check-in	Opening Ceremony	Field Trip	Holiday	Morning Meeting		
9:00 ▶ 10:30		Orientation			Japanese 1	Japanese 3	Japanese 5
10:45 ▶ 12:15		Placement Test			Japanese 2	Japanese 4	Japanese 6
Lunch break							
13:00 ▶ 14:30		Campus Guidance			Cultural Excursion	Career Exploration Workshop	Laboratory Visit/ Specialized Lecture
14:45 ▶ 16:15		Welcome Party					
	16(Thu)	17(Fri)	18(Sat) - 19(Sun)	20(Mon)	21(Tue)	22(Wed)	23(Thu)
8:45 ▶ 9:00	Morning Meeting		City Tour/ Holiday	Morning Meeting			Housing Check-out
9:00 ▶ 10:30	Japanese 7	Japanese 9		Japanese 11	Japanese 13	Japanese 15	
10:45 ▶ 12:15	Japanese 8	Japanese 10		Japanese 12	Japanese 14	Final Exam	
Lunch break							
13:00 ▶ 14:30	Japanese Company Visit	Social Event with NU Students		Laboratory Visit/ Specialized Lecture	Self Study	Closing Ceremony	
14:45 ▶ 16:15						Farewell Party	



1 Hands-On Painting Experience 2 Social Exchange with NU Students 3 Presentation in Japanese Class



**Program for Leading Graduate Schools**

**- Five-Year Doctoral Programs for Training and Developing Future International Leaders -**

This enterprise, which has been implemented since 2011 by MEXT, aims to cultivate globally active leaders; to this end, it gathers together first-class teaching staff and students from both inside and outside Japan and supports projects at universities which are forming and developing five-year unified doctoral programs that will be of use globally. 62 programs have been selected from across Japan for this enterprise, six of which are at Nagoya University. These six programs are outlined below:



A Cross-Cultural Meeting with Burmese Students



HeForShe Seminar



Leadership program in NORTH CAROLINA



Students Discussing in Project Management course



**JUN-KAN**  
GRADUATE PROGRAM FOR  
REAL-WORLD DATA CIRCULATION LEADERS  
PROGRAM FOR LEADING GRADUATE SCHOOLS  
NAGOYA UNIVERSITY

**Number of Research Assistants**  
19 (FY2013) 16 (FY2014)  
11 (FY2015) 11 (FY2016)

**Number of Students who received a study grant**  
12 (85,000 yen/month) (FY2014)  
2 (50,000 yen/month) (FY2014)  
13 (200,000 yen/month) (FY2015)  
13 (85,000 yen/month) (FY2015)  
23 (200,000 yen/month) (FY2016)  
2 (150,000 yen/month) (FY2016)  
14 (85,000 yen/month) (FY2016)

**Graduate Program for Real-World Data Circulation Leaders**

The field of real-world data circulation aims to integrate the acquisition, analysis, and implementation of data in engineering, information science, medicine, and economics. Data acquisition involves observing digital data from real-world phenomena, while data analysis involves evaluating this data using information science. Data implementation then follows by developing innovative products and services using the analysis results. This Program will foster leaders in industrial technologies, rather than in basic sciences, who can generate effective data circulation to create positive social values. Students in the Program gain fundamental knowledge of real-world data circulation processes, the comprehensive understanding needed to recognize data circulation within various technologies that drive the world, and the skill to create new values. In addition, the Program provides practical experiences, such as research internships in industry or academia, while thesis work allows students to incorporate their experience and knowledge into a Ph.D. dissertation. Furthermore, students in this Program may be offered financial assistance.



**Number of Research Assistants**  
56 (FY2013) 54(FY2014)

**Number of Students who received a study grant**  
19 (150,000yen/month) (FY2014)  
32 (150,000yen/month) (FY2015)  
34 (150,000yen/month) (FY2016)  
9 (200,000yen/month) (FY2016)

**Women Leaders Program to Promote Well-being in Asia**

This program has been designed to address problems that must be solved in the Asian region, which consists of multicultural societies in various stages of development. These problems include poverty, diverse health problems, and gender gaps. With a focus on food, health, environment, social systems, and education, we aim to foster women leaders who can work in a global context to achieve well-being in Asia. Well-being refers to a situation in which the rights and personal fulfillment of individuals are guaranteed and to a state characterized by good physical, mental, social, and economic conditions. This program is jointly undertaken by four graduate schools: International Development, Education and Human Development, Medicine (including Health Sciences), and Bioagricultural Sciences, as well as the International Cooperation Center for Agricultural Education and the Office for Gender Equality.



**Number of Students**  
178 (FY2011) 218 (FY2012)  
246 (FY2013) 266 (FY2014)  
247 (FY2015) 229 (FY2016)

**Integrative Graduate Education and Research Program in Green Natural Sciences**

This program aims to find lasting solutions to problems relating to the environment and energy, through the development of green natural sciences. While improving the level of dissertations and research, doctoral students will cultivate their "scientific ability and social skills in order to look upon challenges from a broad perspective," as well as their "ability to extract practical results from fundamental research," and their "international experience in order to play an active role in the world" through internationalized education. Through this program, which stretches across science, engineering and bioagriculture, many students work together in competition and raise the ability of each other. The vision of this program is to foster human resources who have the courage and ingenuity to lead the development of green natural sciences. The students who graduate from this program will be able to contribute to the development of a sustainable society as leaders, and will take the environmental field to the next level.



**Number of Teaching Assistants**  
2 (FY2014) 1 (FY2015)  
1 (FY2016)

**Number of Research Assistants**  
1 (FY2014) 4 (FY2015)  
4 (FY2016)

**Number of Students who received a study grant**  
5 (200,000yen/month) (FY2012)  
11 (200,000yen/month) (FY2013)  
16 (200,000yen/month) (FY2014)  
17 (200,000yen/month) (FY2015)  
15 (200,000yen/month) (FY2016)

**The Program for Cross-Border Legal Institution Design**

This Program develops leaders who can organize international teams working on enterprises to plan and design legal institutions for cross-border transplantation. Transplanted institutions will form the foundations of social operations in various countries. The Program fosters networks of international leaders with a strong awareness of Asia through joint research on comparative law and comparative politics by Japanese and international students.



## - Five-Year Doctoral Programs for Training and Developing Future International Leaders -



Group Work during a Student Workshop Organized by Students

Field work in Cambodia for 1st year students



### Leadership Development Program for Space Exploration and Research

This program aims to expand the utilization of the space environment, the final frontier for humankind, by fostering world-class leaders who can integrate advanced technologies and knowledge with broad perspectives and utilize them in industries, and by creating a network of next-generation industry leaders who will expand the utilization of space technologies and infrastructures that improve people's daily lives. Our graduates will have broad visions and solid expertise, project planning, management and execution, problem-solving, and global communication skills. A flagship of this program is the ChubuSat instrument development projects, where teams of students with different sets of interests, skills and expertise develop instruments for the industry-academia microsatellite project, ChubuSat. Students can exercise their problem-solving and project management skills through the hands-on experience of instrument development. One of the projects proposed by our students was launched as ChubuSat-2 in February 2016.

**Number of Teaching Assistants**  
 3 (FY2013) 4 (FY2014)  
 11 (FY2015) 10 (FY2016)

**Number of Research Assistants**  
 44 (FY2012) 53 (FY2013)  
 15 (FY2014) 16 (FY2015)  
 14 (FY2016)

**Number of Students who received a study grant**  
 4 (200,000yen/month) (FY2013)  
 3 (170,000yen/month) (FY2013)  
 6 (200,000yen/month) (FY2014)  
 3 (170,000yen/month) (FY2014)  
 16 (150,000yen/month) (FY2014)  
 12 (85,000yen/month) (FY2014)  
 6 (200,000yen/month) (FY2015)  
 1 (170,000yen/month) (FY2015)  
 14 (150,000yen/month) (FY2015)  
 18 (85,000yen/month) (FY2015)  
 3 (200,000yen/month) (FY2016)  
 35 (150,000yen/month) (FY2016)



### PhD Professional: Gateway to Success in Frontier Asia

For Japan to regain its former vitality, it is essential to regenerate manufacturing industry by more expanding the operation into the global markets. Under these circumstances, this program aims to cultivate next-generation leaders who play active roles in developing and implementing new growth strategies by collaboration with Frontier Asia including Vietnam, Cambodia and Indonesia. Through the collaboration, we believe it is important for both parties to build win-win relationship while each party plays a respective role; namely Frontier Asia as production bases and Japan as expert and investor in technology. This program is intended to train young talents from all-round graduate schools (integration of arts and sciences) to become global leaders strengthening the ties between Japan and Frontier Asia.

**Number of Research Assistants**  
 92 (FY2012) 62 (FY2013)  
 23 (FY2014) 13 (FY2015)  
 6 (FY2016)

**Number of Students who received a study grant**  
 13 (200,000yen/month) (FY2013)  
 7 (85,000yen/month) (FY2013)  
 27 (200,000yen/month) (FY2014)  
 10 (85,000yen/month) (FY2014)  
 43 (200,000yen/month) (FY2015)  
 11 (85,000yen/month) (FY2015)  
 52 (200,000yen/month) (FY2015)  
 14 (85,000yen/month) (FY2016)

## Other International Programs

### International Development and Cooperation Course (Master/ Doctoral)

The program aims at equipping students with knowledge of a wide range of issues of developing countries. By imparting knowledge and understanding of the realities of the developing world, students will be equipped with skills to work in a variety of related professional fields. Drawing on Japanese development experience, it provides alternative perspectives which differ from the conventional development theories of the Western model.

### LL.M. (Comparative Law) and LL.D. (Comparative Law) Programs in Law and Political Science, Department of the Combined Graduate Program in Law and Political Science

In this program, a traditional curriculum in law and politics is complemented by social activities, student mentorship arrangements, and private and public sector internships. Students may take advantage of language instruction through the Education Center for International Students, annual participation in the Japan Inter-Collegiate Negotiation Competition, and a set of student-driven cross-national seminars (the Peer Support Initiative). The extended features of our environment supplement the academic program, creating additional opportunities for cross-border and cross-cultural teaching and learning.

### Young Leaders' Program (Master)

The Young Leaders' Program at Nagoya University is a one-year Master's degree course in Healthcare Administration. The Young Leaders' Program (YLP), which aims to foster the development of future national leaders in Asian and other countries, is one of the Japanese Government Scholarship Student systems and it should help form a network among national leaders, contributing to the establishment of friendly relationships and improved policy planning among Asian and other countries including Japan. (Not open for general admission)

### Nagoya University Global Environmental Leaders Program (Master/ Doctoral)

Nagoya University Global Environmental Leaders Program (NUGELP) aims to foster future environmental leaders who can propose concrete solutions to various environmental problems around the world, particularly in Asia and Africa. NUGELP is interdisciplinary and covers various research fields such as Civil Engineering, Environmental Systems Analysis, Transportation Planning, Land Use Planning, Architecture, Economics, and Policy Studies.

### Forefront Studies Program (Master/ Doctoral)

The objective of the Forefront Studies Program is to develop international civil engineers who have advanced expertise, ability to make comprehensive judgement and deployment capabilities for sustainable co-development of Japan and foreign countries in civil engineering field. This Program offers the financial aid of the Japanese Government Scholarship Program.

### Other International Programs (Graduate)

Programs	Affiliated Schools	Degree	
		Master's	Doctoral
International Development and Cooperation Course	• Graduate School of International Development	●	●
Department of the Combined Graduate Program in Law and Political Science LL. M. (Comparative Law) Program and LL.D.(Comparative Law)	• Graduate School of Law	●	●
Young Leaders' Program (YLP)	• Graduate School of Medicine	●	
Nagoya University Global Environmental Leaders Program (NUGELP)	• Graduate School of Environmental Studies • Graduate School of Engineering	●	●
Forefront Studies Program	• Graduate School of Environmental Studies • Graduate School of Engineering	●	●



## Promoting Gender Equality from Nagoya to the World!



1 University IMPACT Champions and Phumzile Mlambo-Ngcuka, UN Under-Secretary-General and Executive Director of UN Women 2 President Matsuo at the HeForShe seminar  
3 President Matsuo at the launch of the HeForShe University Parity Report

Nagoya University is famous for producing many Nobel Prize winning scientists. Nagoya University is also famous for its strong commitment to promoting gender equality. In response to the enactment of the Basic Law for a Gender-Equal Society in 1999, Nagoya University became the first Japanese university to establish a university-wide committee for promoting gender equality in 2002 and the Office for Gender Equality in 2003. Ever since, promoting gender equality has continued to be given high priority among Nagoya University's important goals.

As the first initiative of promoting gender equality, Nagoya University established two nursery schools and an after-school childcare facility on campus. Those facilities became symbols to demonstrate the university's strong determination to achieve gender equality. Following the initiative, Nagoya University has introduced many other innovational approaches to promoting gender equality and women's empowerment, such as women-only positions in natural sciences, women's leadership programs both for faculty members and graduate students, and industry-university-government cooperation for gender equality. As a result of various efforts to promote gender equality, the Nagoya University's gender equality model has diffused to not only Japanese universities but also many other Asian universities through its satellite offices and partnership network in Asia.

Today, Nagoya University is promoting gender equality globally. Nagoya University has been selected as one of the ten University IMPACT Champions by UN Women to support the HeForShe initiative, together with University of Oxford, University of Leicester, University of Hong Kong, Science Po, Georgetown University, Stony Brook University, University of Waterloo, University of São Paulo, and University of the Witwatersrand, Johannesburg. HeForShe is a solidarity movement for gender equality on a global scale, and engaging men in gender equality is a major objective.

As a HeForShe University IMPACT Champion, Nagoya University has made three commitments. The first commitment is to build a center for gender equality to serve as the

home for the gender equality movement. The second commitment is to drive parity from the top, increasing the representation of female faculty members and women in leadership positions to 20% by 2020. The third commitment is to work with the government and private sector to champion gender equality across Japan.

In September 2016, the first-ever HeForShe University Parity Report was launched on the sidelines of the 71st United Nations General Assembly in New York. Together with Emma Watson, UN Women Goodwill Ambassador and Phumzile Mlambo-Ngcuka, UN Under-Secretary-General and Executive Director of UN Women, Nagoya University President Matsuo and seven other presidents of University IMPACT Champions participated in the press conference. Ten University IMPACT Champions confirmed a common HeForShe commitment, "make campus safer" at the conference.

In order to implement our third HeForShe commitment (working with the government and private sector to promote gender equality), jointly with PwC Japan Group, Nagoya University organized a HeForShe seminar titled "the Promotion of Diversity and Women's Leadership" at Nagoya University on November 17, 2016. This first public HeForShe event in Japan ended with a great success, with more than 600 attendees from the central and local governments, private corporations, and universities, as well as students from all over Japan. Panel discussion session featured student representatives, corporate leaders, university leaders, and Ms. Haruno Shimada, first-ever female vice chair of the board of councilors at Keidanren (Japan Business Federation) and president and representative director of BT Japan, gave a keynote speech.

Gender Equality benefits not only women but also men. Thus, men's commitment is as equally as important as women. As one of the world's leading universities of promoting gender equality, Nagoya University will continue striving to be a frontrunner of gender equality not only in Japan but also in the world.





Nagoya Endoscopy Training Center



Center for Asian Legal Exchange (CALE)



International Cooperation Center for Agricultural Education (ICCAE)  
- A leading center for international cooperation in agricultural education -

## Nagoya Endoscopy Training Center



Training in Laos

Recent advances in health care have improved the rate of mortality from infectious disease in developing countries. On the other hand, mortality from all forms of malignant neoplasms, including gastrointestinal cancer, has become a major problem worldwide. Early diagnosis is critical in the treatment of gastrointestinal cancer, but there are many patients who do not receive the appropriate medical care because of a shortage of doctors who are qualified to perform a gastrointestinal endoscopy.

The training of doctors is an important step toward solving this problem. Japanese gastrointestinal endoscopy techniques and equipment are the most advanced in the world, making them indispensable for the early diagnosis and treatment of various digestive diseases. The "Nagoya Endoscopy Training Center" was opened at Hue University of Medicine and Pharmacy in Vietnam in September 2013. The purpose of this Center is to disseminate the endoscopic diagnosis and treatment techniques that have been developed by the Department of Gastroenterology and Hepatology in Nagoya University's Graduate School of Medicine to Asian countries. The Center boasts state-of-the-art endoscopy systems, and many young doctors have received instruction on the techniques of endoscopic diagnosis and treatment there as well as at Nagoya University itself. The doctors who studied at the Center have since provided the highest quality care in diagnosis and treatment using gastrointestinal endoscopy. The first step

in promoting the possibilities of the gastrointestinal endoscopy techniques originating in Japan to Asian countries and contributing to the improvement of their health care was completed. After Hue, the second Center was opened at Bach Mai Hospital in Hanoi, Vietnam in July 2014 and the third at Yangon General Hospital in Yangon, Myanmar in February 2015. In September 2015, through the cooperation between the Japanese Ministry of Health, Labour and Welfare and the Thai Department of Medical Services, the Early Cancer Detection Training Center was established within the National Cancer Institute in Bangkok, where a delegation from Nagoya University visited and contributed to the promotion of endoscopic skills acquisition by young Thai doctors. These training centers constitute an Asian network and accelerate the training process, contributing not only to daily practice but also to academic affairs in Asian countries. Using this network to support other countries in the Mekong region, we held three GI endoscopy workshops at Mahosot Hospital in Laos in January, May, and September of 2016, and two at Calmette Hospital in Cambodia in February and July of the same year.

The Nagoya Endoscopy Training Center, supported by the Department of Gastroenterology and Hepatology, is central to the treatment and diagnosis of digestive diseases and contributes to health care worldwide.



## Center for Asian Legal Exchange (CALE)



1 New building Asian Legal Exchange Plaza 2,3 2016 Summer Seminar 4 2016 Summer School



- Research and Education Center for Japanese Law**
- 1 Tashkent State University of Law, Uzbekistan (Est. Sep. 2005)
  - 2 National University of Mongolia, School of Law, Mongolia (Est. Sep. 2006)
  - 3 Hanoi Law University, Vietnam (Est. Sep. 2007)
  - 4 Royal University of Law and Economics, Cambodia (Est. Sep. 2008)
  - 5 Ho Chi Minh City University of Law, Vietnam (Est. Jan. 2012)
- Myanmar-Japan Legal Research Center**
- 6 University of Yangon, Myanmar (Est. Jun. 2013)
- Indonesia-Japan Legal Research and Education Center**
- 7 University of Gadjah Mada, Indonesia (Est. Jan. 2014)
- Laos-Japan Legal Research and Education Center**
- 8 National University of Laos, Laos (Est. Feb. 2014)

CALE was established in 2002 as a research base for Asian Law and a coordinating center for Japanese research and practice on legal assistance in Asia. It has been expanding its cooperation activities into several countries in Asia, and remains the only center within a Japanese university to be professionally involved with legal assistance research and implementation projects. The Center is committed to playing a major role in carrying out legal assistance projects centering on Asia, disclosing research outcomes related to those projects, disseminating research and legal information on countries in Asia, and expanding the network of specialists within this field.

The Center's legal assistance activities include cooperation with developing countries which are making the transition to a market economy, to assist them in promoting the necessary reform of their legal systems and enable them to achieve a working market economy, the rule of law, human rights, and democracy. Activities in the field include the following:

- Cooperating in the drafting of laws and promoting judicial system reform
- Cooperating in the consolidation of legal infrastructure such as the improvement of maintenance and access to legal and judicial information.
- Cooperating in human resources development in the judicial sector

### Establishment of centers for research and education in the field of law

Eight centers have been established jointly by Nagoya University and partner universities in seven Asian transitional countries – Uzbekistan, Mongolia, Vietnam, Cambodia, Myanmar, Indonesia, and Laos, where the Japanese government is implementing legal assistance projects, and where local legal experts with sufficient knowledge and understanding of Japanese law and language are becoming indispensable. Some of these centers provide law students in partner universities with knowledge of Japanese Law through the Japanese language, to foster experts who can contribute to their own country's legal development in the future by benefiting from Japanese knowledge and experience.

These centers are designed as a central point of dissemination of information about Japanese law, and as a hub for the collection and sharing of information about the laws of these countries. They are also aimed at facilitating research on both comparative and country-focused topics, and to coordinate joint research projects between academic and professional institutions of the two countries in order to enhance deeper mutual understanding between professionals and to promote expert knowledge on the law and society of these Asian countries.

## International Cooperation Center for Agricultural Education (ICCAE)

- A leading center for international cooperation in agricultural education -



A field survey to investigate agricultural activities in Kenya



Research on rice cultivation in Kenya



Interview to rice liquor producer by students



Traditional rice liquor production in Cambodia

The International Cooperation Center for Agricultural Education (ICCAE) is a research institute mandated to function as a leading center for international cooperation in agricultural education. It was established in April 1999, at Nagoya University, under the initiative of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan.

In developing countries, many problems related to agriculture (for example, food shortages, downturns in agricultural production, poverty, and environmental devastation) have yet to be solved by the international community. To solve these global-scale issues, it is important to develop appropriate agricultural technologies while paying careful attention to socioeconomic impact, effective use of natural resources, and respect for the environment. In both developing countries and Japan, the development of human resources is a pressing issue. In recent years, the need for international cooperation to overcome these problems and to facilitate human resources development has increased. Japan has been expected to work actively to resolve these issues.

To respond to such expectations, ICCAE was established by the MEXT of Japan at Nagoya University. ICCAE's goal is to become a leading center for international cooperation to help solve problems in agricultural and rural development in developing countries.





Japan-UK Research and Education Network for Knowledge Economy Initiatives (RENKEI)



MIRAI — Connecting Swedish and Japanese Universities through Research, Education and Innovation



Academic Consortium for the 21st Century (AC21)



Nagoya University around the Globe - International Liaison Offices and Bases -



Our Partner Institutions

## Japan - UK Research and Education Network for Knowledge Economy Initiatives (RENKEI)



1 RENKEI Workshop on Aerospace Engineering at Nagoya



2 RENKEI Workshop on Ageing Society at Liverpool

### RENKEI member universities

#### Japan

- Kyoto University
- Kyushu University
- Nagoya University
- Osaka University
- Ritsumeikan University
- Tohoku University

#### UK

- University of Bristol
- University of Leeds
- University of Liverpool
- Newcastle University
- University of Southampton
- University College London (UCL)

In March 2012, a consortium known as the "Research and Education Network for Knowledge Economy Initiatives (RENKEI)" was launched by six Japanese and six UK universities in order to promote multilateral collaboration involving academia, industry, government and even society through education and research between the two countries.

RENKEI member universities form Working Groups to plan and design the RENKEI Workshops.

Nagoya University held in 2014 a week-long RENKEI Workshop entitled "Japan-UK Joint Workshop on Aerospace Engineering", in collaboration with the University of Bristol and the University of Southampton. The Workshop, which drew 20 participants from Japan and the UK who were students and early-career researchers of the member institutions, was a great success with support from local industry and business leaders including Mitsubishi Heavy Industries, Ltd.

2016 saw a total of four RENKEI Workshops, all of which allowed participants to explore various approaches and perspectives in working on assignments together with other participants, including the Workshop organized by Bristol and Southampton as paired with Nagoya's 2014 Workshop, with more emphasis on building ties with industry.

## MIRAI — Connecting Swedish and Japanese Universities through Research, Education and Innovation



MIRAI Project Kick-off Meeting

The MIRAI Project is a three-year collaboration initiative between Japan and Sweden from 2017 to 2019 for the enhancement of collaborative research and the development of networks among young researchers, serving as an impetus for future continued cooperation in higher education between the two countries. Committed members include renowned universities from both countries.

In this scheme, MIRAI Seminars and Workshops are organized annually with the following three core themes: Sustainability, Materials Science, and Aging.



# Academic Consortium for the 21st Century (AC21)



1 AC21 members 2 AC21 General Assembly 3 Guided tour at Technische Universität Chemnitz



## Towards "The Global University — Architect of the New Century"

The Academic Consortium for the 21st Century (AC21) was established in 2002, at the initiative of Nagoya University, with the aim of founding a new and vigorous global partnership in higher education. Over the fourteen years of its history, the AC21 network has steadily grown, currently with 19 member universities from 11 countries spanning five continents. With the ambitious vision "The Global University — Architect of the New Century", the Consortium has conducted an array of initiatives and programs through which the member institutions can develop and contribute to addressing global issues of the 21st century.



### AC21 Activities

As a dynamic consortium, AC21 supports its mission and fosters collaboration amongst members through the following programs and activities:

#### ☑ Collaboration in Research & Education

##### —International Forums (IF)

Held every two years, International Forums provide members with the opportunity to reassess the role of higher education in society through keynote addresses by prominent public figures, presentations and panel discussions.

##### —Special Project Fund (SPF)

The AC21 Special Project Fund, launched in 2009, endeavors to promote research and educational exchanges between member institutions.

#### ☑ Initiatives for Students

##### —Student World Forums (SWF)

Student World Forums are conferences at which students from member institutions are invited to exchange ideas on issues of international concern. The SWF facilitates international friendship, encourages students to develop a global mindset and strengthens the AC21 network.

##### —International Graduate Schools (IGS)

While SWFs target mainly undergraduate students, a new program was launched in 2013 in order to inspire graduate students of member institutions. Lectures in the IGS are offered by leading scholars with outstanding credentials in their respective fields.

#### ☑ Industry-Academia-Government Collaboration

Taking advantage of its international network, the AC21 seeks to facilitate collaboration between academia, industry and government at the global level.

### AC21 Member Institutions

As of February 2016



#### Australia

- The University of Adelaide



#### China

- Jilin University
- Nanjing University
- Northeastern University
- Peking University
- Shanghai Jiao Tong University
- Tongji University



#### France

- University of Strasbourg



#### Germany

- Technische Universität Chemnitz
- University of Freiburg



#### Indonesia

- Gadjah Mada University



#### Japan

- Nagoya University



#### Laos

- National University of Laos



#### New Zealand

- University of Canterbury



#### South Africa

- Stellenbosch University



#### Thailand

- Chulalongkorn University
- Kasetsart University



#### USA

- North Carolina State University
- University of Minnesota

## 8th AC21 International Forum 2016 Embedded with 14th AC21 Steering Committee (STC) Meeting and 8th General Assembly (GA) Held in Chemnitz, Germany

Under the theme "Networks of Innovation for the Transformation of Society through Science", the AC21 IF 2016 was organized by the Technische Universität Chemnitz from April 30 to May 3, 2016, with more than 100 attendees mainly composed of university researchers and professionals from industry.

In the panel discussions and sessions, many ideas were presented and participants discussed how to foster innovation through a linkage between basic and applied research or between academia, industry and civil society. As an academic consortium is an example of a linkage or network, representatives of AC21 members led a panel, too, in order to share perspectives towards bringing the Consortium to the next level.

The four days ended as a success, with various networks being built, personally or institutionally, among the participants.

AC21 members also gathered and exchanged opinions at the AC21 STC Meeting and GA held at Chemnitz on April 30 and May 3, respectively. These two meetings serve as a decision making body for the organization, during which delegates from AC21 member universities discuss strategies and plans that enhance the AC21 activities.

Among agenda items discussed at these gatherings at Chemnitz were new STC members, hosts for the 2019 and 2020 events and the potential for beginning new initiatives, such as student mobility and staff exchange.

The AC21 continues to develop by launching new initiatives with cooperation from its members and beyond.









# Nagoya University around the Globe

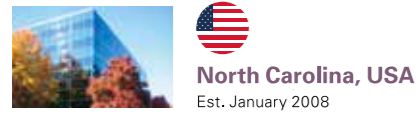
## - International Liaison Offices and Bases -

### ● International Liaison Offices



-  **China Center for International Exchange**  
(Shanghai, China): Est. November 2005-①
-  **Uzbekistan Office**  
(Tashkent, Uzbekistan): Est. November 2009-②
-  **European Center**  
(Freiburg, Germany): Est. April 2010-③
-  **Bangkok Office**  
(Bangkok, Thailand): Est. April 2014-④
-  **Mongolia Office**  
(Ulaanbaatar, Mongolia): Est. October 2014-⑤
-  **Vietnam Office**  
(Hanoi, Vietnam): Est. October 2014
-  **Cambodia Office**  
(Phnom Penh, Cambodia): Est. October 2014
-  **Laos Office**  
(Vientiane, Laos): Est. October 2015-⑥
-  **Philippine Office**  
(Los Banos, Philippine): Est. November 2015

### ● Technology Partnership of Nagoya University Inc.



 **North Carolina, USA**  
Est. January 2008

### ● Field Research Center



 **Ulaanbaatar, Mongolia**  
Est. September 2009

### ● Nagoya Endoscopy Training Center (refer to: P30)



-  **Hue, Vietnam**  
Est. September 2013-①
-  **Hanoi, Vietnam**  
Est. July 2014-②
-  **Yangon, Myanmar**  
Est. February 2015-③

### ● Asian Satellite Campuses (refer to: P17)



-  **Phnom Penh, Cambodia**  
Est. August 2014-①
-  **Tashkent, Uzbekistan**  
Est. April 2015
-  **Ulaanbaatar, Mongolia**  
Est. August 2014
-  **Vientiane, Laos**  
Est. October 2015
-  **Hanoi, Vietnam**  
Est. August 2014-②
-  **Los Banos, Philippine**  
Est. November 2015-③

In order to establish a world presence to develop true research excellence, Nagoya University has international liaison offices, research and education bases and a technology transfer office around the world. These stations are strategically positioned to recruit top-level students and teaching staff, organize academic exchanges, host workshops, interact with world-level researchers, learn about different countries' education systems, and promote Nagoya University around the globe.

### ● Nagoya University/Mongolian National University of Education Joint Support Center for Child Development



**Ulaanbaatar, Mongolia**  
Est. September 2016

### ● The Cooperative Center for Resilience Research, National University of Mongolia and Nagoya University



**Ulaanbaatar, Mongolia**  
Est. February 2016



### ● Centers for research and education in the field of law (refer to: P31 CALE)

<http://cjl.law.nagoya-u.ac.jp/content/en/>



-  **Tashkent, Uzbekistan**  
Est. Sep. 2005
-  **Ulaanbaatar, Mongolia**  
Est. Sep. 2006
-  **Hanoi, Vietnam**  
Est. Sep. 2007
-  **Phnom Penh, Cambodia**  
Est. Sep. 2008
-  **Ho Chi Minh City, Vietnam**  
Est. Jan. 2012
-  **Yangon, Myanmar**  
Est. Jun. 2013-①
-  **Yogyakarta, Indonesia**  
Est. Jan. 2014-②
-  **Vientiane, Laos**  
Est. Feb. 2014-③



# Our Partner Institutions

As of Dec. 1, 2016

## Academic Exchange Agreements

- Inter-University Agreement
- Inter-School Agreement

### Asia

#### BANGLADESH

- Bangladesh Agricultural University
- Bangladesh University of Engineering & Technology, Department of Physics
- University of Dhaka, Faculty of Social Sciences
- SAARC Meteorological Research Centre

#### BHUTAN

- The Centre for Bhutan Studies

#### CAMBODIA

- Royal University of Phnom Penh
- Royal University of Agriculture
- Royal University of Law and Economics

#### CHINA

- Nanjing University
- Jilin University
- Huazhong University of Science and Technology
- Tsinghua University
- Fudan University
- Xi'an Jiaotong University
- Zhejiang University
- Shanghai Jiao Tong University
- Tongji University
- Northeastern University
- Peking University
- Harbin Institute of Technology
- University of Science and Technology of China
- Chinese Academy of Sciences, the Shanghai Institute of Organic Chemistry
- The Chinese University of Hong Kong
- The University of Hong Kong
- Dalian University of Technology
- Central South University
- Beijing University of Technology
- Chinese Academy of Sciences, Purple Mountain Observatory
- Chinese Academy of Sciences, National Astronomical Observatories
- China University of Political Science and Law
- East China Normal University, Faculty of Education Sciences
- Chinese Academy of Social Sciences, Institute of Literature and Institute of Literature of National Minorities
- Peking University, School of International Studies
- East China University of Political Science and Law
- Chinese Academy of Sciences, Institute of High Energy Physics
- Beijing International Studies University
- Nanjing University of Aeronautics and Astronautics
- Jiangsu Provincial Academy of Social Sciences (JSASS)
- Chinese Academy of Sciences, Institute of Process Engineering
- Polar Research Institute of China
- Southwest Jiaotong University, School of Economics and Management

- Beijing Institute of Technology, School of Management and Economics
- Chinese Academy of Sciences, Research Center for Eco-Environmental Sciences
- Tianjin University, School of Management and School of Public Administration
- Chinese Academy of Social Sciences, Institute of Population and Labor Economics
- University of International Business and Economics, School of International Trade & Economics
- Chinese Academy of Sciences, Xinjiang Institute of Ecology and Geography
- Chinese Academy of Sciences, Shanghai Institute of Ceramics
- China Meteorological Administration, Institute of Desert Meteorology
- Hainan University, Law School
- The Hong Kong University of Science and Technology, School of Engineering
- Renmin University of China, School of Law
- Shenyang University of Technology
- Sun Yat-sen University, Lingnan College
- Ministry of Health, P.R.China, China-Japan Friendship Hospital
- Beijing Normal University, Academy of Disaster Reduction and Emergency Management, State Key Laboratory of Earth Surface Processes and Resource Ecology
- Xiamen University, School of Law
- Chinese Academy of Sciences, Institute of Theoretical Physics
- Chinese Academy of Sciences, Institute of Geographic Sciences and Natural Resources Research
- Nanjing Normal University, School of Energy & Mechanical Engineering
- Donghua University, College of Foreign Languages
- Shanghai International Studies University, School of Japanese Studies and School of Chinese Studies and Exchange
- Beijing Normal University, Faculty of Education
- Institute of Science and Technology for Development of Shandong (ISTD)
- Xi'an International Studies University, School of Japanese Culture and Economy
- Tianjin University, School of Architecture
- Renmin University of China, School of Foreign Languages

#### INDIA

- University of Pune
- Indian Institute of Science, Bangalore
- Tata Institute of Fundamental Research
- Tata Institute of Fundamental Research, Natural Sciences Faculty
- Indian Institute of Technology Madras
- Indian Institute of Technology Delhi

#### INDONESIA

- Gadjah Mada University
- The State University of Surabaya
- Institute of Technology Bandung
- Indonesian National Institute of Aeronautics and Space
- Padjadjaran University, Faculty of Letters
- Syiah Kuala University, Faculty of Basic Science
- Diponegoro University, Pusat Studi Asia

- Agency for the Assessment and Application of Technology (BPPT), Center for the Assessment and Application of Environmental Technology
- University of Indonesia, Faculty of Engineering
- University of Indonesia, Faculty of Computer Science
- Sepuluh Nopember Institute of Technology
- Sriwijaya University, Faculty of Agriculture
- Universitas Halu Oleo

#### REPUBLIC OF KOREA

- Mokpo National University
- Gyeongsang National University
- Ewha Womans University
- Hanyang University
- Korea University
- Seoul National University
- Kyung Hee University
- Yonsei University
- Sungkyunkwan University
- Pohang University of Science and Technology
- Korea Advanced Institute of Science and Technology (KAIST)
- Korea Maritime and Ocean University
- Korean Research Institute of Standards and Science, Astronomy Observatory
- Chungnam National University, College of Economics and Business Administration
- Korea University, College of Education
- Korea Institute for Advanced Study, School of Mathematics
- Seoul National University, College of Law
- Kyungnam University, Industry Academic Cooperation Foundation
- Korea Legislation Research Institute
- Pukyong National University, College of Fisheries Sciences
- Pusan National University, College of Engineering
- Hankuk University of Foreign Studies, Graduate School and Graduate School of International Area Studies
- Chonnam National University, College of Business Administration
- University of Seoul, College of Public Affairs and Economics
- Chonbuk National University, Institute for North-East Asian Law
- Korea Institute of Geoscience and Mineral Resources, Geologic Environment Research Division
- Kyungpook National University, Faculty of Engineering
- Institute of Sunchang Fermented Soybean Products
- Korea Institute of Geoscience and Mineral Resources, Geologic Environment Research Division
- Seoul National University Hospital
- Korean Space Weather Center
- ASAN Medical Center
- Dong-A University, College of Natural Resources and Life Science
- Korea Aerospace University, College of Engineering, Department of Materials Science, Center of Surface Technology and Applications
- Pusan National University, Professional Graduate School of Law
- Korea Institute of Ocean Science and Technology, Korea Ocean Satellite Center
- Chungnam National University, College of Agriculture and Life Sciences
- Seoul National University Asia-Pacific Law Institute
- Chonnam National University, Automobile Research Center, School of Mechanical Engineering

#### LAOS

- National University of Laos
- National Agriculture and Forestry Research Institute
- Champasack University

#### MALAYSIA

- MARA University of Technology, Faculty of Mechanical Engineering
- Universiti Putra Malaysia, Faculty of Science

#### MONGOLIA

- National University of Mongolia
- Mongolian University of Science and Technology
- Ministry of Health and Sports, Mongolia
- Mongolian National University of Medical Sciences
- Mineral Resources and Petroleum Authority of Mongolia, Geological Information Center
- National Legal Center of Mongolia
- Mongolian University of Science and Technology, School of Geology and Petroleum Engineering
- Mongolian Academy of Sciences, Institute of Geography
- Mongolian Academy of Sciences, Institute of Philosophy, Sociology and Law
- Institute of Meteorology, Hydrology and Environment, Mongolia
- Mongolian National University of Education

#### MYANMAR

- University of Yangon
- The University of Medicine 1, Yangon

#### NEPAL

- Kathmandu University, School of Science

#### PHILIPPINES

- University of the Philippines, Los Baños
- University of the Philippines
- University of the Philippines, Diliman
- University of the Philippines, Manila, UP College of Nursing
- Gokongwei College of Engineering, De La Salle University

#### SINGAPORE

- National University of Singapore, Yong Loo Lin School of Medicine, Alice Lee Centre for Nursing Studies
- National University of Singapore, NUS Business School
- National University of Singapore, Office of Safety, Health & Environment
- National University of Singapore, Center for Quantum Technologies

#### SRI LANKA

- University of Sri Jayewardanapura, Faculty of Humanities and Social Sciences

#### THAILAND

- Kasetsart University
- Chulalongkorn University
- Chulabhorn Research Institute/Chulabhorn Graduate Institute
- Rajamangala University of Technology Thanyaburi
- Bangkok Dusit Medical Services Public Company Limited

- King Mongkut's University of Technology North Bangkok, Science and Technology Research Institute
- Thammasat University, Faculty of Economics
- Mahidol University, ASEAN Institute for Health Development
- Chiang Mai University, Faculty of Economics
- Mahidol University, Faculty of Medicine Ramathibodi Hospital

#### VIETNAM

- Hanoi University of Science and Technology
- Vietnam National University, Hanoi
- The Ministry of Justice of the Socialist Republic of Viet Nam
- Vietnam Institute of State and Law
- Hanoi Law University
- Ho Chi Minh City University of Law
- Vietnamese Academy of Science and Technology, Ho Chi Minh City Institute of Resources Geography
- Vietnam National University- Ho Chi Minh City, University of Science, Faculty of Environmental Science
- Foreign Trade University
- Hue University of Medicine and Pharmacy
- Vietnam Academy of Science and Technology, Institute of Mathematics
- University Medical Center, Ho Chi Minh City

#### TAIWAN

- National Taiwan University
- National Chengchi University
- National Tsing Hua University
- National Chung Cheng University
- National Chengchi University, College of Law
- National Taiwan Normal University, College of Education
- Soochow University, School of Law
- Soochow University, School of Foreign Languages and Cultures
- National Taiwan University, Department of Atmospheric Sciences
- Taiwan Ocean Research Institute
- National Chiao Tung University, College of Electrical and Computer Engineering
- National Chung Cheng University, Center for International Affairs and Exchange

### Pacific

#### AUSTRALIA

- University of Sydney
- Monash University
- Flinders University
- University of South Australia
- The University of Adelaide
- The Australian National University
- The University of Western Australia
- The University of Melbourne, Asian Law Centre
- Commonwealth Scientific and Industrial Research Organization, Division of Ecosystem Sciences (CSIRO)
- The University of Adelaide, Faculty of Health Sciences

#### NEW ZEALAND

- National Institute of Water and Atmospheric Research
- University of Auckland, Center for Geophysical Research
- University of Canterbury, Faculty of Science

### Europe

#### ARMENIA

- Yerevan Physics Institute

#### AUSTRIA

- University of Innsbruck
- Johannes Kepler University Linz, Faculty of Law
- The Medical University of Vienna
- FH JOANNEUM Gesellschaft mbH University of Applied Sciences
- Universität Klagenfurt, Institute of Social Ecology, Faculty for Interdisciplinary Studies

#### BELGIUM

- KU Leuven

#### BULGARIA

- Sofia University, Department of Astronomy
- Bulgarian Academy of Sciences, Institute of Electronics and Space Research Institute, Space Astronomy Division
- Bulgarian Academy of Sciences, Institute of Mathematics

#### DENMARK

- University of Copenhagen
- Aarhus University

#### FINLAND

- Finnish Meteorological Institute, Department of Geophysics

#### FRANCE

- Ecole Nationale des Ponts et Chaussées (ENPC)
- Université Paris Diderot-Paris 7
- Université Jean Moulin-Lyon 3
- Université de Grenoble\*
- Université Paris-Est
- Université de Strasbourg
- École Normale Supérieure de Lyon
- Fondation Maison des Sciences de l'Homme
- Aix-Marseille Université
- Université Stendhal (Université de Grenoble 3)
- Université de Paris-Sorbonne, Paris 4
- Université Panthéon Assas, Paris 2
- École Nationale Supérieure d'Architecture Paris Val-de-Seine
- Université de Technologie de Belfort-Montbéliard

\* Université de Grenoble represents Université Joseph Fourier (Grenoble 1), Université Pierre Mendès France (Grenoble 2), Université Stendhal (Grenoble 3), Institut d'Études Politiques de Grenoble, Institut Polytechnique de Grenoble, Université Savoie Mont Blanc.

#### GERMANY

- Technische Universität Braunschweig
- Technische Universität München
- Technische Universität Chemnitz
- University of Freiburg
- RWTH Aachen
- University of Freiburg, Faculty of Economics and Behavioral Sciences
- University of Cologne, I Physical Institute
- Johannes Gutenberg University Mainz, Faculty of Chemistry, Pharmaceutical Sciences and Geoscience



- o German Aerospace Center, Institute of Aerospace Medicine
- o University of Ulm, Faculty of Mathematics and Economics
- o University of Freiburg, Faculty of Medicine
- o University of Regensburg, Faculty of Law
- o University of Münster, Faculty of Chemistry and Pharmacy
- o Ruhr-Universität Bochum, Faculty of Physics and Astronomy and Faculty of Electrical Engineering and Information Technology
- o Technische Universität Kaiserslautern, Faculty of Architecture, Spatial and Environmental Planning and Civil Engineering
- o Freie Universität Berlin, Environmental Policy Research Centre
- o The Research Center for Eastern and South Eastern Europe in Regensburg, Institute for East European Law
- o Technische Universität Darmstadt, Department of Civil Engineering and Geodesy
- o Ruhr Universität Bochum, Faculty of Mathematics
- o University of Duisburg-Essen, Institute of East Asian Studies
- o Fraunhofer Institute for Chemical Technology ICT, Fraunhofer-Gesellschaft
- o CFK Valley Stade e.V.
- o EBS Law School
- o Johannes Gutenberg University Mainz, Faculty of Physics, Mathematics and Computer Science
- o Leibniz Institute of Ecological Urban and Regional Development

## HUNGARY

- o Hungarian Academy of Sciences, Institute for Legal Studies

## ICELAND

- University of Iceland

## ITALY

- National Institute of Nuclear Physics (INFN)
- University of Catania
- University of Bologna
- Sapienza University of Rome
- o University of Padova, Department of Information Engineering

## KAZAKHSTAN

- o Kazakh Humanitarian and Law University
- o Legislation Research Institute, Republic of Kazakhstan

## LATVIA

- o Latvian State University

## NORWAY

- University of Oslo
- o University of Tromso, Faculty of Science

## POLAND

- University of Warsaw
- Institute of High Pressure Physics (UNIPRESS), Polich Academy of Sciences
- o Medical University of Gdańsk
- o Warsaw University of Technology
- o Polish Academy of Sciences, Institute of Geological Sciences, Krakow Research Centre

## RUSSIA

- Ioffe Institute
- Rzhanov Institute of Semiconductor Physics Siberian Branch of Russian Academy of Sciences
- o Institute of Theoretical and Experimental Physics
- o Ministry of Health of Russia, Institute of Biomedical Problems
- o Lomonosov Moscow State University, Faculty of Physics
- o Moscow State Engineering and Physics Institute (Technical University-MEPH)
- o Russian Academy of Sciences, Institute of Computer Aided Design

- o Russian Academy of Sciences, Far Eastern Branch, Institute of Cosmophysical Research and Radiowave Propagation (IKIR)
- o Russian Academy of Sciences, Siberian Branch, Institute of Solar-Terrestrial Physics (ISTP)
- o M.V. Lomonosov Moscow State University, Department of Chemistry
- o Russian Academy of Sciences, Siberian Branch, YuG. Shafer Institute of Cosmophysical Research and Aeronomy (IKFIA)

## SPAIN

- University of Barcelona
- o Institute of Space Studies of Catalonia (IEEC)

## SWEDEN

- Uppsala University
- Royal Institute of Technology
- o Swedish Institute of Space Physics
- o Lund University, Faculty of Law
- o SAFER - Vehicle and Traffic Safety Centre at Chalmers
- o Lund University, Faculty of Medicine

## SWITZERLAND

- University of Geneva
- o University of Bern, Interdisciplinary Center for General Ecology (IKAOe)

## U.K.

- The University of Sheffield
- The University of Warwick
- University of Bristol
- University of London, School of Oriental and African Studies (SOAS)
- The University of Leeds
- The University of Edinburgh
- University of Cambridge, St John's College
- o The University of Nottingham, School of Biosciences
- o University of East Anglia, Faculty of Social Sciences, School of International Development
- o The University of Manchester, Faculty of Life Sciences
- o University of Leicester, Department of Physics and Astronomy
- o The University of Oxford, Department of Physics
- o The University of Manchester, School of Environment & Development
- o The University of Warwick
- o The University of Edinburgh, College of Science & Engineering, School of Chemistry
- o The University of Edinburgh, Higgs Centre for Theoretical Physics

## UKRAINE

- o Ukrainian Academy of Sciences, Institute of Theoretical Physics

## UZBEKISTAN

- Tashkent State University of Law (TSUL)
- University of World Economy and Diplomacy
- Tashkent State Technical University named after Abu Raykhan Beruniy
- The Academy of Public Administration under the President of the Republic of Uzbekistan
- Samarkand State University

## North America

### CANADA

- York University
- University of Toronto, the Faculty of Arts and Science
- Université de Montréal
- University of Alberta

- University of Ottawa
- University of Calgary
- o Carleton University, Faculty of Science
- o University of Toronto, Ontario Institute for Studies in Education (OISE)
- o University of Victoria, Centre for Asia-Pacific Initiatives

## USA

- Oberlin College
- North Carolina State University
- Harvard-Yenching Institute
- University of Cincinnati
- St. Olaf College
- Southern Illinois University, Carbondale
- University of Illinois at Urbana-Champaign
- New York University
- University of Kentucky
- University of Minnesota
- University of California, Los Angeles
- The University of North Carolina at Chapel Hill
- University of California, Davis
- University of California, Berkeley
- University of Florida
- Iowa State University
- o University of Michigan, College of Engineering
- o University of California, Los Angeles, Department of Education
- o University of Houston, Cullen College of Engineering
- o University of California, Berkeley, Department of Physics
- o University of North Carolina at Chapel Hill, School of Medicine
- o University of California Berkeley, College of Natural Resources
- o University of Alaska Fairbanks, Geophysical Institute
- o National Oceanic and Atmospheric Administration, Space Environment Laboratory
- o National Oceanic and Atmospheric Administration, National Geophysical Data Center
- o Massachusetts Institute of Technology, Haystack Observatory
- o Harvard Medical School
- o Tulane University, School of Medicine
- o University of Pennsylvania, School of Medicine
- o University of California, San Diego, Center for Astrophysics and Space Sciences
- o Colorado School of Mines
- o University of Alaska Fairbanks, Geophysical Institute
- o Duke University, School of Medicine
- o Johns Hopkins University, School of Medicine
- o University of Wisconsin Law School
- o University of Wisconsin Law School, East Asian Legal Studies Center
- o University of Maryland, Department of Mechanical Engineering
- o University of Washington, Genetically Engineered Materials Science and Engineering Center
- o University of California, Los Angeles, California NanoSystems Institute
- o Northwestern University, Materials Research Institute
- o University of California, Berkeley, Center for Global Metropolitan Studies
- o Michigan State University, Department of Physics and Astronomy
- o Green Mountain College
- o University of California, Santa Barbara, Bren School of Environmental Science and Management
- o University of Michigan, College of Literature, Science, and the Arts, Department of Chemistry
- o University of Michigan, College of Engineering, Macromolecular Science and Engineering Center
- o University of Pittsburgh, School of Education

- o Ohio State University, Center for Cosmology and AstroParticle Physics; College of Arts and Sciences, Department of Physics and Department of Astronomy
- o University of Colorado Boulder, Laboratory for Atmospheric and Space Physics
- o Virginia Polytechnic Institute and State University, Center for Space Science and Engineering Research
- o University of Washington, College of Engineering
- o Ohio State University, College of Education and Human Ecology
- o The University of Akron, School of Law

## Latin America and the Caribbean

### ARGENTINE

- o National University of Rosario, Faculty of Biochemical and Pharmaceutical Sciences
- o Luis F. Leloir, Campomar Foundation, The Research Institute of Biochemistry

### BOLIVIA

- o Universidad Mayor de San Andres, La Paz, Faculty of Sciences, Chacaltaya Cosmic Ray Observatory

### BRAZIL

- Universidade de Brasília
- Universidade de São Paulo
- o National Institute for Space Research
- o Fundacao Joaquim Nabuco

### GUATEMALA

- o Del Valle de Guatemala University, School of Engineering

### MEXICO

- Universidad Nacional Autonoma de Mexico
- o Universidad de Sonora

## Middle East

### IRAN

- o University of Kurudistan, Faculty of Engineering

### TURKEY

- Bilkent University
- o Istanbul Technical University

## Africa

### EGYPT

- Cairo University
- o Tanta University, Faculty of Engineering

### GHANA

- o University of Ghana, Faculty of Social Studies

### KENYA

- University of Nairobi
- o African Institute for Capacity Development (AICAD)

### SOUTH AFRICA

- Stellenbosch University
- o South African Astronomical Observatory
- o The Human Sciences Research Council (HSRC)

## International Organization

- Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA)
- European Organization for Nuclear Research (CERN)
- United Nations Centre for Regional Development (UNCRD)
- o International Institute for the Unification of Private Law

## Multilateral

- Chulalongkorn University (Thailand); Hanoi University of Science and Technology (Vietnam) and National University of Laos (Laos)
- Tashkent State Technical University named after Abu Raykhan Beruniy (Uzbekistan); University of Tsukuba (Japan)
- o The University of Adelaide, Faculty of Health Sciences (Australia); University of Freiburg, Faculty of Medicine (Germany)

## Agreements for Industry-University Collaboration

## Europe

### U.K.

- University of Warwick
- o NCC Operations Ltd. as legal entity for the University of Bristol National Composites Centre

## North America

### USA

- North Carolina State University

## Multilateral

- Mongolian University of Science and Technology (Mongolia); University of Toyama (Japan); Japan Geocommunications Co. Ltd. (Japan)
- o Pôle EMC2 (France); IRT Jules Verne (France); Gifu University, Composite Materials Center (Japan); Kanazawa Institute of Technology, Innovative Composite Materials Research and Development Center (Japan)

## Agreement for International Joint Research

## Asia

### REPUBLIC OF KOREA

- Sungkyunkwan University, Center for Advanced Plasma Surface Technology

## Agreements for Internship

## International Organization

- o The United Nations Educational Scientific and Cultural Organization, Asia and the Pacific Regional Bureau for Education (UNESCO Bangkok)
- o The International Organization for Migration (IOM)

## Memorandum of Understanding on the Establishment of the Office

## Asia

### THAILAND

- o Chulalongkorn University, Research Services Center of Petroleum and Petrochemical College

## International Networks

- Academic Consortium 21 (AC21)
- University Mobility in Asia and the Pacific (UMAP)
- Open Education Consortium
- Japan-Canada Academic Consortium
- Japan-UK Research and Education Network for Knowledge Economy Initiatives (RENKEI)

## Overseas Research and Education Bases

- China Center for International Exchange (Shanghai, China)
- Uzbekistan Office (Tashkent, Uzbekistan)
- European Center (Freiburg, Germany)
- Bangkok Office (Bangkok, Thailand)
- Mongolia Office (Ulaanbaatar, Mongolia)
- Vietnam Office (Hanoi, Vietnam)
- Cambodia Office (Phnom Penh, Cambodia)
- Laos Office (Vientiane, Laos)
- Philippine Office (Los Banos)
- Technology Partnership, Inc. (North Carolina, USA)
- Centers for research and education in the field of law (Tashkent, Uzbekistan • Ulaanbaatar, Mongolia • Hanoi/Ho Chi Minh City, Vietnam • Phnom Penh, Cambodia • Yangon, Myanmar • Yogyakarta, Indonesia • Vientiane, Laos)
- Field Research Center (Ulaanbaatar, Mongolia)
- Nagoya Endoscopy Training Center (Hue/Hanoi, Vietnam • Yangon, Myanmar)
- Asian Satellite Campuses (Phnom Penh, Cambodia/Ulaanbaatar, Mongolia/Hanoi, Vietnam/Tashkent, Uzbekistan/Vientiane, Laos/Los Banos, Philippines)
- Nagoya University/Mongolian National University of Education Joint Support Center for Child Development (Ulaanbaatar, Mongolia)
- The Cooperative Center for Resilience Research, National University of Mongolia and Nagoya University (Ulaanbaatar, Mongolia)





## Organizational Structure



\*English names for the above organizations are tentative.



# Figures

## Staff

As of May 1, 2016

Members of the Board of Trustees			
President	1		
Trustees	7		
Auditors	2		
<b>Total</b>	<b>10</b>		
Staff (Full-time)			
Faculty			
Professors	652	(63)*1	
Associate Professors	498	(112)	
Lecturers	159	(109)	
Assistant Professors	392	(336)	
Research Associates	3		
Researchers	0	(174)	
Specialist	3	(1)	
University Research Administrator	0	(36)	
School Teachers at Affiliated Schools	39		
Administrative / Technical Staff*2	2,111	(180)	
<b>Total</b>	<b>3,857</b>	<b>(1,011)</b>	

\*1 Data in parenthesis show the number of staff under limited-time contracts.

\*2 Data include medical staff of the University Hospital.

## International Students by School

FY2015

School / Graduate School	
Letters	175
Education	84
Law	300
Economics	163
Informatics and Sciences	33
Science	130
Medicine	171
Engineering	517
Agricultural Sciences	119
International Development	265
Mathematics	13
Languages and Cultures	152
Environmental Studies	139
Information Science	64
Pharmaceutical Sciences	1
Environmental Medicine	2
Research Center of Health, Physical Fitness and Sports	2
International Education & Exchange Center	4
International Language Center	83
<b>Total</b>	<b>2,417</b>

## Student Enrollment

As of May 1, 2016

Name of Schools / Graduate Schools	Undergraduate Courses		Graduate Courses		Total
	Degree seeking	Non-degree seeking	Degree seeking	Non-degree seeking	
Letters	601	50	260	9	920
Education	315	26	242	19	602
Law	684	27	257	71	1,039
Economics	940	20	126	8	1,094
Informatics and Sciences	371	8	-	-	379
Science	1,213	23	575	8	1,819
Medicine	1,556	49	1,002	29	2,636
Engineering	3,416	45	1,627	26	5,114
Agricultural Sciences	748	4	419	5	1,176
International Development	-	-	282	17	299
Mathematics	-	-	162	6	168
Languages and Cultures	-	-	199	35	234
Environmental Studies	-	-	419	13	432
Information Science	-	-	352	14	366
Pharmaceutical Sciences	-	-	85	1	86
Human Informatics	-	-	1	-	1
International Language Center	-	42	-	-	42
Research Institute of Environmental Medicine	-	1	-	-	1
Institute for Space-Earth Environmental Research	-	3	-	-	3
Research Center of Health, Physical Fitness and Sports	-	2	-	-	2
<b>Total</b>	<b>9,844</b>	<b>300</b>	<b>6,008</b>	<b>261</b>	<b>16,413</b>

# International Exchange

## International Students by Country / Region

<b>Asia</b>	Bangladesh	28
	Bhutan	5
	Cambodia	86
	China	955
	East Timor	2
	India	28
	Indonesia	95
	Republic of Korea	205
	Laos	12
	Malaysia	60
	Mongolia	45
	Myanmar	23
	Nepal	11
	Pakistan	2
	Philippines	31
	Singapore	21
	Sri Lanka	12
	Taiwan	59
	Thailand	125
	Vietnam	114
<b>Subtotal</b>	<b>1,919</b>	
<b>Pacific</b>	Australia	22
	New Zealand	2
	Papua New Guinea	1
<b>Subtotal</b>	<b>25</b>	
<b>Europe</b>	Armenia	2
	Austria	2
	Azerbaijan	1
	Bulgaria	2
	Czech Republic	2
	Denmark	1
	Estonia	2
	Finland	1
	France	33
	Germany	38
	Greece	3

<b>North America</b>	Hungary	4
	Italy	8
	Kazakhstan	5
	Kyrgyz Republic	2
	Latvia	1
	Netherlands	2
	Norway	2
	Poland	8
	Romania	3
	Russia	4
	Slovak Republic	3
	Spain	5
	Sweden	10
Switzerland	4	
Tajikistan	1	
U.K.	22	
Ukraine	1	
Uzbekistan	37	
<b>Subtotal</b>	<b>209</b>	
<b>Latin America and the Caribbean</b>	Canada	10
	United States	66
<b>Subtotal</b>	<b>76</b>	
<b>Latin America and the Caribbean</b>	Argentina	2
	Bolivia	2
	Brazil	28
	Chile	1
	Colombia	2
	Ecuador	1
	El Salvador	2
	Honduras	2
	Jamaica	1
	Mexico	6
	Peru	9
	Venezuela	2
	<b>Subtotal</b>	<b>58</b>

## Students Going Abroad by Country / Region

<b>Asia</b>	Bangladesh	5
	Bhutan	1
	Cambodia	69
	China	77
	India	2
	Indonesia	37
	Republic of Korea	60
	Laos	14
	Malaysia	12
	Mongolia	47
	Myanmar	1
	Nepal	1
	Philippines	60
	Singapore	17
	Taiwan	9
	Thailand	104
	Vietnam	18
<b>Subtotal</b>	<b>534</b>	

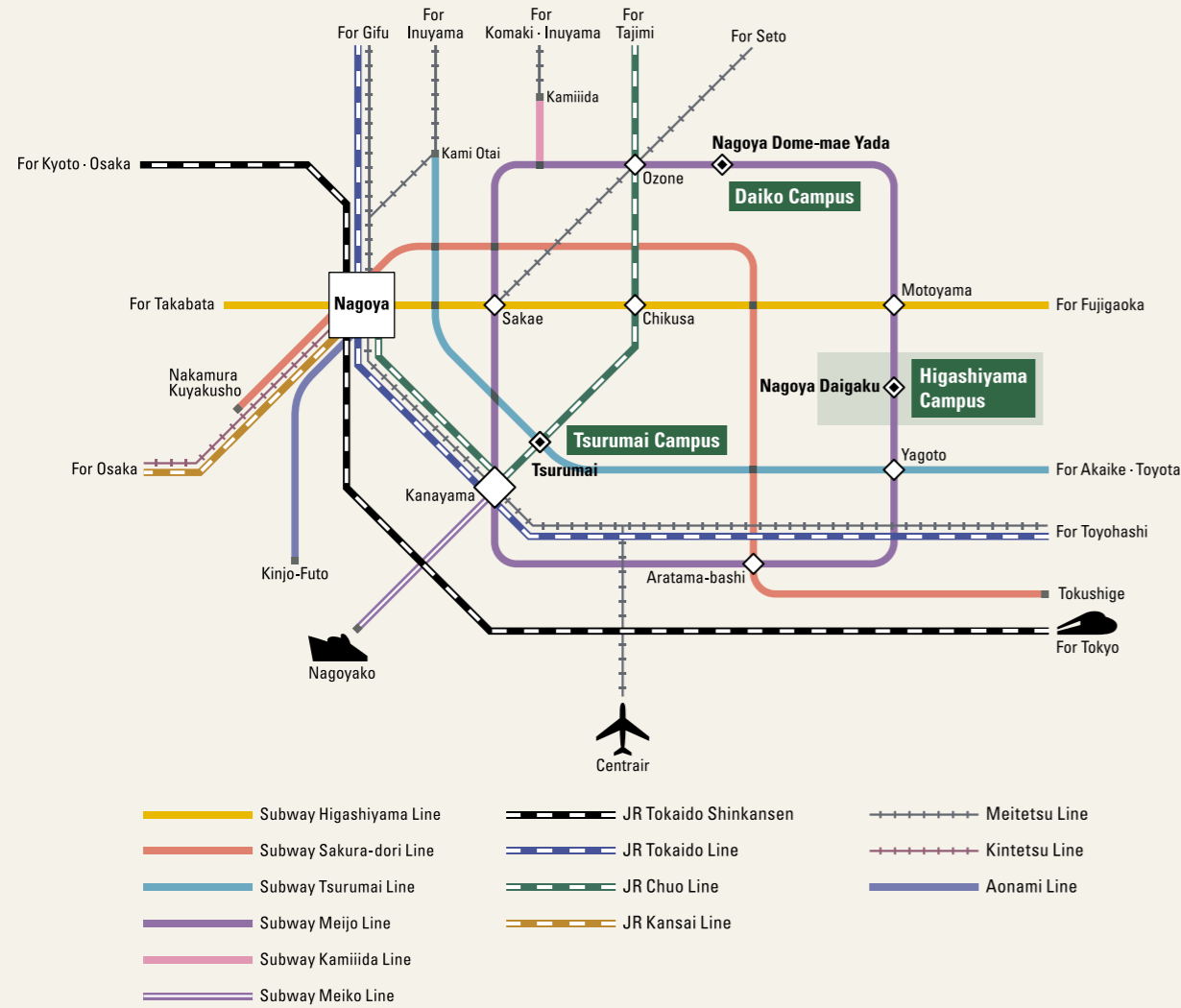
<b>Pacific</b>	Australia	63
	New Zealand	2
	Palau	2
<b>Subtotal</b>	<b>67</b>	
<b>Europe</b>	Austria	7
	Azerbaijan	1
	Czech Republic	3
	Denmark	4
	Finland	1
	France	15
	Germany	77
	Greece	1
	Hungary	1
	Ireland	1
	Italy	3
	Malta	1
	Netherlands	1
Poland	5	
Russia	2	
Slovakia	1	

<b>Middle East</b>	Afghanistan	23
	Iran	6
	Iraq	2
	Israel	2
	Saudi Arabia	3
	Syria	3
	Turkey	22
	Yemen	3
<b>Subtotal</b>	<b>64</b>	
<b>Africa</b>	Benin	1
	Cameroon	4
	The Democratic Republic of the Congo	4
	Egypt	15
	Ethiopia	6
	Ghana	4
	Guinea	1
	Ivory Coast	1
	Kenya	8
	Lesotho	1
	Madagascar	2
	Malawi	1
	Mozambique	3
	Nigeria	6
	Senegal	1
	Seychelles	1
	Sudan	1
	Tanzania	1
Tunisia	1	
Uganda	2	
Zambia	2	
<b>Subtotal</b>	<b>66</b>	
<b>Total (95 Countries / Regions)</b>	<b>2,417</b>	

<b>Europe</b>	Spain	1
	Sweden	11
	Switzerland	8
	U.K.	49
<b>Subtotal</b>	<b>204</b>	
<b>North America</b>	Canada	16
	United States	165
<b>Subtotal</b>	<b>181</b>	
<b>Latin America and the Caribbean</b>	Chile	2
	Mexico	2
<b>Subtotal</b>	<b>4</b>	
<b>Middle East</b>	Turkey	9
	<b>Subtotal</b>	<b>9</b>
<b>Africa</b>	Ethiopia	3
	Ghana	2
	Kenya	8
	Madagascar	1
	<b>Subtotal</b>	<b>14</b>
<b>Total (50 Countries / Regions)</b>	<b>1,013</b>	

\*Regional classification is based on the standards of the Ministry of Foreign Affairs in Japan.





- To Higashiyama Campus** From Nagoya Station: Take the Subway Higashiyama Line to Motoyama Station (16 min.), then transfer to the Subway Meijo Line to Nagoya Daigaku Station (2 min.). Higashiyama Campus is just off the subway exit.  
 From Centrair (Central Japan International Airport): Take the Meitetsu Line to Kanayama Station (24 min.), then transfer to the Subway Meijo Line to Nagoya Daigaku Station (21 min.).
- To Tsurumai Campus** From Nagoya Station: Take the JR Chuo Line (bound for Tajimi) to Tsurumai Station (6 min.), then walk 5 min.
- To Daiko Campus** From Nagoya Station: Take the Subway Higashiyama Line to Sakae Station (5 min.), transfer to the Subway Meijo Line to Nagoya Dome-mae Yada Station (12 min.), then walk 5 min.
- To Nagoya Station** From Centrair (Central Japan International Airport): Take the Meitetsu Line (28 min.).  
 From Tokyo Station: Take the Shinkansen (101 min.).  
 From Shin-Osaka Station: Take the Shinkansen (52 min.).



Located in the heart of Japan, the Chubu region has played a central role in Japan's history and has long enjoyed a flourishing culture and economy. The area is well known as the home of Oda Nobunaga, Toyotomi Hideyoshi and Tokugawa Ieyasu, the three leaders who unified Japan over 400 years ago, bringing an end to the "Period of Warring States." Nagoya Castle, originally built by Tokugawa Ieyasu and famous for the pair of golden dolphins on top of its donjon, serves as the region's landmark.

Today, this vibrant metropolis occupies an important place in Japan's political and economic spheres. With a population of 2.2 million, Nagoya is the nerve center of the Chubu Industrial Zone, a merger of both traditional and modern industries, most notably the automotive industry. Nagoya offers a variety of urban conveniences, with shops, restaurants and leisure activities that cater to any taste, making it an exciting place to live, work and study.



JR Central Towers



Nagoya Castle



Nagoya Noh Theater



Arimatsu Shibori Matsuri (festival)



Nagoya City Archives



The Golden Dolphin



Nagoya Congress Center



Nagoya Port Triton



Nagoya City Art Museum



OASIS 21, downtown Nagoya



