

# Top Global University Project (Type A) Kyoto University

## 1. Outline

### 【 Name of project 】

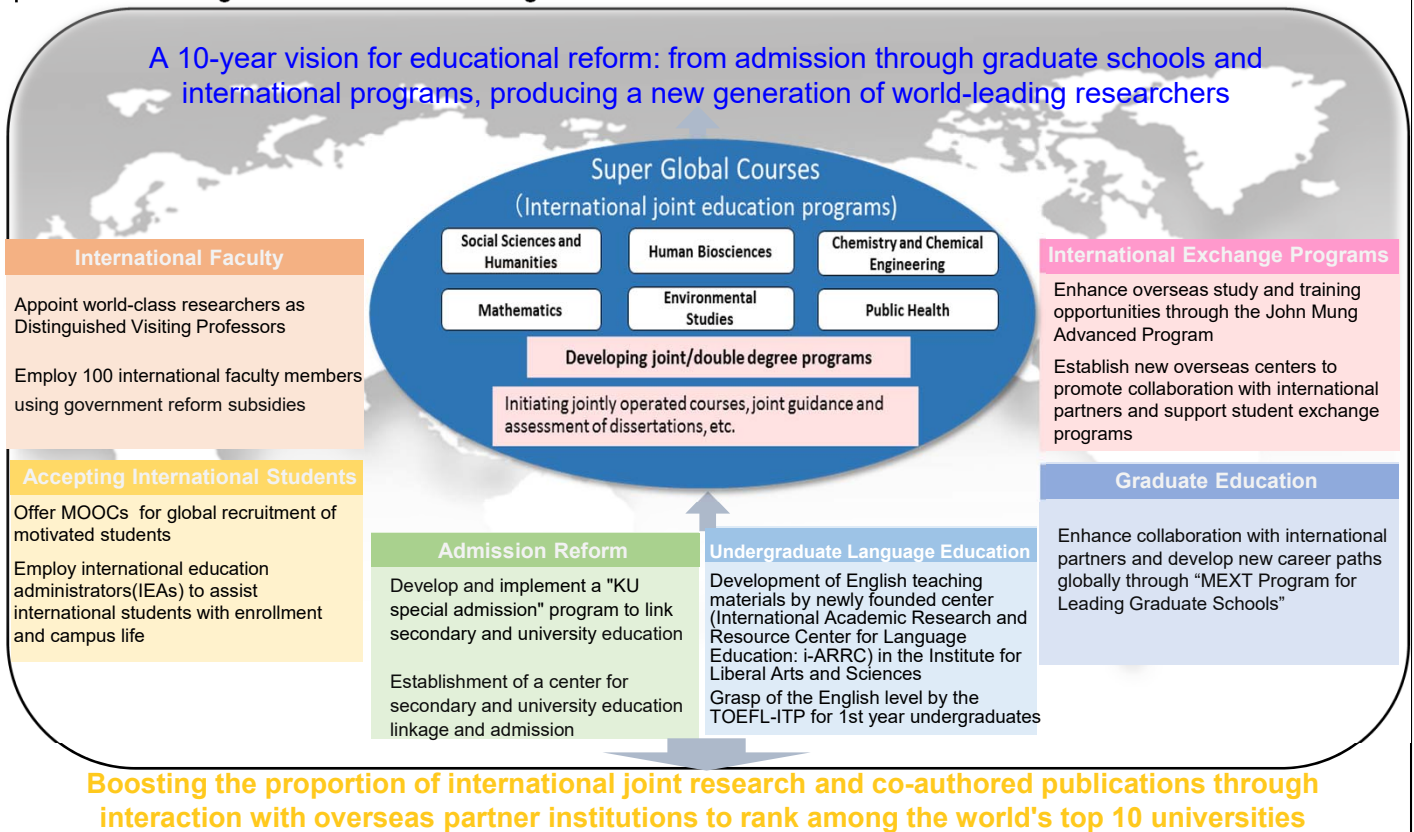
Japan Gateway: Kyoto University Top Global Program

### 【 Future vision of the university planned in TGU project 】

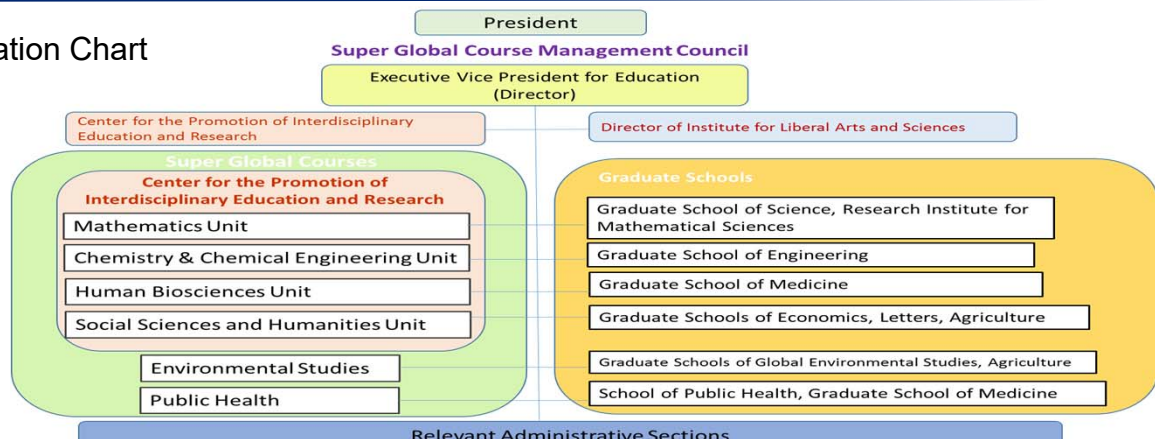
- Education reform from admission to graduate schools with a 10-year vision in tandem with internationalization to produce the next generation of world-leading researchers
- Boosting the proportion of international joint research/internationally co-authored publications through interaction with overseas partner institutions to rank among the world's top 10 universities

### 【 Summary of Project 】

The project will establish international joint education programs called “Super Global Courses” at graduate schools covering research areas in which KU has significant international competitiveness, which will be implemented in partnership with universities that are world leaders in their respective fields. As well as initiating courses that are jointly operated with partner institutions and providing joint guidance and assessments of dissertations under “Super Global Courses” in the respective research areas, we will develop “joint/double degree programs.” Through the synergetic effects of internationalization of graduate education arising out of these initiatives and from internationalization of various aspects of undergraduate education including admission reform, promotion of employment of non-Japanese faculty members, increasing inbound and outbound student mobility, and offering more courses in English, the project is aimed at further reinforcing the university's strengths in research and education to produce the next generation of world-leading researchers.



## Organization Chart



## **【Summary of the 10-year plan】**

### **[AY2014] Phase 1- Year 1: Partnership agreements and preparation for joint education programs**

- Entered into partnership agreements with the world's leading universities for the introduction of international joint education and degree programs
- Forged a system to enable employment of world-class, non-Japanese faculty members with flexible status/compensation

### **[AY2015] Phase1- Year 2: Involvement of more disciplines, introduction of jointly operated courses and employment of IEAs**

- Launch jointly operated courses with a view toward facilitating the introduction of international joint education and degree programs with the world's leading universities
- Employ international education administrators who will investigate system issues for the purpose of launching the new programs. They also assist in the process for accepting students from international partners as well as helping KU students studying abroad

### **[AY2016] Phase 1- Year 3: Application for approval of establishment of international joint curriculum**

- Build infrastructure with overseas partner institutions including infrastructure for distance guidance in research
- Introduce international joint education programs called "Super Global Programs" in which core curricula are offered jointly with international partners

### **[AY2017] Phase 1- Year 4: Starting up joint degree programs**

- Start up international joint/double degree programs
- "Super Global Programs" will accept enrollment as sub-major subjects and enrollment as extension studies

### **[AY2018] Phase 2- year 1: Review for further development based on the interim evaluation**

- Check the status of infrastructure development for internationalization (employment of non-Japanese faculty members, development of lodging facilities, development of overseas bases, etc.)
- Check the progress of the development of quality-assured education systems and programs with international standing

### **[AY2019] Phase 2- Year 2: Increasing mobility and diversity**

- Check the status of the strategic acceptance of high-quality international students and utilization of international bases
- Carry out checks on the development of talented young researchers and increase the ratio of internationally co-authored papers

### **[AY2020] Phase 2- Year 3: Raising Kyoto University's position in the World University Rankings**

- Identify points for improvement and strengthen initiatives with the aim of being ranked among the top 10 in the World University Rankings

### **[AY2021] Phase 2- Year 4: Review for further development based on the 2nd interim evaluation**

- Strengthen initiatives for the improvements required to ensure quality-assured education systems of high international standing

### **[AY2022] Phase 2- Year 5: Establish an organization for industry-government-academia open innovation education**

### **[AY2023] Phase 2- Year 6: Activities for the continuation and development of the project**

## **【Featured initiatives (Internationalization, University reform, Education reform)】**

### **Undergraduate Education**

- Development of English teaching materials by foundation of the International Academic Research and Resource Center for Language Education(i-ARRC) in the Institute for Liberal Arts and Sciences
- Grasp of the English level by the TOEFL-ITP for 1st year undergraduates
- Undergraduate International Course Program of Global Engineering, Faculty of Engineering (wholly in English)

### **Graduate Education**

- “MEXT Program for Leading Graduate Schools,” including the Graduate School of Advanced Integrated Studies in Human Survivability (five projects adopted as of AY2014)
- “Re-Inventing Japan Project,” such as study abroad programs for Japanese students and strategic acceptance of foreign students (three projects adopted as of AY2014)

### **Accepting International Students**

- Employing International Education Administrators(IEAs) to assist international students
- MOOCs (Massive Open Online Courses) to attract high-potential students from around the world
- “Kyoto University International Education Program (KUINEP)”

### **Recruiting international faculty members**

- Recruiting world-class researchers as Distinguished Visiting Professors
- Systematic and strategic promotion of recruitment of international superior faculty members under the initiative to double the number of international faculty members (Employing 100 international faculty members through “subsidy for supporting national university reform”)

### **International Strategy**

- “2x by 2020”: real internationalization supported by achievement of numerical targets (doubling indices of internationalization by 2020)
- Aspiring to place Kyoto University among the top 10 in world university rankings

## **【Measures for the promotion of collaboration with foreign universities】**

- Employ International Education Administrators who will promote partnerships with overseas universities. They will also be in charge of assistance and planning for KU students studying abroad and the acceptance of international students
- Sending more students and researchers abroad under the John Mung Advanced Program
- Increasing the number of Kyoto University offices outside of Japan for interaction with partner institutions and support for in-bound and out-bound study abroad students
- Medium-long term work experience under “International Internship” programs, in partnership with overseas research institutions and corporations

## 2. FY2014 Progress

### ■ Common indicators and targets

#### I. Internationalization

##### (1) Flexible and attractive employment systems for non-Japanese faculty members

We revised the internal rules and regulations including employment rules to increase faculty staff mobility and enable flexible employment of world-class, non-Japanese faculty members.

##### (2) Expansion of academic exchange and cooperation with the world's leading universities

【Memorandum of Understanding (MOU) for inter-university academic exchange】

Massachusetts Institute of Technology (MIT) and McGill University

【Basic agreement】

Copenhagen Business School, Wageningen University and University of Glasgow

##### (3) Enhancement of attractive educational environment for global mindset by lectures in English

Special lectures/lecture meetings and research guidance for graduate students provided by distinguished visiting professors and guest lecturers including Fields Medal awardees enabled students to learn about the world's leading-edge research areas in a high-quality education and research environment. This gave them even greater motivation to ultimately play their part on the international stage.



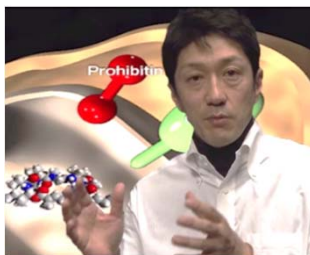
< Special lecture by a Fields Medal awardee >

##### (4) Expansion of faculty and student mobility to/from overseas partner institutions

By sending faculty members and students to partner institutions, reciprocal interactions were enhanced and ties were reinforced with a view to facilitating the introduction of international joint education and degree programs.

##### (5) Promotion of university-wide internationalization by employment of IEA

To propel the university-wide drive towards internationalization, we established a new "International Education Administration Office" within the Organization for the Promotion of International Relations. In order to more effectively and professionally in our approach, we laid out a framework for employing International Education Administrators who will perform such tasks as assistance and planning for KU students studying abroad and the acceptance of international students. IEAs have been employed since April 2015 (one senior IEA and two IEAs took up their positions from April 1, 2015).



< MOOCs offered by KU faculty members >

##### (6) MOOCs (Massive Open Online Courses) service

We prepared course information and syllabuses for offering MOOCs in the 2015 academic year via edX, which Kyoto University has joined as a charter member. The MOOCs service related to this program will enable us to attract highly motivated students of great potential from around the world by publicizing the content of KU's Super Global Programs and other programs both inside and outside Japan.

#### II. University reform

##### (1) Introduction of an annual salary system

For the introduction of the annual salary system, after a decision was made on the age and job categories to be covered (at a Deans and Directors Meeting in November 2014), rules and regulations on salary systems, evaluation systems, retirement pay, etc. were established or revised (a decision by the Board of Executive Directors in February 2015), and 101 staff members whose status changed from civil servant to national university corporation staff in 2004 were transitioned into the annual salary system that started on March 1, 2015 as the first group at Kyoto University to work under the new system. We plan to increase the number of staff covered by the system in the future, starting mainly with non-Japanese faculty members, the group we are now strategically targeting in our recruiting.

Regarding the cross appointment system, the "Kyoto University Regulations Regarding Implementation of Cross-Appointment of Faculty Members" came into force on March 1, 2015.

##### (2) Establishment of Office for the Promotion of Institutional Research

Having built its Data Warehouse (DWH) in 2013, Kyoto University has worked to improve its infrastructure for IR functions.

To further enhance and strengthen its IR functions, the Office for the Promotion of Institutional Research was established in April 2015 within the Planning and Information Management Department.

#### III. Education reform

##### ○ Institute for Liberal Arts and Sciences

To measure the basic English ability of students, we required all first year students to take TOEFL-ITP, the results of which were examined by the Council for Liberal Arts and Sciences and Committee for Planning and Evaluation. The results were then utilized in discussions on plans for English courses and courses conducted in English in and after AY2016.

Furthermore, to further cultivate an international mindset, it has been decided to employ, on a provisional and short-term basis, faculty staff who have positions at overseas universities starting from 2015. These staff will give intensive lectures in English for time periods outside regular semesters (August to September and February to March). As a result of our efforts to increase courses in English, in the 2014 academic year, a total of 101 courses conducted in English including 21 KUINEP courses and 80 liberal arts and general education courses by the Institute for Liberal Arts and Sciences were available for students accepted under the KUINEP (Kyoto University International Education Program), dramatically expanding the range of choices open to these students (in 2013, a total of 36 such courses were available including 26 KUINEP courses and 10 liberal arts and general education courses by the Institute for Liberal Arts and Sciences). The number of courses in foreign languages (primarily English) offered by faculties and graduate schools also dramatically increased to a total of 677 (641 in English) in the 2014 academic year (from 564 courses in 2013, 531 of which were in English).

## ■ University's own indicators and targets

### (1) Internationally co-authored papers by students

In the 2014 academic year, we continued to encourage and support students going abroad or presenting papers at international conferences (193 in 2013 => 512 in 2014). In future, we intend to increase the number of internationally co-authored papers through the introduction of joint curricula and joint degree programs.

### (2) Number of students dispatched overseas under the John Mung Program

With the extra support given to students under the "John Mung Program" which provides motivated students of great potential with the opportunity to study abroad, the number of students studying abroad has been steadily increasing. (107 in 2013 => 132 in 2014)

## ■ Initiatives for the enhancement of international reputation

### ○ Organizing international symposiums and workshops

By organizing international symposiums and workshops, we promoted our endeavors under this project to partner institutions and accelerated reciprocal exchanges. These activities have created a track record that will improve our international reputation.

December: -2014 Kyoto University & National Taiwan University workshop on business analysis

January: -The first international workshop on "Micro/Flow Chemistry & Engineering" (four faculty members and four postdoctoral fellows were invited from partner institutions)

February: -International workshop on agricultural policy research (a faculty member from the University of Arkansas was invited to attend)

-"University of Glasgow/Kyoto University Joint Student Workshop" held at the University of Glasgow

March: -The Kyoto University International Symposium cosponsored by the University of California, San Diego, for research collaboration and researcher interaction

-"The Third Kyoto Course and Symposium on Bioinformatics for Next Generation Sequencing with Applications in Human Genetics"

-"SGU Mathematics Kickoff Meeting" (six faculty members from partner institutions were invited)

-Joint Workshop on East Asian Studies organized by the National Institute for Advanced Humanistic Studies at Fudan University and Graduate School of Letters, Kyoto University (two postdoctoral fellows were invited from Heidelberg University)

-Seminar for graduate students on how to give presentations in English (a faculty member was invited from the University of Stavanger, Norway)

-International workshop on family farming (three faculty members and five postdoctoral fellows were invited from Agropolis International)

-"Kickoff Meeting for Kyoto-ASEAN Forum 2015" for the expansion of research and education activities in the ASEAN region (the plenary session to be held in the 2016 academic year)

-"Wageningen/Kyoto Joint Student Workshop" held at Wageningen University

-"2015 Business Analysis and Accounting Workshop" held at National Taiwan University

## 【 Results for the promotion of collaboration with foreign universities 】

### [Distinguished Visiting Professor](8)

-Columbia University(1) (Jul.)

-University of Michigan(1) (Sep.~ Dec.)

-Vanderbilt University(1) (Oct.~ Nov.)

-University of Zurich(1) (Feb.~ Mar.)

-Texas A&M University(1), McGill University(3) (Mar.~)

### [Visiting lecturers, etc. (lectures, research presentations etc.)](42)

Massachusetts Institute of Technology(6), Washington State University(1), University of Oregon (1), University of Exeter(1), University of Graz(1), Yale-NUS College(1), Tsinghua University(1), University of Wageningen(1),

Copenhagen Business School(2), Yale-NUS College(1), Erasmus University Rotterdam(1), Harvard University(1),

Columbia University(1), University of Oxford(1), McGill University(2), University of Hamburg(1),

Friedrich-Alexander University Erlangen-Nürnberg(1), Hungarian Academy of Sciences(1), University of Pavia(1),

max planck institute for physics(1), University of Bonn(1), University-of-Mainz(1), University of Goettingen(1),

Institute of Pasteur(1), University of Pittsburgh(1), University of the Pacific(1), University of Glasgow(1),

University of Wageningen(2), French National Institute for Agricultural Research(1), Agricultural Research for Development(2),

Swiss Federal Institute of Technology in Zurich(1), University of Freiburg(1), University of Greifswald(1)

### [Dispatch of faculty members (investigation of academic calendars and education systems, joint teaching, discussion on interdepartmental agreement on student exchange, etc.)](28)

Massachusetts Institute of Technology(2), Development Academy of the Philippines(1),

Stockholm School of Economics(1), University of Lethbridge(1), University of Glasgow(3), Thammasat University(3),

Rutgers University(1), Imperial College London(1), University of Heidelberg· Strasbourg University(1),

University of Wageningen(6), National Taiwan University(2), Agropolis International(2), The University of Sheffield(1),

University of Paris-Sud(1), Kazakh National Agricultural University(1), Tsinghua University(1)

### [Invitation (discussion on exchange agreements for program start etc.)](24)

Strasbourg University(2), NUS(2), Chulalongkorn University(2), Vietnam Academy of Social Sciences(1),

Seoul National University(1), University of Stavanger(1), Strasbourg University(1), University of Heidelberg(1),

Technical University Munich(1), University of Bonn(1), University of Utah(1), Louisiana State University(1),

Nanjing University(1), University of Heidelberg· Strasbourg University(1), University of the Pacific(1),

Renmin University of China(2), Stony Brook University(1), Olin College of Engineering(3)

### [Dispatch of graduate students (paid for by the university)](13)

University of Bonn, University of Amsterdam, Imperial College London, Brown University,

University of British Columbia, NUS(7), Massachusetts Institute of Technology(6)

### 3. FY2015 Progress

#### ■ Common indicators and targets

##### I. Internationalization

###### (1) Expansion of academic exchange and cooperation with the world's leading universities

Interdepartmental exchange agreements entered into in AY 2015 (\*concerning the six areas of the Super Global Courses)

- Grad. School of Economics-University of Wageningen (Netherlands), July, 2015 Student Exchange Agreement
- Grad. School of Economics-Katholieke Universiteit Leuven (Belgium), March 2016, Academic Exchange Agreement and Student Exchange Agreement
- Grad. School of Letters-Heidelberg University (Germany), December 2015, Letter of Intent on Establishing a Joint Degree Program
- Grad. School of Agriculture-University of Göttingen (Germany), April 2016, Student Exchange Agreement
- Grad. School of Engineering-Massachusetts Institute of Technology (USA), February 2016, Student Exchange Agreement
- Grad. School of Global Environmental Studies—University of Lorraine (France), July 2015, Academic Exchange Agreement and Student Exchange Agreement
- School of Public Health-National Taiwan University (Taiwan), December 2015, Letter of Agreement for double degree program
- School of Public Health-Mahidol University (Thailand), December 2015, Letter of Agreement for double degree program

###### (2) Improving the educational environment which enhances students' international mindset by offering more lectures conducted in English

We provided special lectures and courses conducted in English by distinguished visiting professors and visiting guest lecturers, including Fields Medal awardees, and strengthened the lineup of liberal arts and general education courses conducted in English offered by the Institute for Liberal Arts and Sciences. As a result, a total of 885 courses conducted in foreign languages were provided in AY 2015 (including 854 in English).

###### (3) Expansion of faculty and student mobility to/from overseas partner institutions

By sending faculty members and students to partner institutions, reciprocal interactions were enhanced and ties were reinforced with a view to facilitating the introduction of international joint education and degree programs.

###### (4) Introducing a GPA system

We introduced a GPA (grade point average) system for undergraduate students studying under a curriculum applicable to entrants in April 2016 or later, with the aim of promoting students' independent study and facilitating guidance for students' study.

###### (5) Strengthening the university-wide organization for promoting internationalization by employing international education administrators (IEAs)

We newly employed three international education administrators. As for inbound mobility, we accepted fifty doctoral program students from inside and outside Japan, primarily from the six HeKKSaGOn universities (Heidelberg University, the University of Göttingen, and the Karlsruhe Institute of Technology from Germany as well as Osaka University, Tohoku University, and Kyoto University), who were provided with lectures and off-campus programs for understanding the culture of Japan and Kyoto. In terms of outbound programs, we administered communication skill training programs abroad, grouped by students' language fluency, in partnership with the University of New South Wales from Australia and the University of Auckland from New Zealand, in which a total of sixty undergraduate and master's program students from Kyoto University participated. In addition, we analyzed students' scholarship applications and assisted students preparing application forms, which doubled the success rate in AY 2015 from the previous year. During the second phase of the ASEAN Foundation, we negotiated with AUN member institutions regarding inbound and outbound student programs and acquired external funds.



###### (6) Offering MOOCs (Massive Open Online Courses)

We created four MOOCs in fields within the scope of Super Global Courses and offered them via edX. These courses attracted many learners, helping us to publicize this program worldwide. Moreover, the process provided a stimulus for our graduate students involved in offering these courses as staff members (such as TAs), giving them opportunities to interact with overseas students by not only asking and answering questions but also participating in discussions among learners.

##### II. University reform

###### (1) Introduction of an annual salary system

As of March 2015, an annual salary system was applied to 101 staff members. Following that, the scope of the annual salary system was expanded in the period from April to July 2015, which shifted another 189 staff members into the annual salary system within AY 2015.

###### (2) Strengthening and improving IR functions

In April 2015, we established the Office for the Promotion of Institutional Research within the Planning and Information Management Department. In addition to that, we established the Office for the Educational IR under the Executive Vice-President for Education in April 2016, in order to centrally collect and manage educational affairs information to support the development of admission strategies, decision making for improving education, quality assurance of education, etc.

##### III. Education reform

###### (1) Introduction of KU Special Admission Programs

To attract students with great potential, we introduced the "KU special admission" programs, starting with the admission of entrants in April 2016, to screen applicants based on the comprehensive evaluation of their learning abilities developed in the years leading up to high school and abilities essential for receiving undergraduate education at respective faculties as well as their ambitions. In the first year of this admission system, 81 out of 616 applicants were admitted under the "KU special admission" programs.

## ■ University's own indicators and targets

### (1) Internationally co-authored papers by students

We continued to encourage and support students going abroad or presenting papers at international conferences (646 papers in AY 2015). In future, we intend to increase the number of internationally co-authored papers through the introduction of joint curricula and joint degree programs.

### (2) Number of students dispatched overseas under the John Mung Program

With the extra support given to students under the "John Mung Program" which provides motivated students of great potential with the opportunity to study abroad, the number of students studying abroad has been steadily increasing. (138 in AY 2015)

## ■ Initiatives for the enhancement of international reputation

### ○ Organizing international symposiums and workshops

By organizing international symposiums and workshops, we promoted our endeavors under this project to partner institutions and accelerated reciprocal exchanges. These activities have created a track record that will improve our international reputation.

#### Symposiums sponsored by Kyoto University as a whole institution

- Kyoto-Bordeaux Symposium2015 (May 2015)
- Bristol-Heidelberg-Kyoto joint symposium (November 2015)
- UCL-Kyoto Grand Challenges Symposium 2015 (December 2015)
- UC San Diego-Kyoto University Joint Symposium (March 2016)

#### Symposiums, workshops, etc. held by departments offering the Super Global Courses

**[Social Sciences and Humanities]** •Kyoto Graduate Seminar (September 2015)

- International Workshop "Theoretical Framework for Comparative Analysis on Family Farming" (March 2016)

**[Human Biosciences]** •1<sup>st</sup> Joint Symposium of International Partners (October 2015)

**[Chemistry and Chemical Engineering]** Joint Workshop with U.S. and German Institutions (December 2015)

**[Mathematics]** •KTGU Mathematics Workshop for Young Researchers (February 2016)

- KTGU-IMU Mathematics Colloquia & Seminars (March 2016)

**[Environmental Studies]**

- International Symposium and International Workshop (December 2015)
- JGP-GSGES International Spring School at Kyoto 2016 (February-March 2016)

**[Public Health]** •2015 Kyoto Global Conference for Rising Public Health Researchers (December 2015)



## 【 Results for the promotion of collaboration with foreign universities 】

### **[Social Sciences and Humanities]**

In December 2015, the Graduate School of Letters entered into a basic agreement with Heidelberg University (Germany), aiming to establish a joint degree (JD) program within AY 2017. Preceding that, a credit transfer system was introduced starting in October 2015. The school offers more than ten courses in Asian and Transcultural Studies for the JD program.

### **[Human Biosciences]**

We organize a training course and symposium every year based on research collaboration between Kyoto University, McGill University (Canada), and Imperial College London (UK). Aside from that, we are designing systems toward introducing a joint degree program with McGill University (Canada). Other activities include international research collaboration with the University of Bordeaux (France) and the establishment of a collaborative research unit in January 2016 with the Pasteur Institute (France).

### **[Chemistry and Chemical Engineering]**

We invited world-class researchers from such institutions as the Massachusetts Institute of Technology (MIT) in the US, who provided students with lectures, seminars, and research guidance, while sending Kyoto University students to laboratories at these researchers' home institutions for research internship programs. In AY 2015, we entered into an agreement concerning student exchange with MIT, where two of our students participated in a long-term research internship program.

### **[Mathematics]**

Partnership activities undertaken thus far include employing or inviting researchers from Columbia University, the University of Michigan, Vanderbilt University, the University of Utah, and UCLA (USA), the University of Zurich (Switzerland), Imperial College London (UK), the University of Bonn and Johannes Gutenberg University Mainz (Germany), as well as commissioning researchers from these institutions to act as vice supervisors for our graduate students. In AY 2015, three of our graduate students earned degrees under the guidance of researchers from UCLA, the University of Bonn, and Rutgers University, respectively, who served as their vice supervisors. Certificates were issued to those students.

### **[Environmental Studies]**

We offer double degree programs with Gadjah Mada University and Kasetsart University. Discussions are going on toward establishing double degree programs with Mahidol University and Bogor Agricultural University.

### **[Public Health]**

We offer double degree programs with Chulalongkorn University and the University of Malaya. Furthermore, in December 2015, we signed the Letter of Agreement toward the establishment of double degree programs with National Taiwan University (Taiwan) and Mahidol University (Thailand).



## 4. FY2016 Progress

### ■ Common indicators and targets

#### Internationalization

##### (1) Entering into joint degree agreements and expanding double degrees

The Graduate School of Letters and Heidelberg University agreed on the establishment of a joint Master's degree program (international collaborative program), entered into a partnership agreement in January, 2017, and lodged an application with the Ministry of Education, Culture, Sports, Science and Technology's Council for University Chartering and School Juridical Person in March. This degree program is the first of its kind at Kyoto University. Agreements were also reached on double Master's degree programs between the Graduate School of Global Environmental Studies and Mahidol University, between the Graduate School of Global Environmental Studies/Graduate School of Agriculture and Bogor Agricultural University, and between the Graduate School of Agriculture and Bandung Institute of Technology. Moreover, the Graduate School of Medicine (School of Public Health) agreed to enter into a double professional degree program agreement with National Taiwan University, and the Graduate School of Energy Science and University of Bordeaux entered into a double doctoral degree program agreement, the first of its kind at Kyoto University.

##### (2) Implementation of course numbering system

A proposal on numbering of courses at Kyoto University was approved by the Educational Systems Committee in July, 2016, resulting in numbers being assigned to all courses from AY 2017.



##### (3) Study abroad support

With a view to aiding improvements in the study abroad environment for students, the International Education Administrator developed and began implementing an online survey designed to gather responses from students who have completed study abroad programs (including student exchange) and ascertain actual conditions in those programs. Moreover, in order to support internationalization within each division, surveys on educational systems in ASEAN member countries and student mobility in Europe were implemented, and the results shared with divisions via the International Education Administrator website.

##### (4) Dissemination of information in English

We published the inaugural issue of the new English-language publicity bulletin *KYOTO U Research News*, and also made the content thereof available online. Using science writers appointed to the university staff, we issued 36 press releases internationally over the course of the year. Most of these were included in press articles in a variety of outlets including the New York Times, The Guardian, and Xinhua News Agency, thereby enhancing Kyoto University's media presence.

##### (5) Initiatives to raise language proficiency levels among undergraduate students

- We have been implementing TOEFL-ITP tests for newly-enrolled students twice a year (in April and December) for some time, but for those enrolled from AY 2016 onward, we have arranged for scores from the December test to contribute to students' grades in the course English Writing-Listening B.
- We have made the Speaking Corner and Conversation Room in the new ILAS Building available for use by students for self-study, and are lending out devices for the self-study of foreign languages.
- Instructors in charge of English Writing-Listening courses are conducting activities such as workshops and TOEIC preparation courses.
- In the ILAS Building, we installed a CBT room where the TOEFL iBT can be offered on-campus, beginning in December, 2016.

#### University reform

##### (1) Strengthening and improving IR functions

We established the Office for the Educational IR under the Executive Vice-President for Education in April 2016, in order to centrally collect and manage educational affairs information to support the development of admission strategies, decision making for improving education, quality assurance of education, etc.



##### (2) Appointment of distinguished visiting professors/associate professors/lecturers, etc.

In AY 2014, we established the new academic position of distinguished visiting professor to enable employment of researchers from leading universities internationally. The positions of distinguished visiting associate professor and distinguished visiting lecturer were also established from AY 2015. This system is steadily yielding results, with a total of 58 appointments made as of January 1, 2017.

#### Education reform

##### (1) Implementation of special admission programs

In the 2016 admissions season, we implemented special admission programs emphasizing senior high school-university articulation, enabling us to attract a diversity of students (108 enrollees sought; 616 applications received; 82 students admitted). For 2017 admissions, the number of departments offering these programs was expanded (from 14 to 19), as was the number of enrollees sought (from 108 to 145). The programs were also revised to allow evaluation of IELTS and International Baccalaureate results in addition to TOEFL.

##### (2) Early graduation/admission, 5-year integrated programs, etc.

Since AY 2016, the Faculty/Graduate School of Economics has been offering a five-year integrated program comprising a four-year undergraduate and one-year graduate curriculum. This program, which enables high-performing undergraduate students to pursue graduate-level education from an early stage, was introduced and shared with other divisions via the Educational Systems Committee.

## ■ University's own indicators and targets

### (1) Internationally co-authored papers by students

We are pursuing initiatives to encourage and support students in outbound study abroad and presentations at international conferences (646 papers in AY 2015). The number of internationally co-authored papers will increase further into the future as we implement joint curricula and joint degree programs.

### (2) Number of students dispatched overseas under the John Mung Program

We are strengthening student support through the John Mung Program, which provides talented, motivated students with opportunities to study abroad (53 students in AY 2016). We are also working to increase the number of outbound study abroad students through initiatives such as Omoro Challenge, an experiential outbound support system launched in 2016, under which students organize their own travel plans rather than participating in pre-made study abroad programs (31 participants in AY 2016).

## ■ Initiatives for the enhancement of international reputation

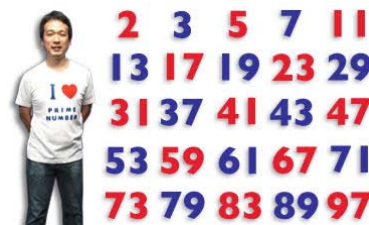
### ○ Initiatives in Super Global Courses

By offering courses taught by faculty members of our overseas partner universities in the six areas in which Super Global Courses are offered (Mathematics, Chemistry and Chemical Engineering, Human Biosciences, Social Sciences and Humanities, Environmental Studies, Public Health), we have provided numerous Kyoto University students with opportunities to learn from faculty members from top universities overseas, thereby boosting their motivation as learners and cultivating their interest in studying at universities overseas. We have also established the conditions for completion of the Super Global Courses in the fields of Mathematics, Chemistry and Chemical Engineering, and Public Health, and following on from the four completions (all in Mathematics) in AY 2015, nine students (7 in Mathematics and 2 in Public Health) completed their courses in AY 2016 after undergoing research and thesis supervision by overseas faculty members.

### ○ Dissemination of MOOCs (Massive Open Online Courses)

Adding to the four MOOCs offered in Super Global Course areas in AY 2015, two new MOOCs were created in AY 2016 and disseminated through edX.

These MOOCs are attracting large numbers of students from all over the world. This enables wide-ranging publicity for our programs and, by furnishing an educational environment for learners worldwide, it is also expected to attract highly-motivated, talented students from across the world in future.



## 【 Results for the promotion of collaboration with foreign universities (Type A only) 】 (AY 2016)

### [Social Sciences and Humanities]

The Graduate School of Economics signed a letter of intent on educational and research partnership with Chulalongkorn University (Thailand) in July 2016, and commenced negotiations on the establishment of a double degree program. Negotiations toward a student exchange agreement and double degree program are also under way with the University of Glasgow (UK). The Graduate School of Letters entered into a joint degree program agreement with Heidelberg University (Germany) in January 2017, and concrete curricula and systems have been designed. The Graduate School of Agriculture signed a divisional-level student exchange agreement with the University of Göttingen (Germany) in April 2016.

### [Human Biosciences]

In November 2016, we entered into an agreement on joint research with the Pasteur Institute (France). Moreover, in March 2017, we signed a letter of intent on the implementation of a joint degree program with McGill University (Canada), a matter which had been under negotiation since the previous academic year.

### [Chemistry and Chemical Engineering]

We invited three professors to Kyoto University under the academic exchange agreement (MOU) signed with Massachusetts Institute of Technology (MIT) (USA) in AY 2014. A total of five students have also been sent for long-term studies at MIT in accordance with the student exchange agreement signed in AY 2015. Furthermore, thirteen MIT students were invited to Kyoto University for an international student workshop. These activities have enabled profound, broad-ranging advancement of exchange between our faculty and students and those of MIT.

### [Mathematics]

We entered into a divisional-level academic exchange agreement with the University of Utah (USA), and we are also in the final stages of negotiating the same kind of agreement with HSE (National Research University Higher School of Economics) in Russia. Moreover, we are preparing to sign an agreement for the Global Math Network, a partnership designed to promote education and research by graduate students in five universities known for their outstanding research and education in the field of mathematics: University of Bonn (Germany), École Normale Supérieure (France), New York University Courant Institute of Mathematical Sciences (USA), Peking University (China), and Kyoto University.

### [Environmental Studies]

We entered into new double Master's degree program agreements with Mahidol University (Thailand) and Bogor Agricultural University (Indonesia). New divisional-level academic and student exchange agreements were also signed with Universitas Indonesia and Bandung Institute of Technology in Indonesia, and the University of Modena and the University of Naples in Italy. We also hosted the International Spring School on Environmental Studies 2017, providing numerous students invited from our overseas partner institutions with a diverse range of research outputs in environmental studies through activities such as special lectures, research lab seminars, analytical guidance, and field training.

### [Public Health]

Under the double degree programs currently pursued with Chulalongkorn University (Thailand) and University of Malaya (Malaysia), we accepted two students from Chulalongkorn and one from Malaya in AY 2016. We also agreed with National Taiwan University College of Public Health (Taiwan) to enter into a double degree program agreement. Moreover, we are currently negotiating with London School of Hygiene & Tropical Medicine (UK) with a view to establishment of a joint degree program.



## 5. FY2017 Progress

[Kyoto University]

### ■ Common indicators and targets

#### Internationalization

##### (1) Establishment of joint degree programs and enactment of university regulations in preparation for expansion of double degrees

Governmental approval was granted for establishment of the Kyoto University and Heidelberg University Joint Degree Master of Arts Program in Transcultural Studies to be operated jointly by the Graduate School of Letters and Heidelberg University. The program was formally established in October 2017, and the first cohort of students is set to enroll in April 2018.

Establishment of the Graduate School of Medicine's joint degree program with McGill University was also approved and the new program--titled the Kyoto-McGill International Collaborative Program in Genomic Medicine--is scheduled to open in April 2018.

Double degree programs have previously required, in principle, submission of separate dissertations to each university awarding a degree. By enacting new regulations on the implementation of collaborative degree programs with universities outside Japan, we have made it possible to award two degrees on the basis of a single dissertation. Clarifying this "double degree (single-dissertation)" model paves the way for a future increase in double degree programs that leverage our strengths as a research university.

##### (2) Kyoto iUP

In order to expand our intake of talented and highly motivated international students at the undergraduate level, we started recruiting applicants for the Kyoto University International Undergraduate Program (Kyoto iUP).

This program does not require any Japanese language proficiency at the time of enrollment. Students receive ongoing, intensive Japanese language training after enrollment alongside liberal arts and sciences courses taught in English, before moving on to take specialized courses in Japanese. The aim of the program is to prepare international students for careers in globally-active Japanese companies.



Joint degree signing ceremony with McGill University

##### (3) Dissemination of information in languages other than Japanese

We issued 103 press releases in English in AY 2017, around double the number of the previous year. These were posted on the university website and through the EurekAlert! international science news distribution site, enabling information on Kyoto University to be disseminated to a global audience. Moreover, we hosted a press tour to showcase our research facilities to journalists from overseas outlets to have articles posted in overseas media, and worked in other ways on multi-directional information dissemination through influential media channels outside Japan.



Research presentation as part of a press tour for overseas media outlets

##### (4) Participation in international inter-university networks

We planned and implemented student exchange activities utilizing the University Social Responsibility Network (USRN), of which the Hong Kong Polytechnic University is one of the leading members. These activities include heading a joint summer program with fellow USRN members the Hong Kong Polytechnic University (Hong Kong), Peking University (China), and Ewha Womans University (South Korea). The inaugural program was run at Kyoto University. Moreover, we are participating in presidents' meetings, symposiums, and other activities as part of other international inter-university networks, including AEARU, AUN, ASEAN+3 UNet, HeKKSaGOn, RENKEI, and USJI.

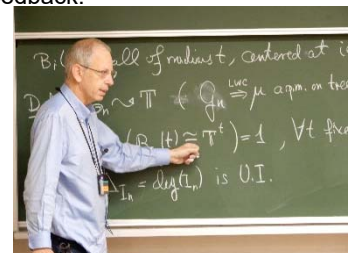
#### University reform

##### (1) Establishment of an International Collaboration Platform

We established the International Collaboration Platform under the International Strategy Office in order to eliminate vertical partitions in the university organization; create horizontal connections between divisions responsible for international affairs and those involved in planning, public relations, IR promotion, and academic research support; and share the university's vision and information effectively, as well as to enable mutual provision of constructive feedback.

##### (2) Appointment of distinguished visiting professors, associate professors/lecturers, etc.

In AY 2014, we established the new academic position of distinguished visiting professor to enable employment of international researchers from leading universities. The positions of distinguished visiting associate professor and distinguished visiting lecturer were also established starting in AY 2015. This system is steadily yielding results, with a total of eighty-three appointments made as of March 31, 2018.



Lecture by a distinguished visiting professor

#### Education reform

##### (1) General and Cross-Departmental Education for Graduate Students

We have been operating a Kyoto University Transdisciplinary Graduate Program in order to equip graduate students with wide-ranging perspectives and research capabilities with the aim of creating new fields of research (broad vision and creativity). This year we reviewed the design of the program together with interdisciplinary education courses, and developed them into a new category of Interdisciplinary Graduate Courses, which will be offered as part of graduate school general and cross-school education. Some of the courses in this category will be provided by divisions operating Super Global Courses. This arrangement will make Super Global Courses accessible to students from other graduate schools.

## ■ University's own indicators and targets

### (1) Number of students dispatched overseas under the John Mung Program

In AY 2017, forty-three students were dispatched under the John Mung Program, which provides talented, motivated students with opportunities to study abroad. We are also working to increase the number of outbound study abroad students through initiatives such as the International Research Purpose Travel Support and Omoro Challenge, an experiential outbound support system under which students organize their own travel plans rather than participating in pre-made study abroad programs. Through these initiatives, another forty-three students were supported to study abroad.

### (2) Strategic international development of alumni associations

There are twenty-eight alumni associations operating in seventeen countries outside Japan as of March 31, 2018, and we are working to expand this network. Alumni are also involved in efforts to attract international students through initiatives such as the development of systems for cooperating with overseas alumni associations in the context of promotion and recruitment for Kyoto iUP.



Discussions at an international student workshop

## ■ Initiatives for the enhancement of international reputation

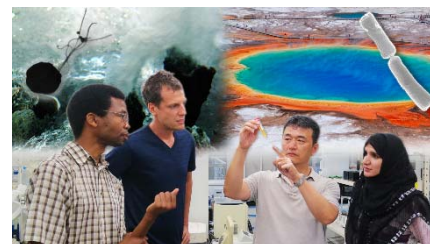
### ○ Initiatives in Super Global Courses

By offering courses taught by faculty members of our overseas partner universities in the six areas in which Super Global Courses are offered (Mathematics, Chemistry and Chemical Engineering, Human Biosciences, Social Sciences and Humanities, Environmental Studies, and Public Health), we have provided numerous Kyoto University students with opportunities to learn from faculty members of top overseas universities, thereby boosting their motivation as learners and cultivating their interest in studying at overseas universities. Fourteen students (five in Mathematics, three in Chemistry and Chemical Engineering, five in Public Health, and one in Social Sciences and Humanities) completed their courses in AY 2017 after having their research and thesis supervised by overseas faculty members.

The Super Global Courses are now yielding results that attest to their high educational quality. For example, students completing the courses have given invited papers at international conferences and co-authored papers with members of the lab at their overseas host universities, which have been published in *Science* and other leading international journals.

### ○ Dissemination of MOOCs (Massive Open Online Courses)

Two new MOOCs were created and disseminated through edX, adding to the four offered in Super Global Course areas in AY 2015 and the two new additions in AY 2016. These MOOCs are attracting large numbers of students from all over the world and receiving a great response from them. MOOCs not only provide opportunities for people worldwide to experience Kyoto University's high standards of education and research, but are also expected to play a role in publicity of the university, helping us to attract highly-motivated, talented students from across the world in the future.



A MOOC offered on edX

## 【 Results for the promotion of collaboration with foreign universities (Type A only) 】 (AY 2017)

### [ University-wide ]

Our network of overseas partners continued to grow steadily in AY 2017, with new inter-university academic cooperation and exchange agreements signed with eleven universities and student exchange agreements with nine universities.

### [Social Sciences and Humanities]

The Kyoto University and Heidelberg University Joint Degree Master of Arts Program in Transcultural Studies, a joint degree to be offered by the Graduate School of Letters in partnership with Heidelberg University, received governmental approval and was formally established in October 2017. The Graduate School of Economics is currently in the final phase of negotiations toward the creation of a double degree program with the University of Glasgow (UK). The Graduate School of Agriculture has been laying the foundations for a higher level of international collaborative education, working with its partner, the University of Göttingen, on projects such as intensive courses taught by faculty members invited from Göttingen (offered in July) and joint workshops (December).

### [Human Biosciences]

Governmental approval for a new joint degree program with McGill University was granted in November 2017, finalizing the establishment of the program, which will be known as the Kyoto-McGill International Collaborative Program in Genomic Medicine.

### [Chemistry and Chemical Engineering]

Five Kyoto University students were sent to study at Massachusetts Institute of Technology (USA) and other international partner universities. The students engaged in international joint research internships, and systems were instituted for granting course credit for these internships. We are also developing a cooperative relationship with the University of California, Davis, extending beyond student exchange and including such activities as faculty development sessions delivered by UC Davis faculty members for their counterparts at Kyoto University.

### [Mathematics]

In August 2017, we signed an agreement for the Global Math Network, a partnership designed to promote education and research by graduate students in five universities known for their outstanding research and education in the field of mathematics: University of Bonn (Germany), École Normale Supérieure (France), New York University (USA), Peking University (China), and Kyoto University.

### [Environmental Studies]

We launched a double degree program with Mahidol University, with which we had signed a new partnership agreement in AY 2016. We are currently in negotiations with the University of Lille (France) regarding the broad framework for a joint degree program.

### [Public Health]

We launched a double degree program with National Taiwan University, with which we had signed a new partnership agreement in AY 2016. We are also extending our collaborative relationships through activities such as hosting a joint symposium in partnership with seven overseas institutions.