

# FY2016 Inter-University Exchange Project CHIBA University

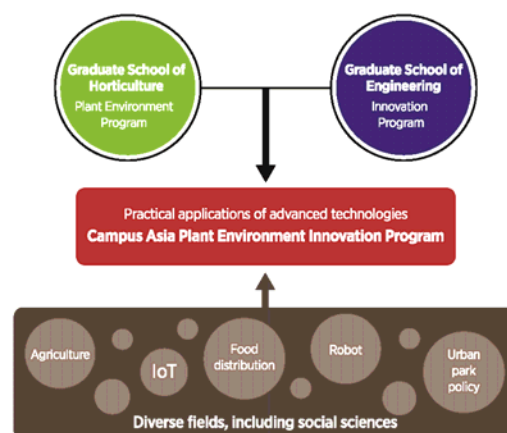
Support for the Formation of Collaborative Programs with Universities in Asia

【Name of project】(Adopted year: FY2016, (Type A-② CAMPUS Asia ))

## CAPE (Campus Asia Plant Environment innovation program)

### 【Summary of Project】

As part of Chiba University's efforts to create new interdisciplinary specialized fields, this project realizes practical applications of advanced technologies in plant environments under the partnership between the Japan's only Graduate School of Horticulture and the Graduate School of Engineering. By combining CAPE by the Graduate School of Horticulture and the Innovation Program by the Graduate School of Engineering, students have unique opportunities to study diverse domains (e.g., agriculture, IoT, robotics, AI, etc.) in science and engineering to the social sciences (e.g., food distribution economy, urban park policy, etc.).



### 【Summary of Exchange program】

#### ① Human resource development for 6<sup>th</sup>+4<sup>th</sup> industrialization in cities

The 6<sup>th</sup> industrialization of agriculture advocated by the Ministry of Agriculture, Forestry and Fisheries aims to revitalize rural and fishery areas with industrial transformations. This program focuses on establishing new businesses for urban farming and greenification by introducing a method of designing services to realize such industrialization in cities. The program seeks to create the 10<sup>th</sup> (6+4) industry through the addition of service innovation of the 4<sup>th</sup> industry to the 6<sup>th</sup> industry, ultimately fostering human resources to support future developments.

#### ② Fostering innovative students with a double degree program in different domains

The Switch Major Double Degree Program (SMDD) allows students to earn two degrees in different domains (agriculture and engineering). They earn a Masters degree in one domain and a doctoral degree in the other.

#### ③ Triple Option Degree Program for diverse and selective degrees

In addition to the double degree (DD) and SMDD, the program creates a new Transferable Degree (TD) where the initial university and the university conferring the degree may differ. The university where a student completes his or her studies confers the degree, while the initial university and the host university each award a diploma for exchange studies.

#### ④ World School of Comprehensive Science to cultivate sophistication at graduate schools

A joint program formed by Chiba University and overseas universities hosts comprehensive science courses, which are available to students outside the specific field of study to cultivate wide-ranging graduate-level sophistication. This program establishes a World School to disseminate information around the globe.

### 【Global Human Resource on the project】

Industry related to plant environments should realize a 6<sup>th</sup>+4<sup>th</sup> industrialization **in cities**. Chiba University has partnered with Tsinghua University, Zhejiang University, and Yonsei University to **cultivate human resources capable of revolutionizing urban farming and greenification in East Asia where food culture based on rice is common**. This is accomplished by utilizing cutting-edge Japanese technologies and creating human resources capable of developing **plant environment innovations**.

### 【Feature on the project】

This program **strives to foster human resources who will lead the new 6<sup>th</sup>+4<sup>th</sup> industrialization in cities** and actualize the flagship double degree (master/doctorate) program in different fields (agriculture + engineering). Because this endeavor requires diverse knowledge, this program seeks to deepen students' interest in horticulture and engineering while allowing students the flexibility to pursue a degree based on their own goals.

### 【Exchange number】 <TypeA-②>

	2016	2017	2018	2019	2020
Accepted number in Japan	C 12	C 16	C 18	C 22	C 24
	K 12	K 15	K 15	K 15	K 10
Accepted number in China	J 10	J 20	J 20	J 20	J 20
	K 6	K 16	K 18	K 20	K 20
Accepted number in Korea	J 10	J 12	J 18	J 15	J 12
	C 6	C 16	C 18	C 20	C 24

# 1. FY2016 Progress

【CHIBA University】

【Name of project】(Adopted year: (Adopted year: FY2016, (Type A-② CAMPUS Asia )

## CAPE (Campus Asia Plant Environment innovation program)

### ■ Exchange Programs

In FY 2016, Chiba University, Tsinghua University and Zhejiang University in China, and Yonsei University in Korea each held at least one workshop for a total of five. A total of 263 students (including students not from partner universities) participated. An international symposium where faculty members and students from each university presented their research was held at the Kashinoha Campus, Chiba University in February. In FY 2017, each university continues to offer workshops as well as aims to increase the number of students participating in long-term study abroad programs.



Chiba University CAPE Winter Workshop in FY 2016

### Student-Mobility

#### ○ Outbound

Students were sent to workshops organized by three universities (Tsinghua University, Zhejiang University, and Yonsei University). These short-term workshops were fruitful and well attended. In fact, 55% more students than planned participated, and the feedback from faculty and students alike was positive. Although a long-term program was not established in FY 2016, these workshops have motivated students to seek long-term study abroad programs.

#### ○ Inbound

Chiba University's workshops hosted students from all three partner universities. These workshops were well attended. Student participation exceeded expectations by 45%. Of the almost 100 student and faculty members attending the international symposium in February, 34 were students from our partner universities. FY 2016 saw fewer students participate in long-term programs, but many students at partner universities were identified as potential long-term students.

<TypeA-②>

	2016
Accepted number in Japan	C 25 K 10
Accepted number in China	J 26 K 0
Accepted number in Korea	J 5 C 10

### ■ Forming the University Network with Quality Assurance

High quality workshops, which are in cooperation with partner universities, private businesses, and public offices, are implemented. Quality is ensured by mandating that each partner university send at least one faculty member to each workshop and requiring participants to study before and after each workshop. Afterwards, students who participate in the workshops are given a certificate of completion as well as credits after their work is graded. At Chiba University, all the courses offered in this program are considered graduate-level general education subjects and are registered as common courses among graduate schools.



The joint workshop at Yonsei University, Korea

### ■ Promotion of Student-Mobility Environment

Each program has more than one faculty member that coordinates the acceptance of students. These faculty members focus on the administration of the program. They support participants by providing sufficient information to ensure that the education and instruction are designed carefully. Additionally, amanuensis leads support by helping students access academic links and active learning zones in the program, prepare for presentation, and help procure necessary equipment and devices.

### ■ Internationalization of the university

#### Information disclosure and Publication of outcome

The CAPE project's website (<http://design-cu.xsrv.jp/cape/index.html>) includes descriptions of the workshops and their results. A CAPE-related large symposium was held in February, and a demonstration on the CAPE plant factory research at the Kashinoha Campus was held to share information with the public. The research conducted during the workshop held at Yonsei University in January will be reported in the field of design education at the October IASDR conference held at the University of Cincinnati.

### ■ Good Practices

Despite the short length of the six-month program in FY 2016, workshops were held at all partner universities. More students than originally planned participated in exchanges.

## 2. FY2017 Progress

【 CHIBA University 】

【Name of project】(Adopted year: ( Adopted year: FY2016, (Type A-② CAMPUS Asia )  
**CAPE (Campus Asia Plant Environment innovation program)**

### ■ Exchange Programs

In FY 2017, we conducted 11 programs (Excellent Summer Winter Programs) with partner universities, namely six at Chiba University, three in China, and two in South Korea, to promote student mobility and studying abroad. A total of 310 students (103 Japanese, 121 Chinese, 74 Korean, and 12 from other countries) participated. With an emphasis on industry-academia-government practical programs, we benefited from cooperation with KLITE, a lighting manufacturing company based in Zhejiang, China; KT (Korea Telecom), the largest telecommunication company in South Korea; and Chiba City Hall. In addition to deepening the relationships with our partner universities and companies, these exchange programs drastically advanced our education, research, and internship activities.



2017 Summer program in South Korea

### Student-Mobility

#### ○ Outbound

We dispatched our students to join the short-term programs conducted at Tsinghua University and Zhejiang University in China and Yonsei University in South Korea. A total of 20 students participated in three programs carried out in China, while 18 students joined two programs in South Korea. The program themes included the design of plant factories, beehives for observations at home, and landscaping for wetland restoration considering biodiversity. Moreover, we sent a graduate student to South Korea for nine months.

#### ○ Inbound

Chiba University hosted six programs in which we welcomed 42 Chinese students (20 were from partner universities), 42 South Koreans (12 from partner universities), and 6 students from other countries. The themes discussed during the programs included plant factory design, landscape design for urban greening, and information design. We also received six Chinese and three South Korean mid-to-long term trainees.

### ■ Forming the University Network with Quality Assurance

Programs with partner universities are composed of the two elements: workshop-style intensive sessions at our partner universities and a series of four to five sessions. Program participants receive a certificate of completion from the host university and earn credits. At Chiba University, we launched six subjects in the Master's program and four in the Doctorate program by including these subjects as part of the new liberal arts education program at the Graduate School.

### ■ Promotion of Student-Mobility Environment

Faculty members of Chiba University work with their counterparts at partner universities to facilitate the acceptance and dispatch of foreign students. Chiba University benefits from such cooperation with amanuenses to obtain support for matters not related to the educational content, to use academic links and active learning zones during the programs, to prepare for presentations, and to arrange for necessary equipment. At overseas host universities, we have strengthened the functions of the IEC (International Education Cooperation) office at Zhejiang University (Hangzhou City, Zhejiang Province, China). In FY 2016, we also opened an IEC office at Yonsei University, South Korea, to promote additional exchange activities.

### ■ Internationalization of the university

#### Information disclosure and Publication of outcome

Information about the CAPE (Campus Asia Plant Environment innovation) project and the achievement of workshops is available online (<http://design-cu.xsrv.jp/cape/index.html>). In addition, we distributed brochures on all these programs in English. On the Nishi Chiba Campus, as part of our efforts to disseminate information, we also demonstrated our research on urban beekeeping, which constitutes part of the project, and encouraged visitors to participate in practical experiences such as collecting honey. During the IASDR (International Association of Societies of Design Research) congress held at the University of Cincinnati last October, we presented on design education. Moreover, we presented the results of our workshops at a public symposium held at Yonsei University in January.



Brochures by program

### ■ Good Practices

Both in Japan and abroad, we actively promote time-shift internships linked with the courses at our university. Partner companies, who supervise these activities, include KLITE (China), KT (Korea Telecom, South Korea), and Chiba City Office (Chiba). This program enables students to realize a deeper understanding about their training and improve their learning efficacy.

<TypeA-②>

	2017
Accepted number in Japan	C 25 K 14
Accepted number in China	J 20 K 7
Accepted number in Korea	J 18 C 25