

# FY2016 Inter-University Exchange Project Nagasaki University

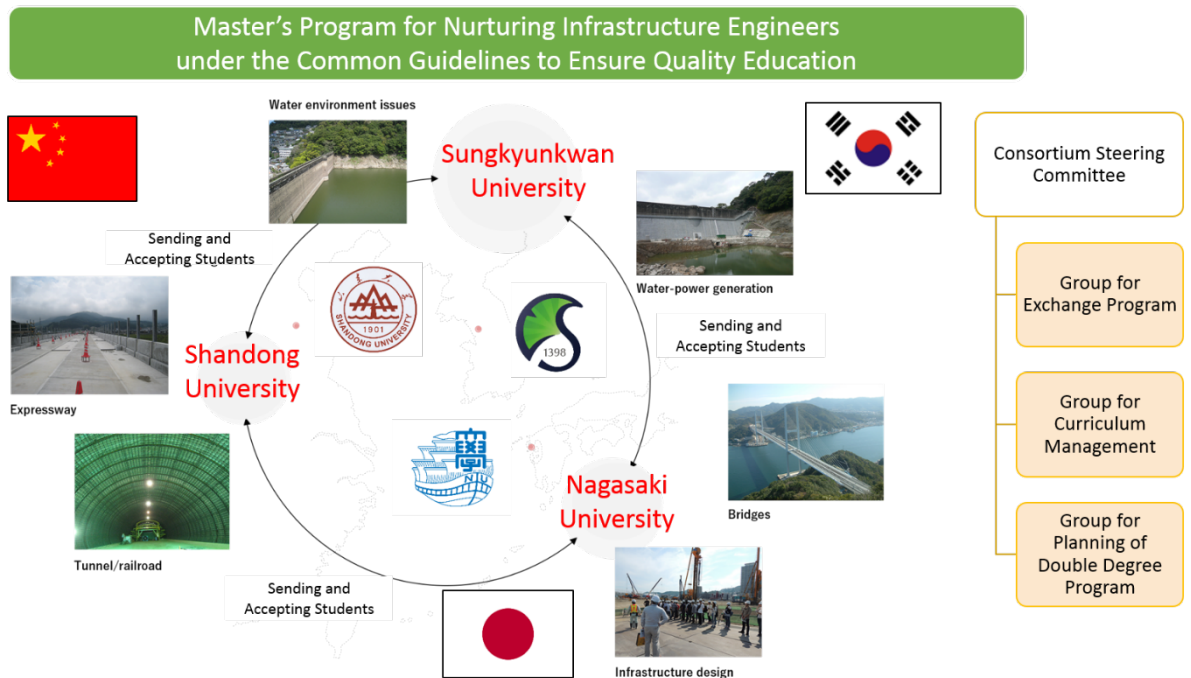
Support for the Formation of Collaborative Programs with Universities in Asia

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

China-Japan-Korea Intercollegiate Cooperative Project for Nurturing Leading Infrastructure Engineers

## 【Summary of Project】

The Master's Course of the Graduate School of Engineering, Nagasaki University, consists of seven courses as represented by the "Civil and Environmental Engineering Course" and "Water and Environmental Engineering Course". These infrastructure related courses will host students from China and Korea, and nurture their practical skills as professional engineers who can contribute to the maintenance of infrastructure in Asian countries under close cooperation with public sectors and domestic enterprises. Furthermore, Japanese students enrolled in these courses will be sent to the partner universities in China and Korea based on the credit-transfer system. They will attend lectures and activities conducted in English which are related to the infrastructure maintenance in these countries. This exchange program is aimed to equip these participating students with global perspective and skills necessary to contribute to the infrastructure maintenance in Asian countries.



**Student Mobility at the Master's Level based on « Credit Transfer System » + « Double Degree Program »**

- Application, admission or tuition fees of the participating exchange students will be waived based on the trilateral agreement among the Graduate School of Engineering, Nagasaki University, the School of Civil Engineering, Shandong University and the Graduate School of Water Resources, Sungkyunkwan University.

## 【Summary of Exchange program】

10 graduate students from each partner university will participate in the reciprocal exchange program (6 months) based on the credit transfer system. In addition to the specialized education curriculum in each university, the "Curriculum for Infrastructure Maintenance Engineering" will be jointly developed. The double-degree program will also be launched by FY2019 to further promote intercollegiate student exchange.

## 【Global Human Resource on the project】

This project aims to develop infrastructure engineers or highly professionals with practical skills necessary to contribute to solving the issues related to infrastructure maintenance in Asian countries.

- Human resources with specialized knowledge and skills about infrastructure maintenance and related technology
- Human resources with general knowledge of overall infrastructure maintenance
- Human resources with English communication skills necessary as global professionals

## 【Feature on the project】

This project focuses on the issues related to infrastructure maintenance in Asian countries based on the past collaboration experience among Japan, China and Korea. Positioned as one of the leading projects in the long-term strategy of Nagasaki University, it is expected to achieve its outcome to develop infrastructure engineers or highly professionals in the area of civil infrastructure as represented by structural engineering, geotechnical engineering, and water and environmental engineering (including environmental engineering and chemical engineering).

## 【Exchange number】

<TypeA-②>

	2016	2017	2018	2019	2020
Accepted number in Japan	C 0	C 5	C 5	C 5	C 5
	K 0	K 5	K 5	K 5	K 5
Accepted number in China	J 3	J 5	J 5	J 5	J 5
	K 0	K 5	K 5	K 5	K 5
Accepted number in Korea	J 3	J 5	J 5	J 5	J 5
	C 0	C 5	C 5	C 5	C 5

# 1. FY2016 Progress

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

China-Japan-Korea Intercollegiate Cooperative Project for Nurturing Leading Infrastructure Engineers

## ■ Exchange Programs

The academic agreement along with MOU on student exchange have been concluded to ensure the trilateral relationship among partner universities. Trial program was also conducted for both outbound and inbound students in order to find issues to be addressed before the implementation of 6 months exchange program starting in FY2017.



Experimental Laboratory of Sungkyunkwan University, Korea

<Type A-②>

	2016
Accepted number in Japan	C 0 K 3
Accepted number in China	J 2 K 0
Accepted number in Korea	J 2 C 0



Research Presentation at Shandong University, China

## Student-Mobility

### ○ Outbound

4 graduate students from Nagasaki University participated in 4 weeks trial program from February to March. Shandong University, China and Sungkyunkwan University, Korea accepted 2 students each. This trial program helped find specific issues related to accommodation or daily lives at host university.

### ○ Inbound

Based on the request from Sungkyunkwan University, Korea, Nagasaki University hosted 3 graduate students from Sungkyunkwan University for 2 weeks in the middle of January. The participating students attended the lectures conducted in English, which were offered by the Water and Environmental Engineering Course.

## ■ Forming the University Network with Quality Assurance

Under the “Consortium Steering Committee” for the project management, three groups, namely “Group for Exchange Program”, “Group for Curriculum Management” and “Group for Double Degree Program”, have been implemented for the purpose of smooth operation of this project. These groups will play the most important role in leading the exchange program under the common guidelines for ensuring quality education.

On March 23, 2017, the 1<sup>st</sup> Consortium Steering Committee was held in Nagasaki University. All the staff members of this project from China and Korea gathered to strengthen the trilateral partnership and to further promote the project.

## ■ Promotion of Student-Mobility Environment

In order to prepare for the implementation of student mobility based on the credit transfer system, Nagasaki University took initiative in organizing round-table meeting among partner universities to confirm the details of student exchange, the application process, student mobility schedule, and financial support for students offered by each university. Nagasaki University also hired bilingual staff who can speak Chinese and Korean to accommodate both incoming and outgoing students before, during and after their stay abroad.

## ■ Internationalization of the university

### Information disclosure and Publication of outcome

Nagasaki University outsourced photo shooting of the campus pictures at Sungkyunkwan University and Shandong University, including university building, library, dormitory and laboratory, for their use of public relations. Partner universities also created a shared logo for promoting the Consortium. The website has been newly created to promote this project in and outside of the university, displaying a number of pictures related to student’s campus life.



Consortium Logo

## ■ Good Practices

- The President of Nagasaki University attended the 1<sup>st</sup> Trilateral Rector’s Forum held in Seoul, Korea on December 13, 2016 to deliver an opening speech at the CAMPUS Asia Launching Ceremony. He showed his strong commitment on the project in front of the participants from universities and ministries of China, Korea and Japan.

- 4 graduate students from Nagasaki University participated in 4 weeks trial program at Shandong University, China and Sungkyunkwan University, Korea. This trial program has turned out to be very valuable in preparing for the implementation of student exchange starting in FY2017.

# 2. FY2017 Progress

**[Name of project]** (Adopted year: (Adopted year: FY2016, (Type A-② CAMPUS Asia))

**China-Japan-Korea Intercollegiate Cooperative Project for Nurturing Leading Infrastructure Engineers**

## ■ Exchange Programs

The year of 2017 marks the second year since the inception of this project. During this time, three universities organized regular round-table meetings every three months, and carried out successful inbound and outbound exchange of students based on the credit transfer system during the period of September, 2017 to February, 2018. With the great dedication of these three universities towards concluding the agreements for the double degree program and its practice guidelines, the documents were successfully signed at the end of March, 2018, at the second Consortium Steering Committee for Nurturing Leading Infrastructure Engineers.

## Student-Mobility

### ○ Outbound

Based on the credit transfer system, one graduate student was sent to Shandong University, China, and three graduate students were sent to Sungkyunkwan University, Korea. The outbound exchange of these students marked the beginning of a full-fledged outbound exchange program of the students at Nagasaki University. In addition, the students who participated in the program became aware that they are expected to play an active role in the international community.

### ○ Inbound

Based on the credit transfer system, Nagasaki University accepted five graduate students from Shandong University, China, and five graduate students from Sungkyukwan University, Korea as special audit students between the end of August, 2017 and the end of February, 2018. Their devotion to study greatly inspired local Nagasaki University students who chose to stay at their home institution. Through communicating with inbound students in the laboratories, Japanese students realized the importance of, and the need to become more internationally-minded.

## ■ Forming the University Network with Quality Assurance

Under the board of the Consortium Steering Committee for Nurturing Leading Infrastructure Engineers, a "Group for Curriculum Management" and "Group for Double Degree Program" were implemented for the purpose of ensuring efficient and smooth operation of the program. In 2017, each group conducted a round-table meeting at the end of May and December at Shandong University, China, and at the end of August at Sungkyukwan University, Korea. In 2018, the groups also conducted a round-table meeting at the end of March at Nagasaki University. As a result of the meetings, the agreement for the double degree program and its practice guidelines were fully developed and prepared for the signing at the second Consortium Steering Committee for Nurturing Leading Infrastructure Engineers, held on March 28-31, 2018.

## ■ Promotion of Student-Mobility Environment

Japanese lessons were offered to the inbound exchange students to provide the opportunity for them to learn basic Japanese skills. This opportunity helped inbound students to decrease their uneasiness about daily life in Japan. Participating inbound students requested further instruction in Japanese skills, and basic conversational Japanese lessons were additionally offered by international coordinators who are fluent in Chinese or Korean. In total, 19 lessons (90 minutes per lesson) were offered during the period of October, 2017 to February, 2018. As for the outbound students, a briefing session for the outbound exchange program was held to explain the schedule of the program, deadline for application, and the content of financial support. The briefing session was productive in terms of helping prospective outbound students to make informed decision about participating in the exchange program.

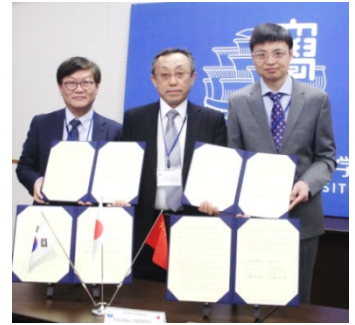
## ■ Internationalization of the university

### Information disclosure and Publication of outcome

Creating promotional brochures both in Japanese and English enabled Nagasaki University to publicize its participation in the program not only to the students in partner universities but also to students worldwide. In addition, Nagasaki University upgraded its website for the project in July 2017 to provide the Chinese and Korean translated version of the website, making it possible to provide clear image of the study abroad program to students inside and outside of Japan.

## ■ Good Practices

With the successful signing of the agreement and practice guidelines for the double degree program, students are now able to utilize the double degree system a year earlier than it was originally planned. Furthermore, five Japanese students and one Chinese student (a senior student at Engineering Department) participated in 4-week summer program about infrastructure at Sungkyunkwan University from July 24 to August 18, 2017. The program turned out to be a great opportunity for the students, as they were able to learn the current situation and issues of infrastructure development in Korea. This opportunity is also expected to encourage outbound students to join this project, beginning in 2019.



The Second Consortium Steering Committee for Nurturing Leading Infrastructure Engineers

<TypeA-②>

	2017
Accepted number in Japan	C 5
	K 5
Accepted number in China	J 1
	K 2
Accepted number in Korea	J 3
	C 5



Orientation for Inbound Students



International Exchange Event at Sungkyunkwan University



Exchange Program Completion Ceremony at Shandong University



Summer Program at Sungkyunkwan University

# 3. FY2018 Progress

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

China-Japan-Korea Intercollegiate Cooperative Project for Nurturing Leading Infrastructure Engineers

## ■ Exchange Programs

In the round-table meetings held every four months, we deliberately discussed and shared information about the supervision and review process during the long-term (one year) student exchange based on the Double Degree Program (“DD Program”) in order to deepen the mutual understanding of the learning outcomes expected from the program. Site Visit as part of CAMPUS Asia Monitoring+ was also conducted at Shandong University, China, where the project representatives and managers exchanged their ideas from multilateral perspectives. The expert team consequently suggested that the DD Program and the joint “International Course in Civil Infrastructure Maintenance” should be continually improved to offer more attractive contents and ensure the quality of education for this project. Furthermore, considering the third phase of CAMPUS Asia Program (expansion to other universities in ASEAN countries), the “International Symposium on Infrastructure Maintenance and Management in Asia” was held at Nagasaki University, which enabled us to consolidate expertise on nurturing leading infrastructure engineers.

## Student-Mobility

### ○ Outbound

In 2018, five Japanese students participated in the summer school (Aug. 4-18) at Sungkyunkwan University, Korea whereas four Japanese students participated in the summer school (Aug. 12-25) at Shandong University, China. Moreover, two graduate students (including one international student) studied at Sungkyunkwan University, Korea between early September 2018 and the end of February 2019 based on the credit transfer system in this project. Another two Japanese graduate students were sent to Shandong University, China based on the DD Program which has fully started this year.

### ○ Inbound

Based on the credit transfer system, Nagasaki University accepted five graduate students from Shandong University, China, and four graduate students from Sungkyunkwan University, Korea between early September 2018 and the end of February 2019. Their devotion to study greatly inspired local Nagasaki University students, and some educational ripple effect was seen.

## ■ Forming the University Network with Quality Assurance

Under the board of the Consortium Steering Committee for Nurturing Leading Infrastructure Engineers, a “Group for Curriculum Management” and a “Group for Double Degree Program” were implemented for the purpose of ensuring efficient and smooth operation of the project. In 2018, each group conducted round-table meetings at the end of August (Aug. 29-31) in Seoul, Korea, in the middle of December (Dec. 17-19) in Jinan, China and at the end of March (Mar. 28-31) in Nagasaki, Japan, respectively. The topics varied from preparation for the Monitoring+ initiative, implementation of the “pre-departure research supervision system for master’s thesis” and re-confirmation of the joint “International Course in Civil Infrastructure Maintenance”, to drafting and finalizing an agreement on internship for participating students in the DD Program. We further discussed to draft the DD Program guidelines as to when and how to conduct a thesis defense meeting and who should be involved in the defense process.

## ■ Promotion of Student-Mobility Environment

In September 2018 before the fall semester started, Japanese lessons were offered to the inbound exchange students to provide the opportunity for them to learn basic Japanese skills. This opportunity helped these students to decrease their uneasiness about daily life in Japan. In response to their request for further instruction in Japanese skills, basic conversational Japanese lessons were continually offered from October 2018 to February 2019 for more than 20 times (90 minutes per lesson). As for the outbound students, a briefing session for the outbound exchange program was held to explain in advance about the schedule of the program, deadline for application, and the content of financial support. Preparatory language lessons were also provided by international coordinators who are fluent in Chinese or Korean, and additionally, “Special English Seminars” were provided by a qualified English teacher to help them improve their language skills intensively.

## ■ Internationalization of the university

### Information disclosure and Publication of outcomes

To enhance the security of the exclusive website for this project as well as to enrich its contents, the server was relocated to the administrative office within the campus. This has enabled to disclose and update project-related information on the website more easily and securely. As part of the “International Symposium on Infrastructure Maintenance and Management in Asia” which was held in the end of March 2019 at Nagasaki University, two outbound graduate students who studied in Korea under the credit transfer system in 2018 presented their experiences in English in front of the audience including international visitors. The event served as an opportunity to publicize the outcome of the project in and outside of campus.

## ■ Good Practices

One of the undergraduate students who had participated in the “Summer School on Infrastructure” hosted at Sungkyunkwan University, Korea during the summer break in 2017 showed strong interest in the long-term (one year) exchange program base on the DD Program. He decided to continue his study and research at the Graduate School of Engineering, and from early September 2018, he started the DD Program at Shandong University, China. His academic performance has been highly recognized by the supervisor at Shandong University.



International Symposium on Infrastructure

<TypeA-②>

	2018
Accepted number in Japan	C 5 K 4
Accepted number in China	J 6 K 15
Accepted number in Korea	J 7 C 35



Onsite Field Trip for Inbound Students



Exchange with International Students at Shandong University



Summer Program at Sungkyunkwan University

## 4. FY 2019 Progress

**【Name of project】** (Adopted year: FY 2016 Type A-② CAMPUS Asia)

**China-Japan-Korea Intercollegiate Cooperative Project for Nurturing Leading Infrastructure Engineers**

### ■ Exchange Programs

The project in the FY 2019 mostly progressed smoothly despite the effect of the Covid-19 pandemic in latter half.

○The student exchange programs of Summer school, Short-term study abroad and Double Degree were successfully carried out between three universities. A total of 82 exchange students participated in the programs for FY2019.

○Two Japanese students who have studied in the partner university under the Double Degree Program since 2018 were awarded master's degree.

In last March, due to Covid-19, students' presentations on their achievement were conducted by a small group of professors. In the presentations, students' living environment, classes and their research activities on their master thesis were reported. Information of their experience and opinions will be useful for continuous improvement of the project.

### ○ Student-Mobility

#### ○ Outbound

As for the Summer school program, seven undergraduate students participated at Sungkyunkwan University (SKKU) in South Korea, and two undergraduate students participated at Shandong University (SDU) in China. Based on the credit transfer system, one student each participated at SKKU and SDU, and 6 credits were certified by Nagasaki University (NU) for each student.

#### ○ Inbound

The summer school, held at NU for the first time, included 12 students from SKKU and 18 students from SDU. Based on the credit transfer system, one student each from SKKU and SDU participated as special auditing students of the Graduate School of Engineering at NU. Furthermore, three students from SDU under the Double Degree Program have been accepted at NU.

### ■ Forming the University Network with Quality Assurance

Ensuring the efficiency and the smooth operation of the project, the sub-committee of "Curriculum Management" and "Double Degree Program" were created.

Discussion on examination criteria, judge membership, and implementation method for the master's thesis defense were carried out in the Round Table Meetings for FY 2019, held in the mid August (Qingdao, China) and the mid December (Nagasaki, Japan).

The Double Degree Program commenced to guarantee the quality of education, and a research guidance meeting on academic dissertations among academic advisors and students was held at the same time. The Consortium Steering Committee Meeting in Korea was postponed because of the Covid-19 outbreak.

### ■ Promotion of Student-Mobility Environment

To reduce inbound students' concerns about daily life in Japan, the project offered them beginner-level Japanese language training to acquire the very basic Japanese before the commencement of the lectures in September. Additional Japanese classes by the international coordinator were carried out after the start of the semester. The international coordinators' 24-hour support system on inbound exchange students' daily life and studies was established.

Well-managed support for outbound Japanese students was offered by giving advice on scholarship, studies, daily life and crisis management through on-campus orientations, individual interviews and emails before departure. Offering the outbound students a real-time support system via SNS from the international coordinators during their study abroad period helped students decide to participate in the program. The language training by Chinese and Korean coordinators were provided in order to improve language skills intensively, and an off-campus English instructor was invited and offered "English language improvement course" as well. Along with the implementation of student exchange, the faculty members in charge of the project in three universities also closely cooperated and shared information.

### ■ Internationalization of the University

#### Information Disclosure and Publication of Outcomes

The project's website has been updated regularly, releasing latest news and events to promote the project. In order to advertise the project widely, on-campus briefing sessions including report of previous participants are conducted often. The project report of the External Evaluation Committee was also distributed to companies and organizations along with the pamphlet to widely disclose the contents of the efforts of this project.

#### ■ Good Practices

Two Japanese Double Degree Program students presented their master's thesis defense in English at each university, and they were awarded master's degrees in both NU and SDU at the end of last March. By forming common subjects on infrastructure between the three universities as part of the Double Degree Program, the mutual exchange of faculty members among the universities was implemented and lectures were given. As a result, not only for the participants of the programs, it also gave great opportunities for other engineering students of each university to experience international exchange.



The 12<sup>th</sup> Round Table Meeting in Nagasaki

<TypeA-②>

	2019
Accepted number in Japan	C 22 K 13
Accepted number in China	J 3 K 27
Accepted number in Korea	J 8 C 9



Field Study by students accepted at NU



Summer School Program at SKKU



Short Term Exchange Program at SDU

# 5. FY2020 Progress

[Nagasaki University]

**[Name of project]** (Adopted year: FY 2016 Type A-② CAMPUS Asia)

**China-Japan-Korea Intercollegiate Cooperative Project for Nurturing Leading Infrastructure**

**Engineers**

## Exchange Programs

The global pandemic of COVID-19 has affected our project to a large extent. The implementation of the student exchange program has become especially difficult, which resulted in only five students exchanged in total in FY2020.

○ Three exchange students who had been accepted to Nagasaki University under the Double Degree Program since FY2019 went back to Shandong University, China by early September 2020. They gave their presentation online for the master's thesis defense and took the final examination in February 2021. Then they were awarded master's degrees from Nagasaki University on March 25, 2021.

○ For the last project year, the Consortium Steering Committee for Nurturing Infrastructure Engineers and the External Evaluation Committee were both held online. We produced a final project report which incorporated the external perspective as well as our self-evaluation. The report was uploaded to our website to share the information and make the outcomes accessible to a broader audience.

## Student-Mobility

### Outbound

In a hope to continue student mobility as long as possible, we considered postponing the summer school program until winter. Due to the pandemic situation, however, Nagasaki University decided on July 1, 2020, to cancel sending students abroad because of safety concerns. Therefore, no students were exchanged from Nagasaki University in FY2020 even though it was the last project year. We also considered an alternative exchange program through online lectures, but due to the challenges with the credit transfer system, it has not been implemented so far in FY2020.

### Inbound

In accordance with Nagasaki University's guideline as of July 1, 2020, on accepting international students, we were unable to host any short-term exchange students under the summer program or the credit transfer system since they were categorized as "irregular students." On the other hand, we accepted four graduate students from Shandong University under the Double Degree Program who were in a category of "regular students." They arrived in Nagasaki in the late November 2020, which was about three months later than originally planned. Also, three exchange students who had been accepted as the first batch of the Double Degree Program completed the program and were awarded master's degrees from Nagasaki University on March 25, 2021.

## Forming the University Network with Quality Assurance

To continue our efforts for ensuring the quality of education, round-table meetings were conducted online several times. The second external evaluation was also performed online on March 17, 2021, which consisted of external experts. The Committee conducted a comprehensive project review from various perspectives based on our achievements over the past five years. They pointed out the extreme importance of online exchange under the coronavirus pandemic, and they recommended to seek opportunities to use online tools that enable students from three universities to attend lectures and get to know each other. The final Consortium Steering Committee also took place on March 26, 2021, where we had a frank exchange of views about general evaluation and continuous improvement of the project. Through these initiatives, the importance of educational quality assurance in globalization, which is the core of our project, has been once again recognized and shared among the participating universities.

## Promotion of Student-Mobility Environment

Prior to departure, online orientation was offered several times for four graduate students from Shandong University on their the summer vacation. During their quarantine period at the hotel after their entry to Japan, specific guidance was provided on how to take online lectures, conduct research assignments, as well as on their scholarships, daily life tips, and crisis handling. All these efforts helped students start studying in Nagasaki comfortably regardless of the pandemic. The international coordinators' 24-hour support system was established to provide more tailor-made support for inbound exchange students. We also combined online lectures and face-to-face lectures for course studies, research activities and Japanese lessons in the fourth quarter in FY2020. Such hybrid learning was introduced to ensure continuous learning while maintaining the health condition of students under the pandemic.

As for outbound students, an on-campus briefing session was conducted in June 2020. Four to five students showed their interest in short term study at Sungkyunkwan University, but we were unable to send them due to the pandemic.

## Internationalization of the university, Information disclosure and Publication of outcome

The project's website has been updated regularly, releasing the latest news and events to a wide audience. On-campus briefing sessions and reporting sessions have been conducted online to share widely information about studying abroad and the students' own experience. A student survey has been used to get feedback about the program and share the results among the three universities. The final project report as well as the findings of the External Evaluation Committee were also distributed to related companies and institutions along with a pamphlet to broadly disclose the efforts of the project.

## Good Practices

All three students from Shandong University who had been accepted to Nagasaki University as the first batch of the Double Degree Program were awarded master's degrees from Nagasaki University. To ensure educational quality of the Double Degree Program, supervisors of Shandong University participated in the students' thesis defense online as sub-judges of Nagasaki University, which allowed both universities to officially verify that the research meets the requirement for quality of education and research. We have further established a system to provide online lectures through the joint "International Course in Civil Infrastructure Maintenance," which has been developed as part of the Double Degree Program. This joint course consists of eight online classes related to infrastructure, with four classes offered respectively from Shandong University and Sungkyunkwan University. It is available for students at Nagasaki University as one of its common subjects.



The Fourth Consortium Steering Committee for Nurturing Infrastructure Engineers (Online Meeting on March 26, 2021)

<TypeA-②>

	2020
Accepted number in Japan	C 4 K 0
Accepted number in China	J 0 K 0
Accepted number in Korea	J 0 C 1



The External Evaluation Committee in Japan (Online Meeting on March 17, 2021)



Field Trip to See a Tunnel Construction Project ordered by Nagasaki Prefecture. (Sasebo city on February 1, 2021)