

FY2016 Inter-University Exchange Project Kyushu University

Support for the Formation of Collaborative Programs with Universities in Asia



[Name of project] (Adopted year: FY2016, (Type A-①) **CAMPUS Asia**)

Cooperational Graduate Education Program for the Development of Global Human Resources in Energy and Environmental Science and Technology - A New Challenge -

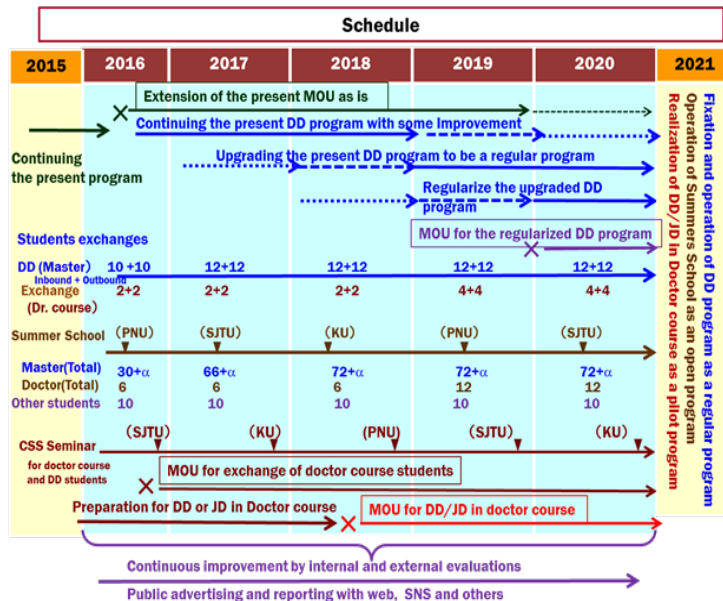
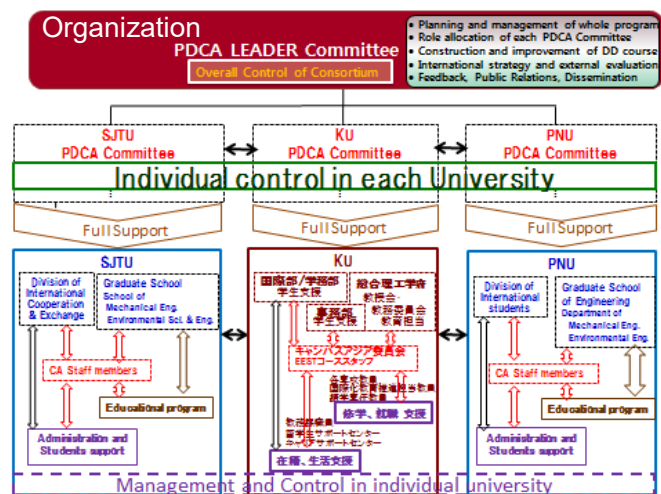
[Summary of Project]

The here-proposed new program takes over the previous purposes. Moreover it challenges following new three targets;

- (1) Fixation and operation of the DD program developed in the previous CA program as a regular program
- (2) Operation of Summer School as an open program with trial to charge school fees from students exterior of the EEST course
- (3) Realization of double degrees or joint degree (DD/JD) in doctoral course as a pilot program with quality assurance in awarding DD/JD as well as Credits given in the program to regularize the DD/JD program in their graduate schools and to extend the program to involve more students with openness, progressiveness and universality in science and engineering field.

[Summary of Exchange program]

Organization and annual schedule are given in the down side figures. For DD course students in master course, one semester exchange and attendance of two times of Summer School (SS) are mandatory. Accordingly 30 - 36 DD students in total (10-12/each university) will stay at Host Universities and 66-72 (except the first year) attend SS annually. Some will attend a research seminar named CSS Seminar. CSS Seminar is organized mainly for doctoral course students and 10-20 students from each university will attend. In addition to that, exchange program for doctoral course students will be established for the future DD/JD program.



[Global Human Resource on the project]

We aim to cultivate human resources who possess

- (1) highly specialized expertise and research development skill based on the expertise,
- (2) understanding of current energy and environmental issues and progressive investigation skill,
- (3) globally-competent English language skill,
- (4) professional ethics required for researchers and engineers in the globalized era as well as understanding of different cultures/races/societies.

[Feature on the project]

This program is designed to be fully quality-assumed graduate educational system and to enable awarding DD for the cultivation of globally-competent human resources in EEST who have profound knowledge of the specialized and related fields of EEST as well as ability of practical application of the expertise globally. After 4 years of the program operation, 72 students were awarded DD until March 2017.

[Exchanged Students]

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------------------|--------------|--------------|--------------|--------------|--------------|
| Accepted number in Japan | C 6 K 6 | C 37 K 37 | C 43 K 43 | C 8 K 8 | C 38 K 38 |
| Accepted number in China | J 36 K 36 | J 51 K 46 | J 7 K 7 | J 38 K 38 | J 56 K 51 |
| Accepted number in Korea | J 39 C 44 | J 7 C 7 | J 37 C 37 | J 56 C 46 | J 8 C 8 |

1. FY2016 Progress

【Name of project】(Adopted year: (Adopted year: FY2016, (Type A-①)**CAMPUS Asia**
**Cooperational Graduate Education Program for the Development of Global Human Resources
 in Energy and Environmental Science and Technology - A New Challenge -**

■ Exchange Programs



〈Spring Seminar in SJTU
2016/4/26~4/28〉



〈Summer School in PNU
2016/8/16~8/26〉



〈Kick-off Symposium in KU
2017/2/22〉

◆ Spring Seminar in SJTU

12 KU students joined Spring Seminar hosted by SJTU in April.

◆ Summer School in PNU

29 students participated in Summer School hosted by PNU.

Interim Appraisal was conducted for M2 students as one of the processes for DD.

◆ CSS EEST 18th Seminar in SJTU

49 students including doctoral students joined CSS EEST seminar hosted by SJTU to share research interests and exchange opinions.

◆ Student exchange of Master course

10 DD students were accepted and 7 DD students were dispatched for one semester as the student exchange program. Credits were transferred to/from each university.

◆ Student exchange of Doctoral course

As a trial run for the implementation of DD/JD program, 1 Doctoral course student was dispatched and 5 students were accepted.

◆ Joint International Symposium with Yonsei University (SKY 3rd) in KU

As the series of the SKY symposium, KU hosted 3rd symposium inviting some professors from Yonsei University.

◆ CA 2nd stage Kick-off Symposium in KU

KU hosted Kick-off Symposium to relaunch CA program in FY 2016.

◆ Spring Seminar and Field trip to Kagoshima

KU conducted Spring seminar and field trip to Kagoshima right after Kick-off Symposium with PNU and SJTU members for 3 days.

■ Student-Mobility

○ Outbound

Total of 102 students including 7 DD students were dispatched.

○ Inbound

Total of 50 students including 10 DD students were accepted.

■ Forming the University Network with Quality Assurance

○ International PDCA committee meeting

PDCA Meeting was held 4 times to discuss several issues.

○ Signing ceremony for the MOU at the Kick off Symposium

For extension of students exchange agreement aiming DD (MOU), the signing ceremony was held at the Kick-off symposium. Three representatives of consortium universities were attended.



From left :Prof. Yang Shengrong (SJTU),
Prof. Akira Harata (KU), and Prof. Lee Suk (PNU)

■ Promotion of Student-Mobility Environment

○ Financial Aids and supports on Daily life

- Scholarship was paid to each students by JASSO program.
- DD students were exempted to pay tuition fee and matriculation fee to a host university under the agreement.
- Detailed information and supports were given to each student at the start of the stay in a foreign country.

■ Internationalization of the university

Information disclosure and Publication of outcome

CA was awarded MEXT Minister's Award in Engineering Education

| | 2016 |
|-----------------------------|--------------|
| Accepted number in Japan | C 29 K 21 |
| Accepted number in China | J 70 K 88 |
| Accepted number in Korea | J 32 C 51 |

2. FY 2017 Progress

【Name of project】 (Adopted year: FY2016 (Type A-①) **CAMPUS Asia**)

Cooperational Graduate Education Program for the Development of Global Human Resources in Energy and Environmental Science and Technology - A New Challenge -

■ Exchange Program



Field Trip to Kitakyushu

◆ **Field Trip to Kitakyushu area (June/July, 2017)**

20 students, including 10 exchange students, joined a scientific tour and field trip to Kitakyushu area for 2 days.

◆ **Summer School in SJTU (Aug. 9~20, 2017)**

Total of 96 students, (KU 27, PNU 34, SJTU 35) participated in Summer School, hosted by SJTU. Interim Appraisal was conducted for M2 students as one of the processes for DD program.

◆ **Student Exchange of Master course**

11 DD students were accepted and 9 DD students were dispatched for one semester as the student exchange program. Credits were transferred to/from each university.

◆ **Student Exchange of Doctoral course and Non-DD student**

As a trial run for the implementation of DD/JD program, 2 Doctoral course students from SJTU were accepted, and 1 Non-DD student was dispatched to PNU.

◆ **CSS-EEST 19th Seminar in KU (Nov/Dec, 2017)**

KU hosted CSS-EEST 19th Seminar aiming to promote international students exchange, and total of 173 students among 3 universities participated.

◆ **Spring Seminar in PNU (Feb, 2018)**

PNU conducted Spring Seminar held in Gyeongju, Korea, and 11 EEST course students joined and fulfilled international research exchange for 3 days.



Summer School (SJTU)



Spring Seminar (PNU)

■ Student-Mobility

○ Outbound

Total of 50 students were dispatched, including 9 DD students (6 to SJTU, 3 to PNU), 27 students to Summer School (SJTU), 11 students to Spring Seminar (PNU), and 1 Non-DD student to PNU.

○ **Inbound** Total of 120 students were accepted, including 11 DD students (8 from SJTU, 3 from PNU), 107 students (30 from SJTU, 77 from PNU) at CSS-EEST seminar and 2 doctoral students.

■ Forming the University Network with Quality Assurance

○ Joint appraisal for the Master thesis defense

To review and evaluate Master thesis of DD students, review committees were jointly organized within 2 universities (KU-PNU, KU-SJTU, PNU-SJTU).

○ Program management by PDCA committees

PDCA meetings were held to discuss several issues for the management and improvement. They were conducted 3 times in 2017.

○ CSS-EEST 19th Seminar in KU

KU hosted the 19th CSS-EEST research seminar aiming to promote international students exchange and total of 173 students among three universities participated.

■ Promotion of Students-Mobility Environment

○ Efforts to promote outbound students to PNU/SJTU

CA faculties in PNU and SJTU supported recruitment activities for new DD candidates and follow-up the academic guidance at the host university.

○ Efforts to promote inbound students to KU

CA orientation was done for new exchange students to support and give detailed information about the classes or lives at the start of the stay in a foreign country.

○ Financial aids and supports

Scholarship was paid to each student by JASSO program to make the financial support for living abroad. DD students were exempted to pay tuition and matriculation fee to the host university under the agreement.

| | 2017 |
|--------------------------|--------------|
| Accepted number in Japan | C 40 K 80 |
| Accepted number in China | J 33 K 36 |
| Accepted number in Korea | J 15 C 18 |

■ Internationalization of the university

Information disclosure and Publication of outcome

The latest information on the program was accordingly updated on the website.

In addition, the newsletters and the program report 2018 at the end of the fiscal year were respectfully sent to all partners to share the information and the outcome of the program.

■ Good Practices

For students participating in the program, the questionnaires were conducted to widely gather information and opinions about their study and environment in the host university, and the program. And, they were also conducted to their supervisors to know the outcome and the pros and cons of the program.

3. FY2018 Progress

【Kyushu University】

【Name of project】 (Adopted year: FY2016 (Type A-①) CAMPUS Asia)

Cooperational Graduate Education Program for the Development of Global Human Resources in Energy and Environmental Science and Technology – A New Challenge –

■ Exchange Program



Summer School in Kyushu Univ.

◆ Summer School in Kyushu University (Aug. 17~29, 2018)

KU hosted Summer School, and the total of 92 students among 3 Universities participated. Interim Appraisal was conducted for M2 students as one of the processes for DD program. And, all M1 and M2 students joined a scientific tour to Next Generation Energy Park in Kitakyushu area for studying renewable energy.



20th CSS-EEST Seminar in Busan

◆ Student Exchange for Master Course DD (Spring/Fall, FY2018)

10 students were accepted, and 6 students were dispatched for one semester as the Double Degree student exchange program.

◆ CSS-EEST 20th Seminar in Busan (Nov. 26~28, 2018)

PNU hosted the 20th CSS EEST research seminar aiming to promote international student exchange, and the total of 124 students among 3 Universities participated.

■ Student-Mobility

○ Outbound

The total of 43 students were dispatched, 6 DD students to PNU and SJTU, and 37 students to CSS-EEST 20th Seminar in Busan.

○ Inbound

The total of 87 students were accepted, including 10 DD students from SJTU and PNU, and 73 students for Summer School, and Sky-4.

■ Forming the University Network with Quality Assurance

○ Joint appraisal for the Master thesis defense

To review and evaluate Master thesis of DD students, review committees were jointly organized, and DD defense was conducted within 2 Universities (KU-PNU, KU-SJTU, PNU-SJTU).

○ Program management by International PDCA committees

PDCA meetings were held to discuss several issues for management and improvement of the program, and they were conducted 2 times on August and November in FY2018.

○ CSS-EEST 20th Seminar in Busan

PNU hosted the 20th CSS-EEST research seminar aiming to promote international students exchange and research exchange. The total of 124 students among 3 Universities, 37 KU, 32 SJTU, and 55 PNU participated.

■ Promotion of Students-Mobility Environment

○ Efforts to promote outbound students to PNU/SJTU

CA Chinese and Korean faculties in PNU and KU supported recruitment activities for new DD candidates and follow-up the academic guidance for DD students at the host university.

○ Efforts to promote inbound students to KU

CA orientation was done for new exchange students to support and advice on the KU courses and lives in a foreign country. In addition, student supporters were provided to help and improve the environment in the campus life.

○ Financial aid and supports

Scholarship was paid to each student by JASSO program to make the financial support for living abroad. DD students were exempted from paying tuition and matriculation fee to the host university under the agreement.

■ Internationalization of the University

Information disclosure and Publication of outcome

The latest information of the program was accordingly updated on the website. And the newsletters and the annual report of FY2018 were respectably sent to all partners to share the information and the outcome of the program.

■ Good Practice

For the students participating the program, the questionnaires were conducted to widely gather information and opinions to improve the program. And they were also conducted to the supervisors of DD students to know the outcome and the pros and cons of the program.

| | FY2018 |
|--------------------------|--------------|
| Accepted number in Japan | C 40 K 47 |
| Accepted number in China | J 4 K 3 |
| Accepted number in Korea | J 39 C 36 |

4. FY2019 Progress

【Kyushu University】

【Name of project】 (Adopted year: FY2016 (Type A-①) CAMPUS Asia)

Cooperational Graduate Education Program for the Development of Global Human Resources in Energy and Environmental Science and Technology – A New Challenge –

Exchange Program



Spring Seminar in SJTU



Summer School in PNU



21st CSS-EEST Seminar in SJTU

◆ Spring Seminar in Shanghai Jiao Tong Univ. (Sep. 10~12, 2019)

Spring Seminar was held at SJTU, and 7 EEST course students from KU attended and learned about Energy and Environmental Sciences for 3 days.

◆ Summer School in Pusan National Univ. (Aug. 16~29, 2019)

PNU hosted Summer School, and the total of 62 students among 3 Universities participated. Interim Appraisal was conducted for M2 students as one of the main processes for DD program. Through the lab exercises for M1 students and other group learning activities, the students from 3 Universities deepened their international exchange.

◆ CSS-EEST 21st Seminar in SJTU (Nov. 24~27, 2019)

SJTU hosted the 21st CSS EEST research seminar, aiming to promote international research and students exchange. The total of 107 students among 3 Universities participated and made oral and poster presentation about their research.

◆ Student Exchange for Master Course DD (Spring/Fall, FY2019)

11 students were accepted, and 14 students were dispatched for one semester as the Double Degree student exchange program.

<TypeA-①>

| | |
|--------------------------|--------------|
| | 2019 |
| Accepted number in Japan | C 10 K 1 |
| Accepted number in China | J 55 K 52 |
| Accepted number in Korea | J 28 C 28 |

Student-Mobility

○ Outbound

The total of 83 students were dispatched, including 6 DD students to PNU and 8 to SJTU, 7 students to Spring Seminar, 22 students to Summer School, and 40 students to 21st CSS-EEST Seminar.

○ Inbound

The total of 11 students were accepted, including 10 DD students from SJTU and 1 DD student from PNU.

Forming the University Network with Quality Assurance

○ Joint appraisal for the Master thesis defense

To review and evaluate Master thesis of DD students, review committees were jointly organized, and DD defense was conducted between 2 Universities (KU-PNU, KU-SJTU, PNU-SJTU).

○ Program management by International PDCA committees

PDCA meetings were held to discuss several issues for management and improvement of the program, and they were conducted 3 times on Apr. Aug. and Nov. in FY2019.

○ CSS-EEST 21st Seminar in SJTU

SJTU hosted the 21st CSS-EEST research seminar aiming to promote international students exchange and research exchange. The total of 107 students among 3 Universities, 40 KU, 34PNU, and 33 SJTU, participated and achieved the international exchange and research exchange.

Promotion of Students-Mobility Environment

○ Efforts to promote outbound students to PNU/SJTU

CA faculty members in charge of PNU and SJTU actively made efforts to promote the recruitment activities for new DD candidates and provided the academic guidance at the host university to support the outbound students.

○ Efforts to promote inbound students to KU

CA orientation was offered for new exchange students to support for starting their lives in a foreign country and give guidance on the courses, etc. In addition, student supporters were provided for exchange students to help and improve their lives and environment in the campus life.

○ Financial aid and supports

Scholarship was paid to each student by JASSO program to make the financial support for living abroad. DD students were exempted from paying tuition and matriculation fee to the host university under the agreement.

Internationalization of the University

Information disclosure and Publication of outcome

The latest information on the program was accordingly updated on the website. The newsletters and the annual report of FY2019 were respectably sent to all partners to share the information and the outcome of the program.

Good Practice

For the students participating the program, the questionnaires were conducted to widely gather information and opinions to improve the program. And they were also conducted to the supervisors of DD students to know the outcome and the pros and cons of the program.

5. FY2020 Progress

【Name of project】(Adopted year: (Adopted year: FY2016, (Type A-① CAMPUS Asia)

Cooperational Graduate Education Program for the Development of Global Human Resources in Energy and Environmental Science and Technology – A New Challenge –

■ Exchange Programs

◆ **2020 Summer School, hosted by SJTU** (Aug. 17~28, 2020)(by Zoom)
SJTU hosted Summer School, and the total of 57 students (KU28·PNU12·SJTU17) among 3 universities participated. Although all activities, such as EEST course lectures, Interim Appraisal for M2 students as one of the main processes for DD program, the Lab exercise for M1 students, and other group learning activities were conducted all online, the students from 3 universities could learn and deepen the international exchange without physical visit.

◆ **22nd CSS-EEST Seminar, hosted by KU** (Dec. 2~3, 2020)(by Zoom)
22nd CSS research seminar hosted by KU was held online, aiming to promote international research and students exchange. The total of 67 students (KU42·PNU17·SJTU8) among 3 universities participated and gave oral presentation about their research.

◆ Student Exchange for DD students (Fall, FY2020)

Due to the outbreak of COVID-19, no KU students were physically dispatched, but 3 inbound students, 1 from PNU, 2 from SJTU, actually came to Japan and carried out the research work at their affiliated laboratories in KU. Also, all 3 universities decided to offer the online classes for DD students, outbound and inbound DD students could take the courses with the required credits by online at the relevant university. (Outbound DD: PNU2·SJTU1 / Inbound DD: PNU1·SJTU3)



(SJTU Summer School by Zoom)



(22nd CSS-EEST by Zoom)

■ Student-Mobility

○ Outbound

In any exchange programs, no KU students could be physically dispatched, but the students took courses with the required credits online in the host university, also attended Summer School, CSS seminar, and other activities offered online in the different ways from physical exchange.

(KU outbound DD students participation: Online class;1 to SJTU/2 to PNU·Summer School; 28·CSS: 42)

○ Inbound

3 SJTU students and 1 PNU student took the courses with the required credits online in KU in the 2nd semester. And in January, 3 students, 1 from PNU and 2 from SJTU, could physically come to Japan and do the research work about for 4 months at their Labs in KU.

■ Forming the University Network with Quality Assurance

○ Joint appraisal for the Master thesis defense (by Zoom)

To review and evaluate Master thesis of DD students, the review committees were jointly organized, and DD defense was conducted online between 2 Universities, KU-PNU or KU-SJTU.

○ Program management by International PDCA committees (by Zoom)

PDCA meetings were conducted to discuss several issues for management and improvement of CA program, held 2 times via online on Aug. and Dec. FY2020.

○ CSS-EEST 22nd Seminar (by Zoom)

KU hosted 22nd CSS-EEST research seminar aiming to promote international students exchange and research exchange. The total of 67 students among 3 Universities, 42 KU, 17 PNU, and 8 SJTU participated, and achieved the international exchange and research exchange.

■ Promotion of Student-Mobility Environment

○ Efforts to promote outbound students to PNU/SJTU

Recruitment activities for new DD candidates were conducted online. CA professors in charge of PNU and SJTU actively made efforts to promote new outbound students, providing the academic guidance and the advice for campus life in the host university.

○ Efforts to promote inbound students to KU

KU offered the online courses in 2nd semester. CA exchange students took the required courses from home country and earned the required credits online. For 3 exchange students who finally come to Japan in January, CA orientation was offered to support them to smoothly and safely start the lives and study here even in this situation due to COVID-19.

○ Financial aid and supports

Scholarship was paid to each student by JASSO program to make the financial support for living abroad. DD students were exempted from paying tuition and matriculation fee to the host university under the agreement.

■ Internationalization of the university Information disclosure and Publication of outcome

The latest information of the program was accordingly released on the website. In addition, the newsletter and the program reports were sent to all partners to share information and the outcome of the program.

■ Good Practices

For the students participating the program, the questionnaires and CA reports were conducted to widely collect information and opinions to improve the program. And they were also conducted to the supervisors of DD students to know the outcome and the pros and cones of the program.

| | 2020 |
|-----------------------------|--------------|
| Accepted number in Japan(J) | C 11 K 18 |
| Accepted number in China(C) | J 29 K 13 |
| Accepted number in Korea(K) | J 2 C 0 |