### FY2014 Inter-University Exchange Project Nagaoka University of Technology

Support for the Formation of Collaborative Programs with Russian and Indian Universities

### 1. Outline

[Name of project] (Adopted year: FY2014, Country (India))

Cooperative Engineer Education Program with South Indian Universities based on the Long-Term Internship Experience

**(Summary of Project)** 

#### Objective

To produce innovative and practical global engineers through a cooperative educational program with universities in India

#### Summary

- Establishment of a cooperative Gigaku educational system that includes a qualityassured credit transfer system and joint degree program
- Training of practical global engineers through a cooperative educational program that includes Jitsumu-Kunren overseas internships
- Development of global human resources capable of proposing solutions with cross-cultural understanding
- Production of practical Indian engineers who are sought after by Japanese companies based in India
- Future global development modelled on the joint degree program framework actualized from these concepts

#### Partner Universities

Indian Institute of Technology, Madras (IITM)

Indian Institute of Information, Technology and Design Kancheepuram(IIITD&M)

One of top engineering college among the world, who share philosophy of "GIGAKU" through long-lasting exchange activities.

#### Initiatives for the Development of **Practical Global Engineers** Credit Transfer Joint Degree System III Invitation of India-Japan Cooperativ Awareness Partner Practical Engineer Nagaoka University Research Units Program for Universities Education of Technology Study in India Establishment Overseas of an Indian Internship Administrative office Financial Support for the viding opportunit ducational Progra Japanese and Local Indira Gandhi Centre for Japan External Companies in India Atomic Research Trade Organization local government bosies nd Local government b

#### (Summary of Exchange program)

Cultivating global practical engineer with experiences of stay in India, such as short-stay program, long-term internship and Joint degree program.

The program will also ascertain the level of accomplishments in research ability and English language ability through presentations on research results and TOEIC® examinations.

#### 【Global Human Resource on the project】

This program strives to develop practical global engineers who can lead and communicate with an understanding of diverse values.

Specific abilities to be acquired by students:

- ✓ International research ability
- ✓ Communication ability as an Engineer(incl. English language)
- ✓ Creativity and innovation

#### [Feature on the project]

The project aims to develop a quality-assured cooperative educational program such as Joint degree program, as well as an industry-academia-government collaboration network program to provide an opportunity of internship in Japan for Indian students based on a Tripartite agreement with internationally influential engineering universities in India through the shared concept of "Gigaku".

[Exchange number]

	2014	2015	2016	2017	2018
Outbound	2	12	12	17	17
Inbound	4	10	10	23	23

## 2. FY2014 Progress

[Nagaoka University of Technology]

[Name of project] (Adopted year: FY2014, Country (India))

Cooperative Engineer Education Program with South Indian Universities based on the Long-Term Internship Experience

#### ■ Exchange Programs



In FY 2014, we exchanged faculties and students to discuss about establishment of Joint degree program and quality-assured credit transfer scheme and seek a possibility of overseas internship in both countries. As a part of faculty exchange and trail of cooperative education, both parties gave lecture and supervise experiment at partner university.

( Lecture by NUT faculty in India )

#### Student-Mobility

#### O Outbound

In FY 2014, we dispatched 4 students to India, to seek a possibility of credit transfer scheme at graduate level.

#### O Inbound

In FY 2014, we accepted 3 students from India, to establish a joint supervision system, as a trial implementation of Joint degree Program.

	2014	
	Plan	Results
Outbound	2	6
Inbound	4	3

#### ■ Forming the University Network with Quality Assurance

An ultimate goal of the project is to establish a quality-assured student exchange program, such as credit transfer scheme and Joint degree program between partner universities.

From this point of view, we started adjusting curricula between partner universities in the field of Mechanical, Electrical, Management and Information for credit transfer scheme.

Also, we began reviewing each other's standards for course completion, degree conferral, etc. to establish a Joint degree program.

#### ■ Promotion of Student-Mobility Environment

- Start serving vegetarian meal at university cafeteria, for accepting students
  with a diverse cultural background. This meal suits not only for Indian
  students, but also other international students.
- Assigned Indian professor in Japan and Japanese coordinator in India, to give an introduction of destination country and support exchange students.
- Held a lecture/seminar by dispatched students and faculties from partner universities, to motivate Japanese students to study in India.



⟨ Vegetarian meal

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

- Made a brochure to advertise the project among students, universities and industries, for the purpose
  of attracting students to study abroad as well as increase the number of participant companies.
- · Have been creating website of the project.
- · Renewed University's English website to enhance international public relation activities
- Prepare English guidebook and course guide for international students, to make their campus life smooth.
- Offered an intensive English language class for administrative staff, to accelerate internationalization
  of the university.

#### Notices

- As a result of FY 2014's activities, we exploited new overseas internship opportunities:
- · For Japanese students: National Research Laboratory in India
- · For Indian students: Japanese private enterprise with financial support
- A research paper co-authored by Japanese exchange student, Indian host professor and Japanese professor was published in an international journal.

## 3. FY2015 Progress

[Nagaoka University of Technology]

[Name of project] (Adopted year: FY2015, Country (India))

Cooperative Engineer Education Program with South Indian Universities based on the Long-Term Internship Experience

#### ■ Exchange Programs



〈 Grant international student certificate 〉

In FY 2015, we worked on an establishment of quality-assured credit transfer system and joint degree program between IITM and IITD&M. For the sake of long-term overseas internship expansion, we negotiated with some companies and research institute in Japan and India.

In order to attract students to study abroad, we created motivating environment by giving student guidance and special lectures.

#### Student-Mobility

#### O Outbound

In FY 2015, we dispatched 7 students as Jitsumu-Kunren overseas internship and 5 students in short-term, to develop credit transfer system at graduate level.

#### O Inbound

In FY 2015, we accepted 9 students from India for establishment of a joint supervision system in credit transfer system, preparation for invitation of research unit and internship.

	2015	
	Plan	Results
Outbound	12	12
Inbound	10	9

#### ■ Forming the University Network with Quality Assurance

- Since last year, we have continued to develop establishment of a quality-assured student exchange program, such as credit transfer system and Joint degree program between partner universities.
- We adjusted curricula between partner universities in the field of Mechanical, Electrical, Management and Information for credit transfer system.
- We came to an agreement with establishing the Joint degree program and started considering to establish a International program.

#### ■ Promotion of Student-Mobility Environment

- Serving vegetarian meal at university cafeteria for lunch and dinner. Not only Indian students but also other international students have the meals.
- Assigned Indian professor in Japan and Japanese coordinator in India, to give an introduction of destination country at pre-departure guidance and support exchange students.
- Held a lecture/seminar by dispatched students and faculties from partner universities, to motivate Japanese students to study in India.



⟨ pre-departure guidance by Indian professor ⟩

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

- Made a brochure and updated website of the project to advertise the project among students, universities and industries, for the purpose of increasing the number of participant companies.
- Prepared English research laboratory guidebook for international students to make their campus life smooth.
- Held Indian Institute of Technology Madras Nagaoka University of Technology Joint seminar at Embassy of India, as a part of promotion.
- In order to establish international cooperative educational system, the external evaluation committee which consists of external experts in various areas was held. We stated the objectives and progress of the project and exchanged of opinions.

#### Notices

- For Japanese students: dispatched 7 undergraduate students to India as Jitsumu-Kunren overseas internship (long-term internship) for 5 months.
- For Indian students: from May to July, <u>accepted 2 students from India in accordance with tripartite agreement with a Japanese private company</u>.
- For research unit: Invited 1 professor and 2 graduate students from IITM.

## 4. FY2016 Progress

[Nagaoka University of Technology]

[Name of project] (Adopted year: FY2014, Country (India))

Cooperative Engineer Education Program with South Indian Universities based on the **Long-Term Internship Experience** 

#### ■ Exchange Programs



⟨ The presidents from NUT and IIITD&M at

In FY 2016, we continued to work on an establishment of quality-assured credit transfer system and joint degree program between Indian Institute of Technology Madras (IITM) and Indian Institute of Information Technology Design & Manufacturing (IIITD&M).

To dispatch students from Japan and India as Jitsumu-Kunren overseas internship, we negotiated with a number of companies and institutes. As a result of negotiation, 1 Indian company and 2 Japanese companies had additionally agreed to accept students.

Signing Ceremony of credit transfer agreement In order to attract students to study abroad, we created motivating environment by giving student guidance and increasing the chance to apply for a program to study abroad.

#### **Student-Mobility**

#### O Outbound

In FY 2016, we dispatched 10 students as Jitsumu-Kunren overseas internship and 2 students in short-term.

In FY 2016, under the agreement of a joint supervision system in credit transfer, we accepted 12 students from India for internship.

	2016	
	Plan	Results
Outbound	12	12
Inbound	10	12

#### ■ Forming the University Network with Quality Assurance

- We have continued to develop establishment of a quality-assured student exchange program, such as credit transfer system and Joint degree program between the each of 2 partner universities. This is done so the students can study abroad without having to spend extra years at their home universities.
- Aiming to eventually establish a joint degree program in the future, we started to prepare to establish a double degree program. We will continue to exchange ideas and consider what needs to be organized with the Indian universities.

#### ■ Promotion of Student-Mobility Environment

- Serving vegetarian meals at university cafeteria for lunch and dinner. Not only Indian students but also other international students are enjoying the
- Assigned Indian professor in Japan and Japanese coordinator in India, to give an introduction of destination country at pre-departure guidance and support exchange students.
- Held a lecture/seminar by dispatched students and faculties from partner universities to motivate Japanese students to study in India.





 Pre-departure guidance / Report presentation by Japanese students who studied in India >

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

- Made a brochure (Japanese and English) and updated website (Japanese and English) of the project to advertise the project among students, universities and industries, for the purpose of increasing the number of participant companies.
- Prepared English version of research laboratory guidebook, program guide and disaster prevention manual for international students to make their campus life smooth.

#### Notices

- For Japanese students: dispatched 10 undergraduate students to India as Jitsumu-Kunren overseas internship (long-term internship) for 5 months.
- For Indian students: from May to July, accepted 1 student from India in accordance with tripartite agreement with a Japanese private company. Also, we have 2 new companies who additionally agreed to accept students for internship. We will continue to prepare for accepting students in FY2017.

### 5. FY2017 Progress

### [Nagaoka University of Technology]

[Name of project] (Adopted year: FY2014, Country (India))

Cooperative Engineer Education Program with South Indian Universities based on the Long-Term Internship Experience

#### **■** Exchange Programs

-In FY 2017, we concluded Memorandum of Agreement (MoA) between Indian Institute of Technology Madras (IITM) / Indian Institute of Information Technology Design & Manufacturing (IIITD&M) and company in Japan for Indian students internship.

-Based on MoA concluded in 2016, we newly dispatched 1 Japanese student to company in India for Jitsumu-Kunren overseas interns. -In order to attract students to study abroad, we created motivating environment by offering various study programs and by holding a presentation session for students to introduce their experience in abroad.



(Study Trip for Indian Exchange Students)

#### Student-Mobility

#### O Outbound

In FY 2017, we dispatched 8 students for Jitsumu-Kunren overseas internship, 1 student in long-term and 2 students in short-term.

#### O Inbound

In FY 2017, we accepted 16 students from India for internship, invitation of research units and short-term student exchange.

	2017	
	Plan	Results
Outbound	17	11
Inbound	23	16

#### ■ Forming the University Network with Quality Assurance

- Based on credit transfer system admitted in 2017, 1 Japanese student studied at IITM and earned credits by attending the lectures at IITM, which are <u>approved at Nagaoka University of Technology (NUT) as credits</u> required for completion. This scheme enables students to complete the course without having to spend extra years regardless of their study abroad.
- Aiming to eventually establish a joint degree program in the future, we have worked to establish a double
  degree program. We shared the schedule towards establishment of the program and what is to be organized
  with the Indian universities.

#### Promotion of Student-Mobility Environment

- Assigned Indian professor in Japan, to give an orientation before students start internship at Japanese institutes and to listening to exchange students so as to know their needs.
- Assigned Japanese coordinator in India, to give an introduction of destination country at pre-departure guidance and support exchange students from Japan. Her negotiation with IIITD&M leads improvements of sanitary environments of university cafeteria.



(Lecture at IITM/ NUT Joint Seminar)

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

 Hold a Joint Seminar with IITM at the Embassy of India in Japan, where Indian and Japanese professors, Indian students studying at NUT, and Japanese students having studied in India gave a presentation on what they have achieved under Re-Inventing Japan Project. We could widely share their achievement with other universities, companies and organizations concerning India.

#### ■ Notices

- For Japanese students: dispatched 8 undergraduate students to India as Jitsumu-Kunren overseas internship (long-term internship) for 5 months. One of them was dispatched to a company which accepts internship students from 2017. Increase in partner companies enables more appropriate matching between companies and students, and leads to improvement in educational effect.
- For Indian students: accepted 4 students from India for internship in accordance with tripartite
  agreement with Japanese companies, including 2 companies newly accepted Indian students. <u>The</u>
  internship is financially supported by host companies, which is significant to continue our program.