



1. Outline

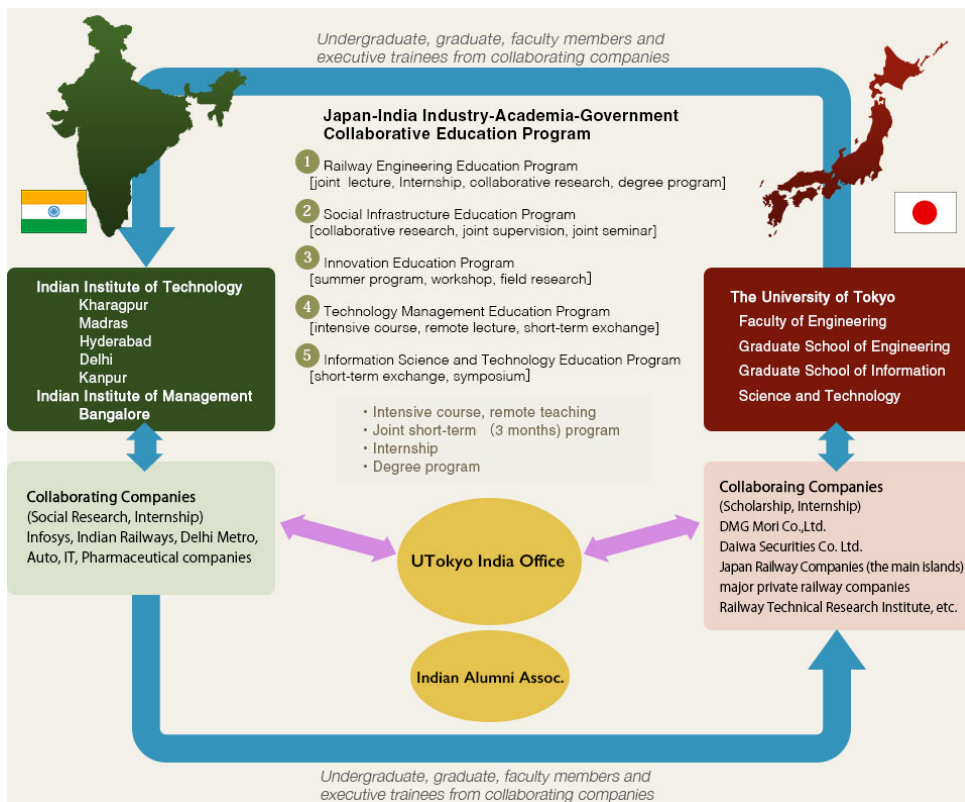
【Project Title】 (Adopted: FY2014, India)

Developing Human-facing Engineers:

Japan-India Industry-Academia-Government Collaborative Education Program (IJEP)

【Project Summary】

The India-Japan Industry-Academia-Government Collaborative Education Program (IJEP) is an effort organized by the Graduate School of Engineering and the Graduate School of Information Science at the University of Tokyo. It aims to educate talented students who will be at the forefront of entrepreneurship, innovation, globalization, and technical advancement in collaboration with educational institutions (including Indian Institutes of Technology (IIT) and the Indian Institute of Management), industries, and governments both in India and Japan. We seek to foster in students the ability not merely to develop groundbreaking products but also to act globally with innovative ideas and entrepreneurial spirit.



【Exchange programs】

IJEP is composed of five subprograms: railway, infrastructure, innovation, technology management, and information science programs.

【Project Mission】

IJEP aims to encourage creative global leaders in industries, public services, and research institutions who are capable of facing challenges with deep insights and an understanding of the relationship between humans and society (regardless of culture and history), without holding on to conventional rules or standards.

【Project Feature】

A unique feature of the IJEP is that it is a consortium with the Japanese government, Indian government, and companies. The program promotes not only human resource education, but also the establishment of a win-win relationship between India and Japan, which can lead to extensive cooperative development.

【Projected Number of Exchange Students】

	2014	2015	2016	2017	2018
Outbound	6	40	42	43	43
Inbound	2	42	43	44	46

【Project Title】(Adopted: FY2014, India)

**Developing Human-facing Engineers:
Japan-India Industry-Academia-Government Collaborative Education Program (IJEP)**

■ Exchange Programs



Winter seminar at IIT Kharagpur

- 2 officials from Indian Railways enrolled in a master course as regular students in the fall semester.
- 3 faculty members and 3 graduate students joined the winter intensive course on high-speed railways at IIT Kharagpur in December.
- An innovation workshop led by 2 UTokyo faculty members was held at IIT Hyderabad in January. 7 UTokyo students attended.
- 2 faculty members from IIM Bangalore attended an innovation workshop held at UTokyo in February.

Student-Mobility

○ Outbound

- 3 graduate students joined the winter intensive course on high-speed railways at IIT Kharagpur in December.
- 7 students attended the innovation workshop held at IIT Hyderabad in January.
- A PhD student conducted research for 2 months at IITH.

○ Inbound

- 2 officials from Indian Railways enrolled in a master course at UTokyo as regular students in the fall semester.
- 2 graduate students enrolled in the fall semester under the UTokyo-IIT Graduate Student Scholarship program.

	2014	
	Plan	Results
Outbound	6	11
Inbound	2	4

■ University Network with Quality Assurance

As part of the comprehensive reformation of undergraduate education, a 4-term system is planned to begin in AY 2015. UTokyo is committed to preserving the quality of the education and making further improvements. The GPA system was introduced from AY 2014 in some courses and will be applied to this project.



Innovation Workshop at IIT Hyderabad

■ Student-Mobility Environment

- UTokyo students who participate in the program-sponsored travel abroad will be covered by health insurance that is valid in India for hospitalization and physician care.
- Participating students will be enrolled in and supported with a 24-hour emergency service (OSSMA for inbound and IMAS for outbound).
- The online application system (T-cens) used to apply to the Graduate School of Engineering makes application a simple step-by-step process for international students.



IJEP HP

■ Internationalization of the university

Information disclosure and Publication of outcome

- All programs under this project can be found in our IJEP website. <http://www.ijep.t.u-tokyo.ac.jp/>
- UTokyo established India Office in 2012 to increase the number of international students to study in Japan. In 2008, "IIT-UTokyo Education Exchange Program" began and it is committed to promoting collaboration with Indian educational institutions. UTokyo is dedicated to further strengthening university-wide relationships with Indian institutions.

■ Distinctive Feature of the Program

2 officials from Indian Railways enrolled in a master course as regular students from fall semester. This program is the first of its kind to accept regular students, and many such cases are certain to follow. This will accelerate more collaboration between both country's government, academia and industries.

3. FY 2015 Progress Report

Project Name (adopted FY 2014 in India)

Developing Human-facing Engineers: Japan-India Industry-Academia-Government Collaborative Education Program (IJEP)

Exchange Programs



Innovation school at IIT-H

5 programs in progress for promoting India-Japan educational collaboration

Railway Engineering: IIT-K professor gave a lecture at UTokyo and attended an International Conference in Tokyo.

Social Infrastructure: Students from Indian Railways had internships at JR East and the Railway Technical Research Institute.

Innovation: Summer school and workshops were held at UTokyo and IIT-H.

Technology Management: IIT-B and IIT-M students attended an intensive course at UTokyo. Credits were awarded by their home universities.

Information Science and Technology: IST students visited Indian corporations and had a workshop at IIT-H.

Other: Japanese language education collaboration/Speech on IJEP at the Indian Embassy in Tokyo

Student-Mobility

Outbound

- 3 students attended the summer program at IIM-B (Aug.)
- 14 students participated in an innovation workshop at IIT-H (Aug.)
- 12 students joined a one week study trip to Hyderabad and Bangalore (Sep.)
- A Social Infrastructure Program student stayed 2 months at IIT-K for his research, completing internships at Delhi Metro and Indian Railways. (Oct.-Dec.)
- 1 student was dispatched by both the Railway Engineering and Innovation Programs.

Inbound

- 8 IIT students enrolled as regular students (Apr.-Oct.)
- The Social Infrastructure Education Program accepted an IIT-K student (May-July) and an IIT-D student (Oct.-Feb.) as research internship students.
- 2 IIT-K students and 1 IIT-M student were accepted through the Graduate School Internship Program (May)
- An IIT-KGP student stayed 2 months (May-July) and 2 IIT-H were accepted at IST.
- 2 IIM-B students and 1 IIT-M student attended the Intensive Summer Technology Management Course and were awarded credits by their home universities. (July)
- 3 IIT-H students joined the Innovation Summer Program (Aug.)
- An IIT-KGP student attended Railway Engineering Program.
- 30 IIM-B students attended Innovation class. (Nov.)
- IIT-H student joined the Innovation Program for one month. (Feb.)
- IST accepted 4 IIT-H students through the Sakura Science Program. (Mar.)

University Network with Quality Assurance

- A 4-term system was introduced in AY 2015 to further improve quality of education.
- Efforts to develop short term student visits into longer educational programs resulted in the launch of the IJEP Internship Program.

Student-Mobility Environment

Incoming students are awarded JASSO scholarships for their stays and are offered various support and advice for living in Japan. Emergency assistance, such as OSSMA and IMAS, is available for all travelling students. The UTokyo India Office moved to Delhi, which is more convenient for communicating with government officials and other major institutions.

Internationalization of the University; Information Disclosure and Publication of Outcome

- Supported by Top Global University Project (Type A) and Study Abroad Coordinator Project (India) by MEXT, UTokyo is committed to promoting collaboration with IITs and IIMB, as they are integral partners of the university's global strategy.
- The English website for the School of Engineering/Graduate School of Information Science and Technology and the IJEP website was extensively updated, making it more accessible by international students.
- A new English IJEP leaflet was made to achieve wider publicity.
- The T-cens online application system for the IJEP Internship Program has a new look.

Distinctive Features of the Program

- The IJEP Internship Program was launched after discussion with collaborating faculty members in India. The application was processed using the T-cens system and 11 selected students will begin internships in May 2016.
- The IST introduced a Special Entrance Examination for the 2017 Doctoral Program. Selections will be made via submitted application documents and an remote interview (without requiring applicants to come to Japan).
- The Graduate School of Frontier Science will offer a new course on advanced human mobility safety design in AY 2016, the course includes research topics such as safety management, traffic infrastructure design, etc., that are relevant to railway engineering.

	2015	
	Plan	Results
Outbound	40	32
Inbound	42	58



IJEP Leaflet

4. FY2016 Progress

Project Name (adopted FY 2014 in India)

Developing Human-facing Engineers: Japan-India Industry-Academia-Government Collaborative Education Program (IJEP)

■ Exchange Programs



〈Visit to IIT Delhi〉

- 5 programs have seen successful progress through encouraging student mobility and promotion of collaborative education between India and Japan. Short-term study visits were organized to motivate engineering students to study in India. IIT-D faculty members gave UTokyo students intensive lectures to allow them to experience the Indian educational environment. As UTokyo now has a 4-term academic calendar, more students are expected to study in India for at least 1 term.
- Faculty members lectured at the High-speed Railway Seminar conducted by Indian Railways. They contributed to encouraging Indian Railways officials to study for advanced degrees at universities in Japan.

Student Mobility

○ Outbound

- 12 IST students participated in a workshop at IIT-H and visited IT companies such as INFOSYS, Microsoft, etc. (Sep)
- 2 students joined the IIMB Summer Program (Nov)
- The Social Infrastructure Program sent 1 student to IIT-D for a month (Nov)
- 2 students visited IIT-H via the Innovation Program (Dec)
- 6 undergraduate students visited IIT-K to support Japanese classes (Feb)
- 12 students were sent to IIT-H via ischool (Summer Innovation Program) (Mar)
- 8 civil engineering students visited IIT-D and Indian companies (Mar)

○ Inbound

- 10 IIT-H students participated in the IST Sakura Science Program (Jun)
- 11 IIT students participated in the IJEP Internship Program (May-July)
- IST accepted 2 students for a week. The Social Infrastructure Program accepted 1 student for 2 months.
- 3 IIT-H students were accepted to the Summer School Innovation Program, and the DMG Mori Internship Program accepted 1 IIT-K student.
- 3 students were accepted to the Technology Management Summer Intensive Course and they were awarded credits at their home institutions.
 - 1 official from Indian Railways was accepted as a regular student. 11 IIT graduates have matriculated as regular students at UTokyo.
 - 5 IIT students (4 Madras, 1 Bombay) took part in the Asian Academic Seminar at UTokyo and gave presentations.

	2016	
	Plan	Results
Outbound	42	43
Inbound	43	49



〈WS at IITH〉

■ University Network with Quality Assurance

IITs are well-known as world-class institutions producing talented students for the global IT market. They offer a high level of graduate school education and research. Indian students are accepted based on their academic records and their personal statements. We are pleased to have accepted such outstanding students.

For outbound activities, we expect more UTokyo students to study in India for at least one term after the introduction of the 4-term academic calendar.

■ Mobilizing Students

- Incoming students were awarded JASSO scholarships and were offered various extracurricular activities.
- Emergency assistance (such as OSSMA and IMAS) is available for all travelling students.
- Detailed interviews were conducted for outbound students to collect information about life and the research environment in India.

■ Internationalization of the University, Information Disclosure, and Publication of Outcome

- Program information has been successfully disseminated via the web, pamphlets, and SNS.
- Faculty members participated in promotional study fairs held in various areas of India.

■ Distinctive Features of the Program

- 11 IIT students took part in the IJEP Internship Program, which was launched this year. The students researched at their labs for over 2 months. 2 of these participants were accepted to master's courses at UTokyo. The program has proved to be very successful in attracting talented Indian students. It was also inspiring for UTokyo students to study alongside excellent IIT students.
- IIT Bombay joined as a collaborating institution due to the success of this internship. (IJEP internship Day trip to Kobe)
- IST launched a special entrance examination for PhD courses for collaborating Indian institutions. Indian students who meet the requirements can take the exam without visiting Japan.
- Faculty members from collaborating Indian institutions offered UTokyo students an intensive course (for credit).



5. FY2017 Progress



【The University of Tokyo】

Project Name (adopted FY 2014 in India)

Developing Human-facing Engineers: Japan-India Industry-Academia-Government Collaborative Education Program (IJEP)

■ Exchange Programs



〈IJEP Symposium〉

- 5 programs have seen successful progress through encouraging student mobility and promotion of collaborative education between India and Japan.
- IJEP Symposium was held in June to bring together relevant faculty members from Indian partners, business collaborators, public official guests and UTokyo researchers and students.
- Faculty members lectured at the High-speed Railway Seminar conducted by Indian Railways. They contributed to encouraging Indian Railways officials to study for advanced degrees at universities in Japan.
- UTokyo started the work of creating the platform for Japan-India exchange through the creation of a network to connect universities and companies.

Student Mobility

○ Outbound

- 14 IST students participated in a workshop at IIT-H and some visited IT companies such as INFOSYS, TCS etc. (Aug/Sep)
- 1 students visited IITD for a week (Dec) and 1 student stayed at IITH for a month by Social Infrastructure Program. (Jan) 1 student visited Indian Railway research facility. (Feb)
- 2 students visited IIT-H via the Innovation Program. (Dec)
- 12 engineering students visited IIT-D and Indian companies. (Feb)
- 6 undergraduate students visited IIT-K to support Japanese classes. (Mar)
- 8 students were sent to IIT-H via i.school. (Mar)

○ Inbound

- 10 IIT students participated in the JST Sakura Science Program (SSP) and 9 IIT students in SSP for social infrastructure. (Jun)
- 9 IIT students participated in the IJEP Internship Program. (May-July)
- Innovation Summer Program accepted 2 IITH students. 60 IIMB students attended i.school lecture.
- IST accepted 1 IITH student for 2 weeks (Dec) and Innovation Program accepted 1 IITH student for a month.
- 14 IIT students matriculated as a regular student and 4 others attended short summer program.

	2017	
	Plan	Results
Outbound	43	41
Inbound	45	111



〈 Lab visit at IITD 〉

■ University Network with Quality Assurance

IITs are well-known as world-class institutions producing talented students for the global IT market. They offer a high level of graduate school education and research. Indian students are accepted based on their academic records and their personal statements. We are pleased to see some of those excellent students who had taken part in our short program returned to join UTokyo as regular student.

■ Mobilizing Students

- Incoming students were awarded JASSO scholarships and were offered various extracurricular activities.
- Emergency assistance (such as OSSMA and IMAS) is available for all travelling students.
- Detailed interviews were conducted for outbound students to collect information about life and the research environment in India.

■ Internationalization of the University, Information Disclosure, and Publication of Outcome

- Program information has been successfully disseminated via the web, pamphlets, and SNS.
- Faculty members participated in promotional study fairs held in various areas of India.
- Strategy for India Committee was organized to decide a policy regarding university-wide collaboration with India. UTokyo also contributes to work as coordinator for study in Japan.

■ Distinctive Features of the Program

- UTokyo and IIT-B discussed to conclude Academic Exchange agreement.
- Short Program, such as IJEP internship program and Sakura Science Program, has been proved to be very successful in attracting talented Indian students. 2 IIT students matriculated this year and we expect a few more students in coming academic year.



〈IJEP internship students〉

6. FY2018 Progress

Project Name (adopted FY 2014 in India)

Developing Human-facing Engineers: Japan-India Industry-Academia-Government Collaborative Education Program (IJEP)

Exchange Programs



- 2 staff members of Indian Railways joined Master Course from September.
- 10 IIT students were accepted at the third IJEP internship program.
- Total 25 IIT students joined Sakura Science exchange plan in civil engineering and information science.
- Faculty members gave model lectures at the study abroad information session for Indian Railways staff members in Delhi. UTokyo continues to contribute to accept staff members from Indian Railways.
- JIEPP Symposium was held in December and IJEP had a chance to give final report presentations of the project.

<Study Visit to IIT Delhi>

Student Mobility

Outbound

- 9 IST (Graduate School of Information Science and Technology) students participated in a workshop at IIT-H and visited IT companies such as INFOSYS, TCS. (16-23 Sep)
- 1 student visited IIT-H under Innovation Program. (10-14 Feb)
- 7 undergraduate students visited IIT-B to join Japanese classes. (11-19 Feb)
- 10 Engineering students visited IIT-D and Indian companies. (20-27 Feb)
- 1 student stayed at IIT-D for internship at ShiruCafe. (Aug)

Inbound

- 10 IIT students participated in the IJEP Internship Program. (May-July)
- 10 IIT students participated in the JST Sakura Science Program (SSP) for information science and 15 IIT students in SSP for social infrastructure. (Jun/July)
- Technical Management Education Program accepted 1 IITM student for a month (28 Apr-8 Jun) and 2 IIT-M student attended Summer Intensive Course.
- IST accepted 2 IITH students in Nov.
- DMG Mori Internship program accepted 1 student for 2 months and 2 students joined Doctoral course thanks to DMG sponsorship.
- 7 IIT students and 2 Indian Railways staff matriculated as a regular student.

	2018	
	Plan	Results
Outbound	43	28
Inbound	48	52



< IJEP Internship Students >

University Network with Quality Assurance

IITs are well-known as world-class institutions producing talented students for the global IT market. They offer a high level of graduate school education and research. Indian students are accepted based on their academic records and their personal statements. We are pleased to see some of those excellent students who had taken part in our short program returned to join UTokyo as regular student. One student who participated in Sakura Science and another student in IJEP internship each individually co-authored academic papers with IST faculty members and they were exhibited at the international academic conference.

Mobilizing Students

- Incoming students were awarded JASSO scholarships and were offered various extracurricular activities.
- Emergency assistance (such as OSSMA and IMAS) is available for all travelling students.
- Detailed interviews were conducted for outbound students to collect information about life and the research environment in India.

Internationalization of the University, Information Disclosure, and Publication of Outcome

- Program information has been successfully disseminated via the web, pamphlets, and SNS.
- Faculty members participated in promotional study fairs held in various areas of India.
- First JIEPP Symposium was held in December and IJEP had a chance to report its activity as a part of the symposium. Networking with other institutions and companies took place during the event.

Distinctive Features of the Program

- A sustainable student exchange program has been realized.
 - (1) The number of Indian students is steadily increasing.
 - (2) IST has newly set up a special entrance exam for Indian students.
 - (3) 2 IJEP internship students will start their career in Japan this fall.
 - (4) School of Engineering has decided to continue accepting internships and short-term dispatching to India with its own funding.
- Japan-India Industry-Government-Academia Collaboration Network has strengthened.
 - (1) The president of IIT Kharagpur visited for a discussion on strengthening collaboration with the university. This led to the conclusion of the student exchange MOU with IST. <IIT Kharagpur Director's visit>
 - (2) An academic exchange agreement was signed with IIT Bombay in February 2019.
 - (3) Tata Consultant Services (TCS) and IST will start joint research on robots.

