東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration in Higher Education at Tokyo Tech

CAMPUS Asia and Top Global University Project

Masahiko Hara

on behalf of TKT CAMPUS Asia and
SGU Summer Program
Tokyo Institute of Technology

東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration

1. Summer Program

2. Quality Assurance and Credit Transfer

3. Double Degree and Joint Degree

4. Professors and Administrative Staff

5. University Ranking

東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration

1. Summer Program

2. Quality Assurance and Credit Transfer

3. Double Degree and Joint Degree

+. Top Global University Project

東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration

Re-Inventing Japan Project (MEXT)
大学の世界展開力強化事業 (文科省)

TKT CAMPUS Asia

Europe
(IDEA League)
Imperial College London
TU Delft
ETH Zurich
RWTH Aachen
Paris Tech

Tsinghua University
KAIST
Tokyo Tech
The Hong Kong University of Sci. and Tech.
Nanyang Technological University
Asia (ASPIRE League)

U.S. (10 universities)
Brown U., Caltech
Carnegie Mellon
Georgia Tech
MIT, Stanford
UC Berkeley
U. Minnesota-TC
U. Washington-Seattle
U. Wisconsin-Madison

Tokyo Tech International Research Opportunities Program (TiROP)

東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration

Re-Inventing Japan Project (MEXT)
大学の世界展開力強化事業 (文科省)

TKT CAMPUS Asia

	Number (May 2014)
Undergraduate Students (international students)	4,761 (174)
Graduate Students (international students) (research students)	5,041 (879) (171)
Faculty (4% international)	1,142
Administrative Staff	583

ASPIRE League

Asian Science and Technology Pioneering Institutes of Research and Education

Tsinghua University
Student Population
Undergraduate Students 14,608
Graduate Students 17,035
Total 31,643

Korea Advanced Institute of Science and Technology
Student Population
Undergraduate Students 4,362
Graduate Students 5,268
Total 9,630

KAIST

清華大學
Tsinghua University

東京工業大学
Tokyo Institute of Technology

Tokyo Institute of Technology
Student Population
Total 9,868

Asian Science and Technology Pioneering Institutes of Research and Education (ASPIRE) since 2009

Student Population
Undergraduate Students 6,010
Graduate Students 3,505
Total 9,515

香港科技大學
THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

NANYANG TECHNOLOGICAL UNIVERSITY

Nanyang Technological University
Student Population
Undergraduate Students 23,576
Graduate Students 10,169
Total 33,745

"CAMPUS ASIA"
COLLECTIVE ACTION FOR MOBILITY PROGRAM OF UNIVERSITY STUDENTS

東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration

Re-Inventing Japan Project & Top Global Univ Project
世界展開力強化事業 & スーパーグローバル大学創成支援

TKT CAMPUS Asia

Europe
(IDEA League)
Imperial College London
TU Delft
ETH Zurich
RWTH Aachen
Paris Tech

Tsinghua University
KAIST
Tokyo Tech
The Hong Kong University of Sci. and Tech.
Nanyang Technological University
Asia (ASPIRE League)

U.S. (10 universities)
Brown U., Caltech
Carnegie Mellon
Georgia Tech
MIT, Stanford
UC Berkeley
U. Minnesota-TC
U. Washington-Seattle
U. Wisconsin-Madison

Tokyo Tech International Research Opportunities Program (TiROP)

東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration

1. Summer Program

2. Quality Assurance and Credit Transfer

3. Double Degree and Joint Degree

4. Professors and Administrative Staff

5. University Ranking

東京工業大学
Tokyo Institute of Technology

Summer Program

Event	June	July	Aug.	Place/Org.
Lab Research	←	—	→	Host's Lab
Survival Japanese	4-17,18-27	1-10,14-24		S6-409A
High Tech Japan	17-25			Campus & Off-site
Opening Ceremony		2		W8-10F, 13:30
Summer School		←	→	Various
Tea Ceremony		8		International House
Special Lecture		14		W9 MPD Hall 15:00
Tokyo Bus Tour		21		Life Safety L Center
RAKUGO Live			5	H-111, 15:00
Workshop (MISW)			7-8	TTF
Closing Ceremony			22	W8-10F

Note: Aug. 9 start of summer vacation, Aug. 9-10 e-off, 11-12 Univ. closed

東京工業大学
Tokyo Institute of Technology

Summer Program

Lab

Surv

High te

Ope

Sum

Tea use

Spe :00

Toky nter

RAK

Wor

Clos

Not ed

東京工業大学
Tokyo Institute of Technology

Summer Program

	30 (Mon)	1 (Tue)	2 (Wed)	3 (Thu)	4 (Fri)
9:00		Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	
10:45		Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	10:45@G1-113 Advanced Technology in Emerging Fields 2 Environment & Energy 1 @G1-G113 (Yoshikawa)
13:20			13:30-14:30 Opening Ceremony @West8-10F	Advanced Technology in Emerging Fields 1 @S511 (Kurabayashi)	Advanced Technology in Emerging Fields 1 (Suzukakedai Tour)
15:05	Student Orientation S6-409A	17:30-19:30 Welcome Party @Kinomi Garden	Science & Engineering Communication Project @H103(Hino)	Advanced Technology in Emerging Fields 1 (O-okayama Tour) TSUBAME~EEI	
	7 (Mon)	8 (Tue)	9 (Wed)	10 (Thu)	11 (Fri)
9:00	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	
10:45	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	Survival Japanese 2 @S6-409A	10:00-11:30 Advanced Technology in Emerging Fields 1 @S6-409A(Kim)
13:20	Advanced Technology in Emerging Fields 2 Nanotech & Nanomaterials @S511 (Hayashi)	Advanced Technology in Emerging Fields 2 Natural Disaster @S511 (Midorikawa)	Science & Engineering Communication Project @H103(Hino)	Advanced Technology in Emerging Fields 1 @S511 (Kim)	12:15 @West 9 Bldg. Advanced Technology in Emerging Fields 1 Factory Tour 1 SONY (Kim, Yano)
15:05		15:30- Tea Ceremony @International House			

	14 (Mon)	15 (Tue)	16 (Wed)	17 (Thu)	18 (Fri)
9:00	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	
10:45	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	10:00-11:30 Advanced Technology in Emerging Fields 1 @S6-409A (Xing)
13:20	Advanced Technology in Emerging Fields 2 Environment & Energy 2 @S511 (Ihara)	Advanced Technology in Emerging Fields 2 New Batteries @S511 (Kanno)	Science & Engineering Communication Project @H103(Hino)	Advanced Technology in Emerging Fields 1 @S511 (Xing)	12:15 @West 9 Bldg. Advanced Technology in Emerging Fields 1 Factory Tour 2 RIKEN (Xing, Hara)
15:05	Advanced Technology in Emerging Fields 2 **Special Lecture** @Digital (Ikegami)				
	21 (Mon)	22 (Tue)	23 (Wed)	24 (Thu)	25 (Fri)
9:00	<National Holiday>	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	8:45 @West 9 Bldg. Advanced Technology in Emerging Fields 1 Factory Tour 3 AM: Keiyo JCT(Chiba) (Hino, Hara, Yano) PM: NIMS-MANA(Tsukuba) (Hara, Yano)
10:45		Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	Survival Japanese 3 @S6-409A	
13:20	<Field Trip> 12:45 @Main Gate Life Safety Learning Center (Sumida-ku)	Advanced Technology in Emerging Fields Mechanical Engineering @S511(Mizutani)	Science & Engineering Communication Project @H103(Hino)	Advanced Technology in Emerging Fields 1 Emerging Sci & Tech & Final Report @S511 (Iwamura/Hara)	
15:05				Advanced Technology in Emerging Fields 1 Final Report @S511 (Iwamura/Hara)	

東京工業大学
Tokyo Institute of Technology

Summer Program

Advanced Technology in Emerging Fields 1: **2 credits**

This course introduces the student to cutting-edge scientific and technological research conducted in Asia.

1) July 3 Thu (Kurabayashi)
"New Approach to Mechanical Engineering"

2)3) July 10 Thu and 11 Fri (Kim)
"Human Machine Interactions"

Jung Kim
KAIST

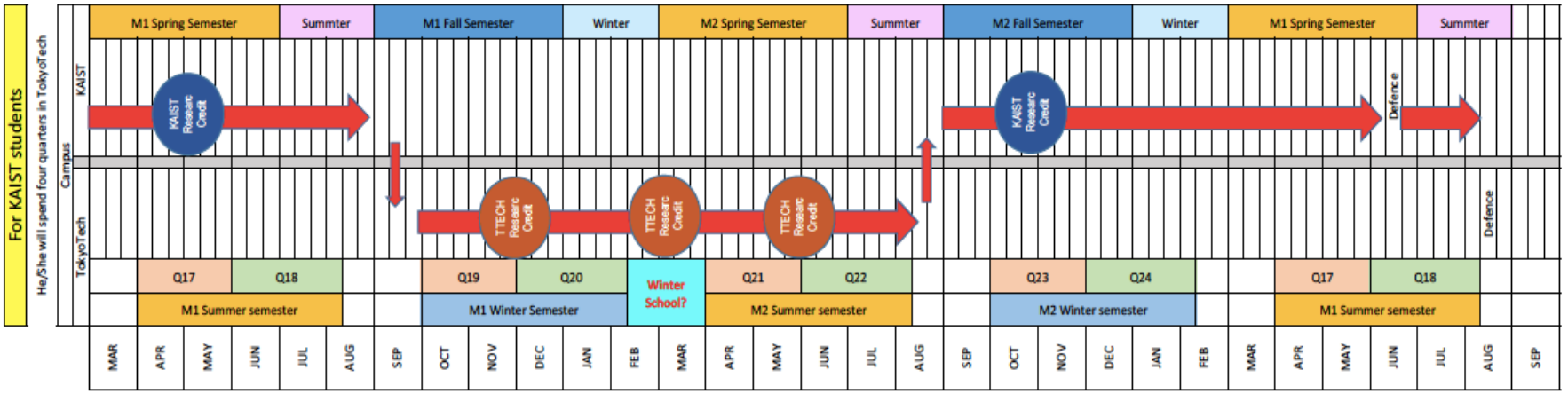
Xin-Hui Xing
Tsinghua University

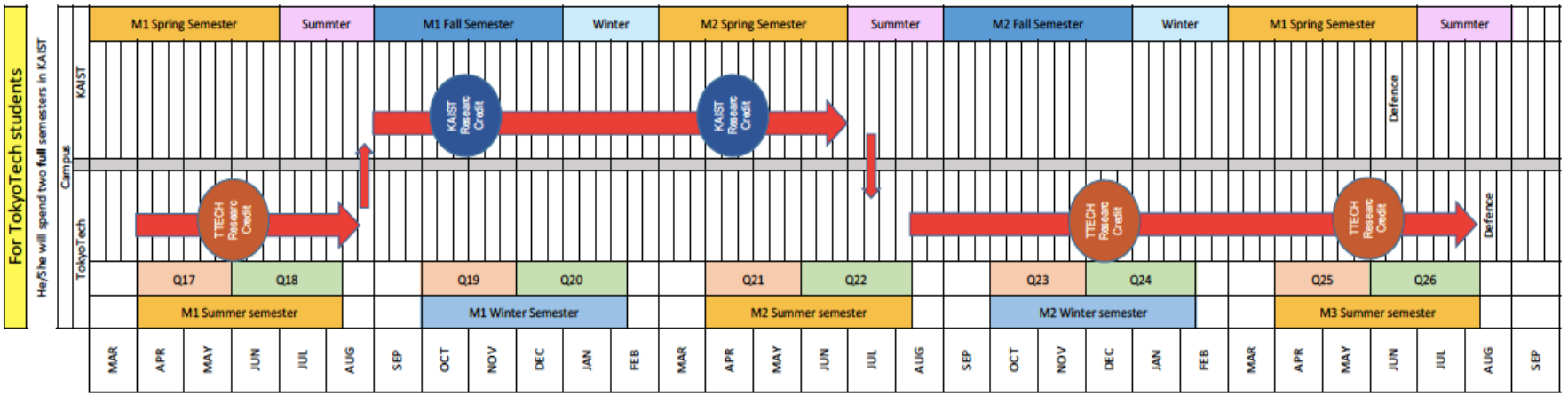
4)5) July 17 Thu and 18 Fri (Xing)
"Life-Inspired Integrative Biotechnology for Bioeconomy"

Same Lecture Series in Aug KAIST Summer School (+ Mihara and Hara)

東京工業大学
Tokyo Institute of Technology

Summer Program





東京工業大学
Tokyo Institute of Technology

Summer Program

Advanced Technology in Emerging Fields 2: 1 credits

This course introduces the student to cutting-edge scientific and technological research conducted at Tokyo Tech.

1) Environment & Energy 1
   "Waste Management - Past, Present and Future -"
2) Nanotech & Nanomaterials
   "Introduction to Nanotechnology and Nanomaterials"
3) Natural Disaster
   "Advanced Technology in Earthquake Disaster Mitigation"
4) Environment & Energy 2
   "Environmental Energy Innovation"
5) Special Lecture
   "Sharing Asia -Potentials and Problems: Environmental Issues-"
6) New Batteries "Scope of New Batteries"
7) Mechanical Engineering
   "Structural Integrity Evaluation of Machines and Structures"

東京工業大学
Tokyo Institute of Technology

Special Lecture "Sharing Asia"

東京工業大学
Tokyo Institute of Technology

Special Lecture "Sharing Asia"

TKT CAMPUS ASIA
TSINGHUA • KAIST • TOKYO TECH

KAIST

清華大學 Tsinghua University

東京工業大学
Tokyo Institute of Technology

CAMPUS ASIA

SEOUL NATIONAL UNIVERSITY

SHANGHAI JIAO TONG UNIVERSITY

NAGOYA UNIVERSITY

POSTECH

POHANG UNIVERSITY

EEST

NANJING UNIVERSITY

TOHOKU UNIVERSITY

부산대학교 PUSAN NATIONAL UNIVERSITY

上海交通大學 SHANGHAI JIAO TONG UNIVERSITY

KYUSHU UNIVERSITY

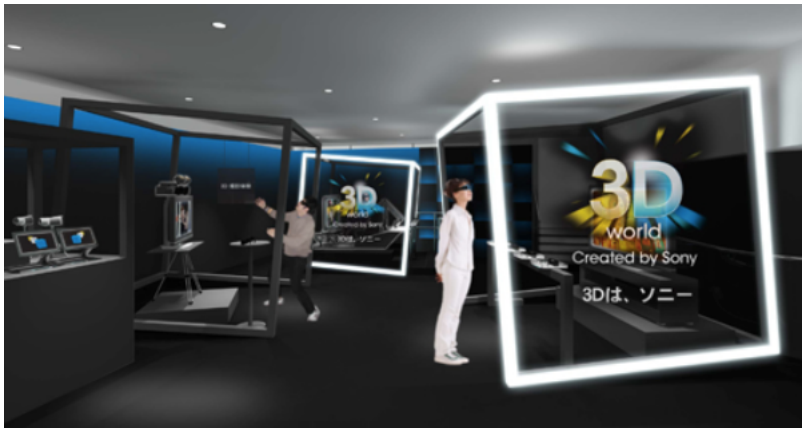
東京工業大学
Tokyo Institute of Technology

Summer Program

Advanced Technology in Emerging Fields 1

July 11

SONY



July 18

RIKEN

東京工業大学
Tokyo Institute of Technology

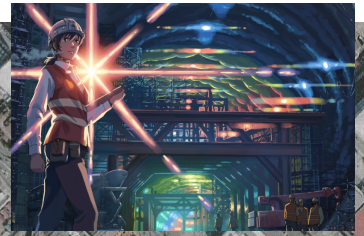
Summer Program

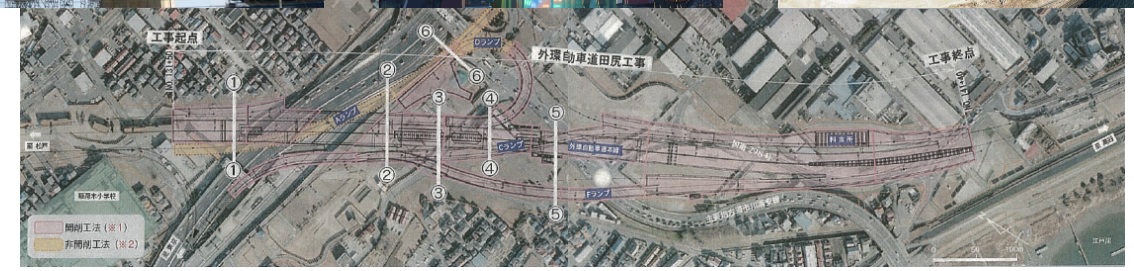
Advanced Technology in Emerging Fields 1

July 25 am

TAISEI

Highway Junction Construction Site

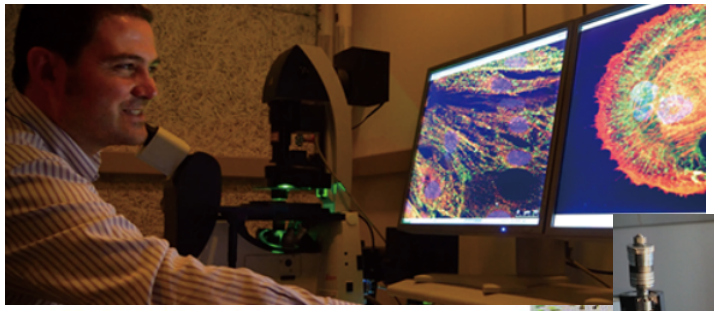
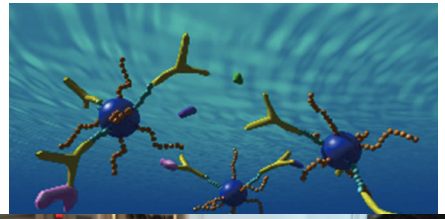
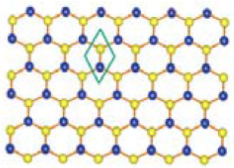
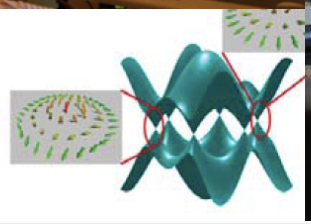





July 25 pm

Nano Revolution for the Future

NIMS Tsukuba Science City


東京工業大学
Tokyo Institute of Technology

Summer Program

東京工業大学
Tokyo Institute of Technology

Summer Program

Earthquake Simulation Section
Urban Flooding Experimental Section
Smoke Maze Section
Fire Fighting Training Section
First Aid Training Room
Rainstorm Simulation Section
Disaster Prevention Theater
and more…

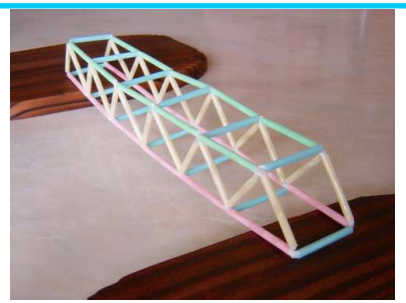
東京工業大学
Tokyo Institute of Technology

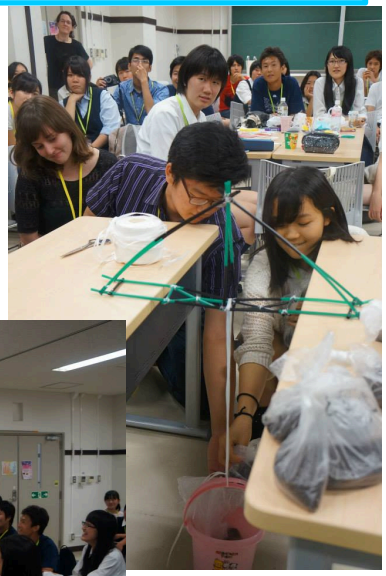
Quality Assurance and Credit Transfer

Science & Engineering Communication Project (SECP): 1 credit

In collaboration with Tokyo Tech students design, create and lead a short physics-based, hands-on outreach workshop for Japanese high school students to be conducted in English. The course consists of lectures, group-based project planning and hands-on activities by participants and high school students.

STEM collaboration with Japan Society of Professional Engineers (JSPE)





東京工業大学
Tokyo Institute of Technology

Quality Assurance and Credit Transfer

Questions:

Tutor, Courses, Advisor, Research, Credit Transfer, Factory Tours, Lab Atmosphere, Orientation, Information and Support, Accommodation, Overall Satisfaction etc.

Responses based upon a 5 point scale:

Summer Prog: Study & Research = 4.1, Life in Japan = 4.4

Joint Edu Prog: Study & Research = 4.3, Life in Japan = 4.6

> structure of the courses

> ability to understand the lectures in English

> research results

< research life and lab atmosphere

< academic advisor and consultation/discussion

< tutor and support

東京工業大学
Tokyo Institute of Technology

Quality Assurance and Credit Transfer

- Joint Committee and Joint Implementation Guidelines
- Study and Research Plan/Record
- Certificate of Participation
- Academic Record for Credit Transfer at Home Institutions

- Joint Educational Program for Graduate Students
- Joint Supervisory Team: The program will be implemented between departments or labs of the two universities.
- Advisors of partnering laboratories have responsibility to jointly provide the necessary guidance to students.

- Intrnational Partnership Forum & Advisory Board Meeting

東京工業大学
Tokyo Institute of Technology

Quality Assurance and Credit Transfer

Implementation Guidelines for TKT CAMPUS Asia Consortium

1. Organization to Implement the Program
2. Forms of Exchanges
   (a) semester long exchanges with course study and/or lab work
   (b) summer programs
   (c) research-oriented joint educational programs
3. Number and Eligibility of Exchange Students
4. Exchange of Information on Educational Programs and Research Opportunities
5. Procedures of Program Announcement, Selection, Nomination, and Acceptance
   5-1. Program Announcement
   5-2. Selection
   5-3. Nomination
   5-4. Acceptance
6. Planning of the Study and Research Activities
7. Study and Research Plan/Record
8. Status of Exchange Students at the Receiving University
9. Financial and Other Responsibility
   9-1. Tuition Fees
   9-2. Financial Support to the Participating Students
10. Report of Students' Educational and Research Results by the Receiving University
11. Recognition of Students' Educational and Research Results at the Sending University
12. Implementation of Monitoring of Students and Evaluation of the Program
13. Cooperation with Education Ministries and Quality Assurance Councils of the three countries
14. Appendix
15. Term of Validity

東京工業大学
Tokyo Institute of Technology

Quality Assurance and Credit Transfer

Part 1. Organization and Outline of the Program

1. Project Leaders and other personnel
  1-1. Project Leaders and Coordinators
  1-2. Faculty members and administrative staff in charge
2. Forms of exchanges
3. Academic calendar
4. Status of exchange students
5. Financial support
6. Recognition procedure of the credits obtained at partner universities
  6-1. Coursework
  6-2. Research activities

Part 2. Educational Systems

7. Semester system/Requirements for graduation
  7-1. Semester system
  7-2. Number of academic years for graduation
  7-3. Number of credits for graduation
8. Credit system/ Credit transfer system
  8-1. Number of credits per class
  8-2. Definition of credit
  8-3. Calculation of credit
  8-4. Limit of credit recognition
  8-5. Regulations on credit recognition
  8-6. Formula of credit recognition
9. Grading system
  9-1. Form of Grades
  9-2 GPA system

東京工業大学
Tokyo Institute of Technology

Double Degree and Joint Degree

Guidelines for Building International Joint Diploma Programs Including Double and Joint Degree Programs (2014.11.14. Central Council for Education)

Points of Attention for the Establishment of JD Program

1. Basic Matters
2. Basic Design of JD Programs

   Degree level, academic field covered and name; Diploma; Partner university (ies) in foreign country; Inter-university agreement; Selection, screening, etc. of entrants to JD program; Student registry and record; Size
3. Curriculum design, Examination for conferral of degree, etc.

   Human resources to be developed; Language; Form of education; Classes with various types of media in a highly advanced manner; Requirements for graduation and completion; Earning of credits; Courses jointly designed; Grading; Thesis; Degree examination for graduation; Supervision system; Academic staffs; School site, buildings, facilities, equipment, etc.; Mobility of students; Study environment
4. Other

   Tuition, scholarships, etc.; Safety net; Evaluation and quality assurance; Recognition and evaluation by society

東京工業大学
Tokyo Institute of Technology

Double Degree and Joint Degree

Guidelines for Building International Joint Diploma Programs Including Double and Joint Degree Programs (2014.11.14. Central Council for Education)

Joint Educational Programs, including Double Degree

1. Basic Principles
2. Points of Attention for Operation of DD Programs
   - (1) Issues to be examined at the outset
   - (2) Agreements on joint implementation
   - (3) Organization of curricula
   - (4) Degree examination for graduation
   - (5) Evaluation of educational and research activities
   - (6) Student support
   - (7) Information publication

東京工業大学
Tokyo Institute of Technology

Double Degree and Joint Degree

我が国の大学と外国の大学間におけるジョイント・ディグリー及びダブル・ディグリー等 国際共同学位プログラム構築に関するガイドライン抜粋（H.26.11.14 中教審）

- ○ 共同の実施体制の整備
- ○ カリキュラムの編成
- ○ 学位のレベル、対象学問分野、名称
- ○ 学位審査
- ○ プログラム対象者の選定、選抜
- ○ 学籍
- ○ 規模：プログラムの実施規模
- ○ 人材像： 育成すべき人材像が明確か
- ○ 使用言語
- ○ 教育の形態： 教育を提供する形態
- ○ 卒業・修了要件
- ○ 共同開設科目
- ○ 成績評価
- ○ 論文：質の保証
- ○ 指導体制
- ○ 教員
- ○ 校地・校舎・施設・設備等
- ○ 学生の移動等（留学・在学期間）
- ○ 学習環境
- ○ 学費・奨学金等
- ○ セーフティーネット
- ○ 評価・質保証
- ○ 教育研究活動の評価
- ○ 学生への支援
- ○ 情報の公開

東京工業大学
Tokyo Institute of Technology

Double Degree and Joint Degree

	Tsinghua University	KAIST	東京工業大学 Tokyo Institute of Technology
Start of Academic Year	Sep. 1	Mar. 1	Apr. 1
Start of Spring Semester	Mar. 2	Mar. 3	Apr. 7
End of Classes for Spring Semester	Jun. 16	Jun. 20	Jul. 25
Final Exams of Spring Semester	Jun. 22 – Jul. 5	Jun. 16 – 20	Jul. 28 – Aug. 7
Summer Holidays/ Summer Session	Jul. 6 – Sep. 13	Jun. 22 – Aug. 31 Jul. 30 – Aug. 14	Aug. 8 – Sep. 30
Start of Fall Semester	Sep. 22	Sep. 1	Oct. 2
Winter Break	Jan. 1 – Jan. 3	Dec. 20 – Jan. 30	Dec. 26 – Jan. 4
End of Classes for Fall Semester	Jan. 10	Dec. 19	Jan. 31
Exams of Fall Semester	Jan. 12 – Jan. 24	Dec. 15 – 19	Feb. 2 – Feb. 13
Spring Break	Jan. 26 –Mar. 1	Feb. 1 – 28	Feb. 14 – Mar. 31

東京工業大学
Tokyo Institute of Technology

Double Degree and Joint Degree

Question: How many semesters/terms does your university have? When each semester/ term starts and how many weeks it continues?

Tsinghua University	KAIST	東京工業大学 Tokyo Institute of Technology
・3 semester-system (fall, spring, summer) ・Fall semester (semester 1):18 weeks (incl. exams) Starting in September ・Spring semester (semester 2): 18 weeks (incl. exams) Starting in February ・Summer semester (semester 3): 12 weeks starting in June	・KAIST has semester system, i.e., two (spring and fall) semesters. ・Spring semester or semester 1 starts in March ・ Fall semester or semester 2 starts in September. ・Each semester continues for 16 weeks of lectures and exams.	・2-semester system (spring and fall) ・Spring semester (semester 1): 15 weeks starting in April +1 week exam ・Fall semester (semester 2) : 15 weeks starting in October+1 week exam

東京工業大学
Tokyo Institute of Technology

Double Degree and Joint Degree

Question: What is the basis of calculation of the credit? [For example, One credit is given for a lecture of one hour per week for a semester (16 hours lecture in total) or for a lab work of two hours per week for a semester (32 hours lab work in total)]

Tsinghua University	KAIST	東京工業大学 Tokyo Institute of Technology
・For undergraduates, 1 credit is given for a lecture /seminar of one hour per week for a semester (16 hours lecture in total) or for a lab work of 2 hours per week for a semester (32 hours lab work in total) ・For graduates, 1 credit is given for 16 lectures of one hour per week for a semester (16 hours lecture in total), or for attending seminar 10 times.	・1 credit is given for a lecture of one hour per week for a semester (14 hours lecture in total plus two exams such as midterm and final) or for a lab work of two hours per week for a semester (32 hours lab work in total).	・1 credit is given for a lecture /seminar of one hour per week for a semester (15 hours lecture in total) plus exam or for a lab work of two hours per week for a semester (30 hours lab work in total) plus exam.

東京工業大学
Tokyo Institute of Technology

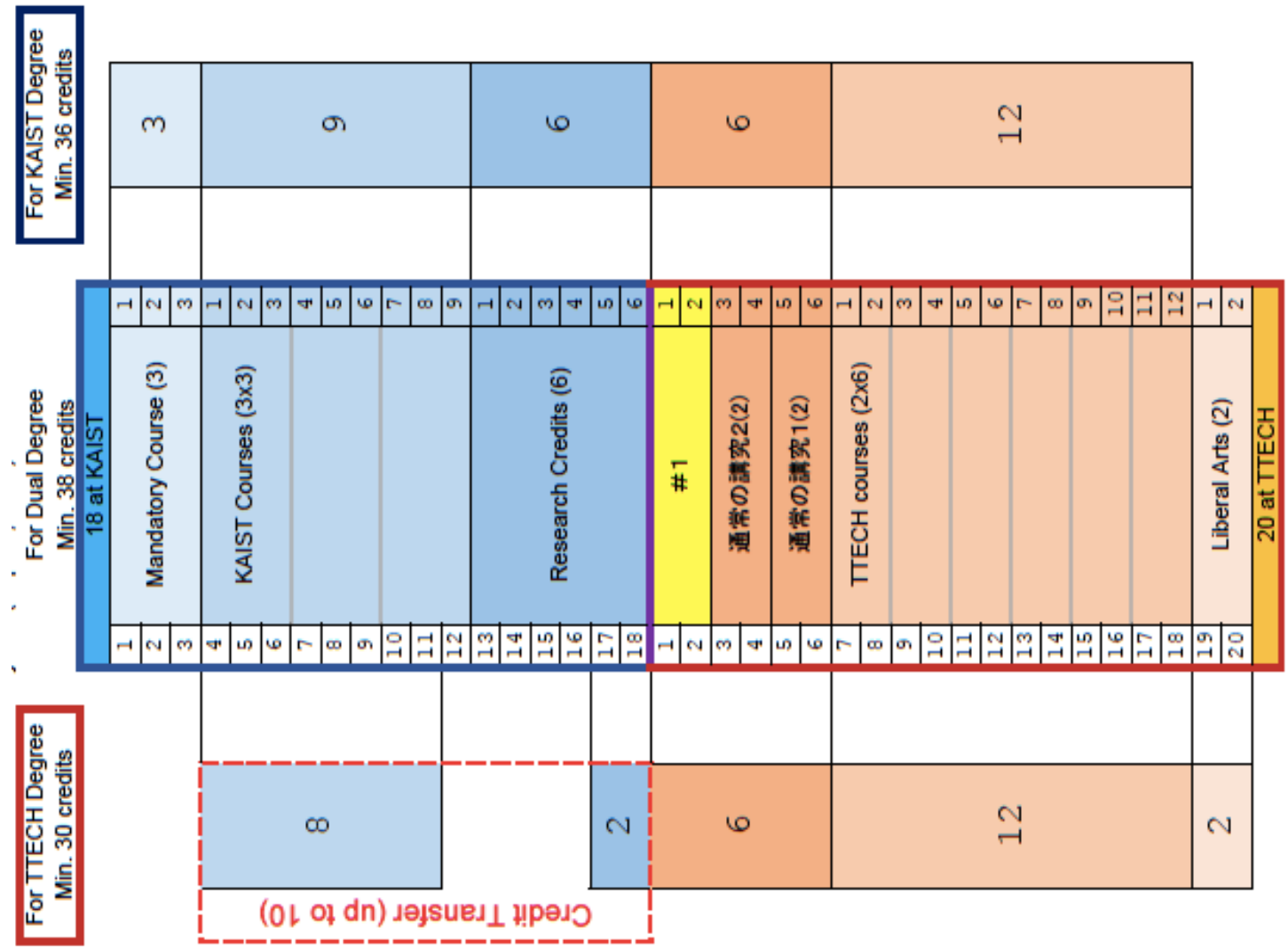
Double Degree and Joint Degree

Question: Is there any limit on credit recognition when students obtain academic credit in foreign countries (e.g., 66 out of 130 credits are recognized at universities overseas)?

Tsinghua University	KAIST	東京工業大学 Tokyo Institute of Technology
・Undergraduate program: No limit, but some credits earned for course attendance may not be recognized. ・Graduate program: At least ½ credits should be earned in Tsinghua.	・66 credits out of 130 credits for under-graduate program ・24 credits out of 33 credits for master program (students have to study at KAIST at least one year to obtain KAIST's master degree)	・Undergraduate program: 60 credits out of 124 credits ・Graduate program: 10 credits out of 30 credits

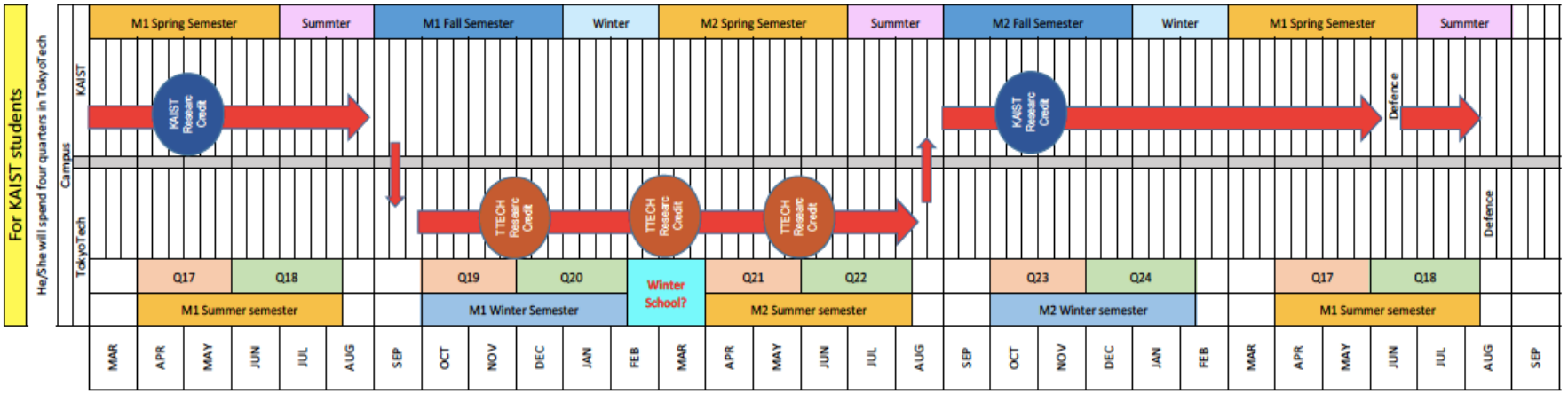
東京工業大学
Tokyo Institute of Technology

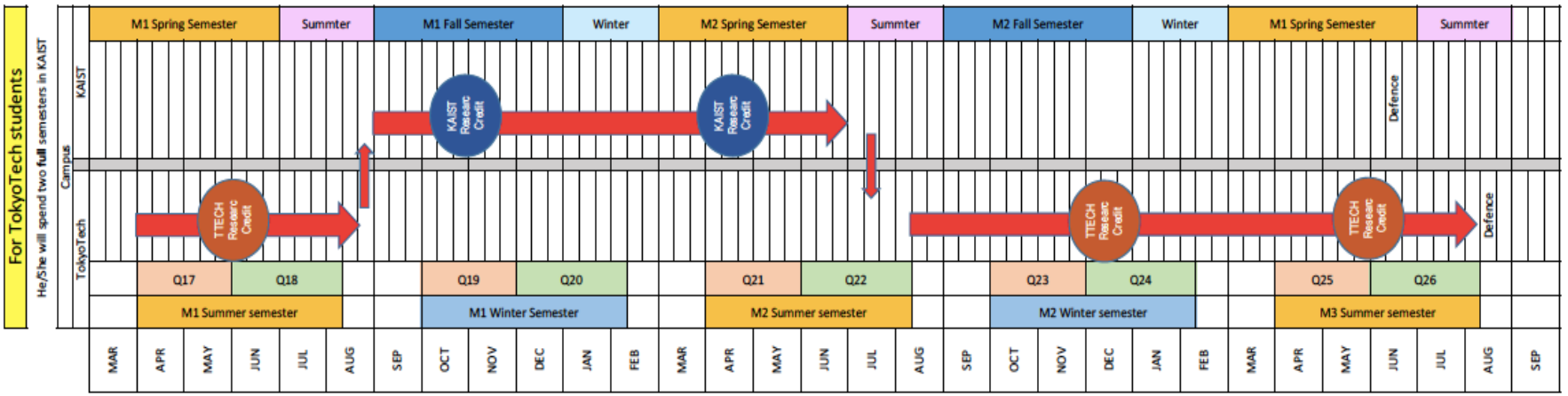
Double Degree and Joint Degree



東京工業大学
Tokyo Institute of Technology

Double Degree and Joint Degree

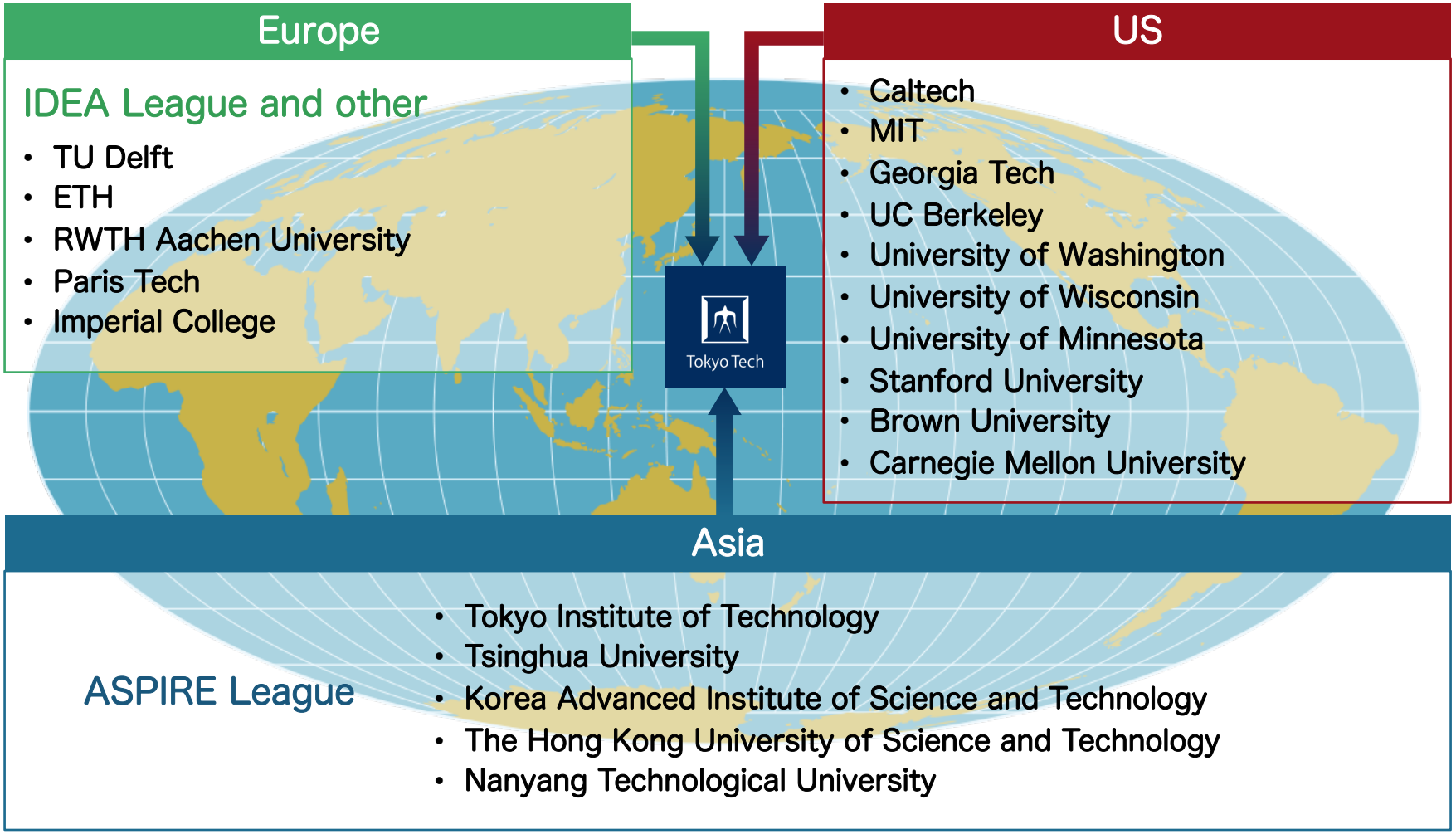




Top Global University Project (SGU in Jpn)

Top Global University Project (SGU in Jpn)
Foster Open and Global Environments

The Developing International Collaborative Network



Top Global University Project (SGU in Jpn)
Foster Open and Global Environments

The Developing New International Summer Program

Program Type	A:Course-Oriented Program	B:Research-Oriented Program	
Date:	July 4 - 29, 2016	1)June 6- Aug. 10, 2016	2)July 4 - Aug. 10, 2016
Duration:	4-week	10-week	6 week
Eligible participants:	Undergraduate students from designated partner university	Undergraduate (upper-level) and graduate students from designated partner universities	
Number of seats	15	15	
Program Details:	Course work (subject to change) ● Environment & Energy ● International Engineering Design ● Communication	Research Project	
	Language: Survival Japanese (1-3 Credits)		
	Factory tour / Site visit		
	Experiencing Japanese culture including two days trip		
	Activities with Tokyo Tech student clubs (Judo, Aikido, sports, online course making etc..)		
Lab work	Not available	Yes	
Credit Transfer	An academic record containing course grades will be available.		

(tentative)

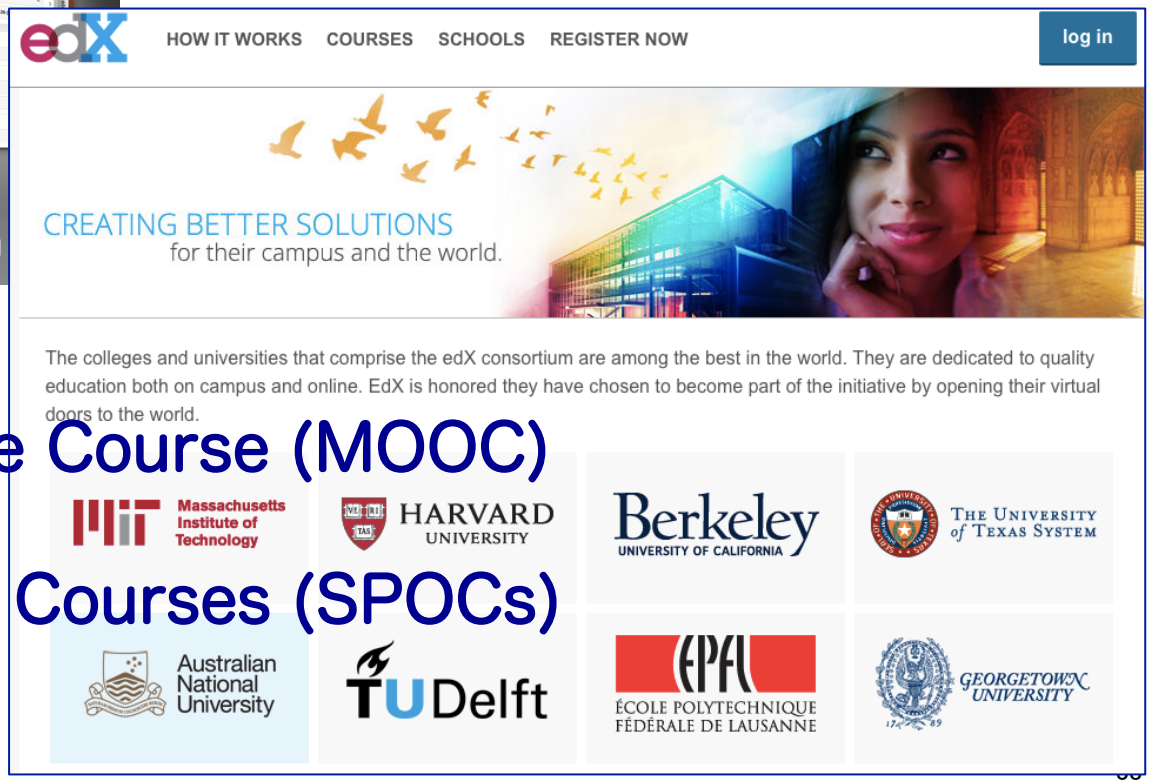
Top Global University Project (SGU in Jpn)

Foster Open and Global Environments

The Developing International Online Course Network

TokyoTechX

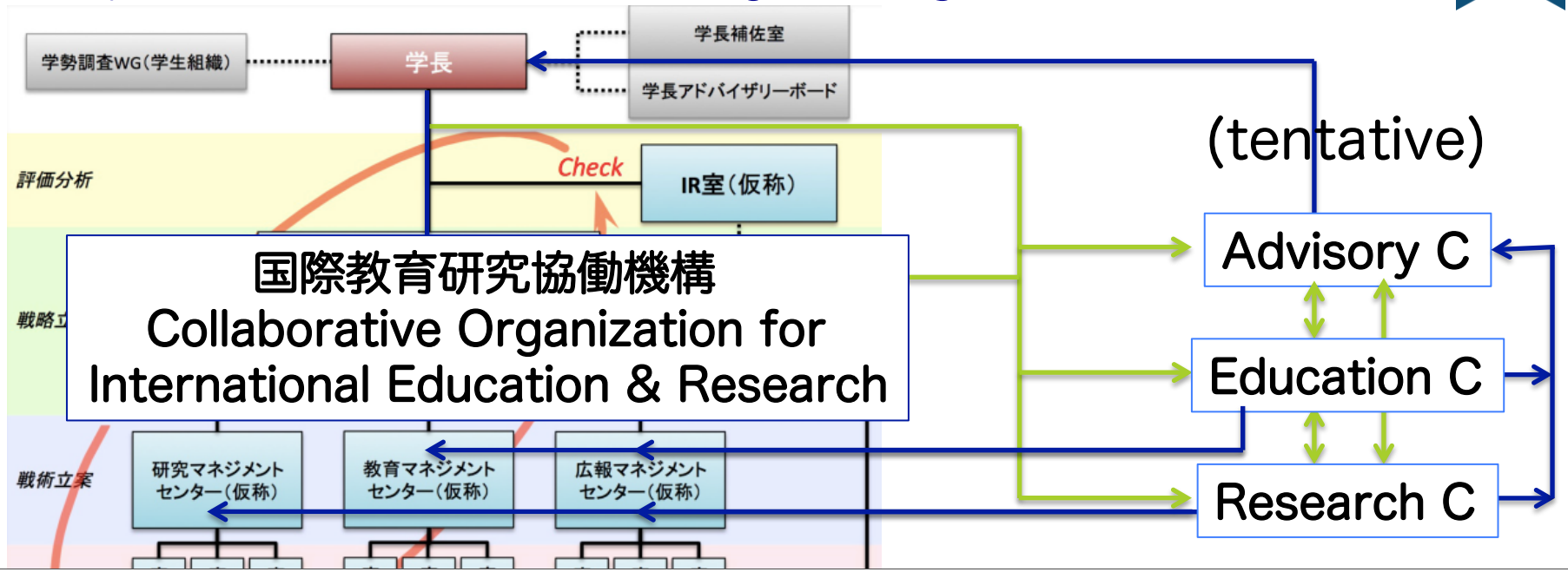
Free online courses from Tokyo Institute of Technology

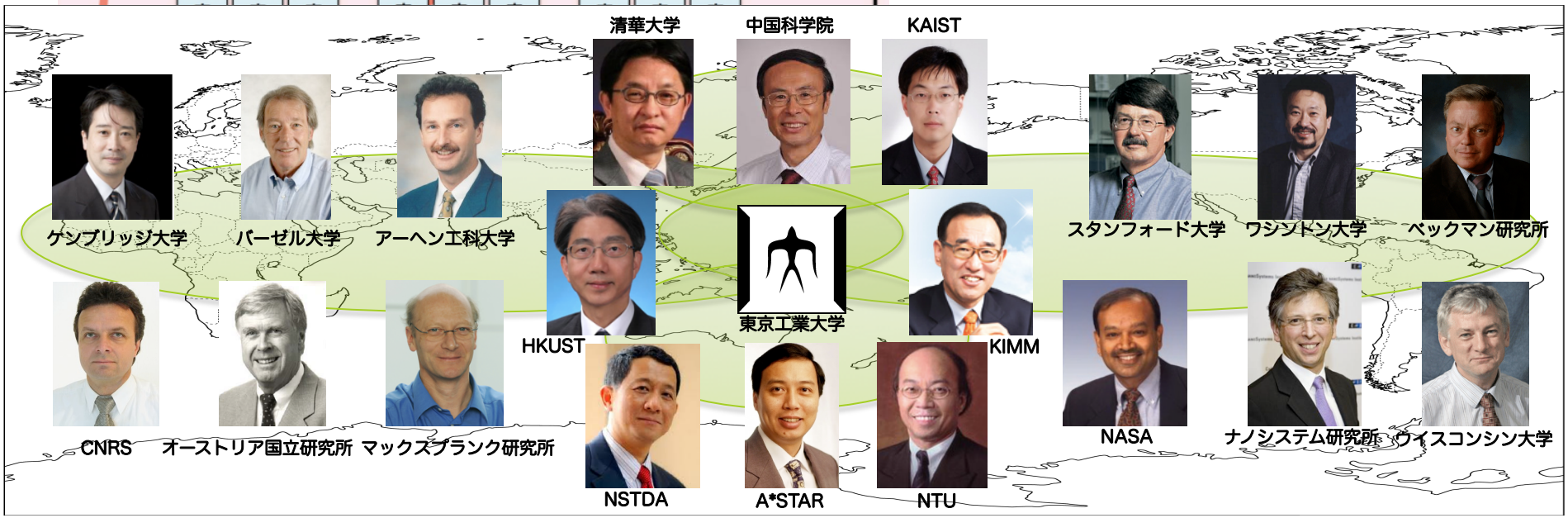


Massive Open Online Course (MOOC)

Small Private Online Courses (SPOCs)

Top Global University Project (SGU in Jpn)





Top Global University Project (SGU in Jpn)
Foster Open and Global Environments

Implementation of world-class education & research systems

Education

Advancing "Education Reform" 教育改革
Academic tuning for easier "Credit Transfer"
International dissemination of education information
Acquisition of "International Accreditations"
Implementation of a "Unit Dispatch System" ユニット派遣

Research

Forming a "Research Hub" 研究特区
Providing graduate education at the research hubs
Promoting international collaborative research
Encouraging joint research papers
Implementing exchange programs for researchers in (and after) doctoral degree programs 博士派遣

東京工業大学
Tokyo Institute of Technology

Professors and Administrative Staff

Career Path Seminar

English Presentation and "Attitude" Seminar

東京工業大学
Tokyo Institute of Technology

University Ranking

世界大学ランキングに挑む ②

大学

過小評価の日本勢

教育改革、トップ校意識

世界大学ランキングのトップ10入りを目指す東京工業大学。担当責任者の原正彦教授は2月、ロンドンに飛んだ。目的はランキングの評価機関へのインタビューだ。国内の大学では初めての試みだった。

評価機関の英タイムズ・ハイヤー・エデュケーション（THE）と英クアクアレリ・シモンズ（QS）を訪問し、ヒアリングを重ねていくと問題点が見えてきた。THEやQSは「世界ランキングについて何を質問しても、日本の大学はほとんど返事をくれない」と不満を感じていたのだ。

評価機関からの質問は英文で届く。メールを受け取った大学職員が即座に返信できるわけではない。担当職員が交代しても、メールのアドレスが更新されず、そもそも質問が届いていないケースがあることも分かった。国立大学法人は3年程度で職員は異動する。評価機関の質問に対応するノウハウが蓄積されておらず、高い評価を得るための体制は整っていない。

原教授は評価方法についても情報を得た。留学生数や外国人教員の割合などの定量分析に基づいてランキングが決まることは知られていたが、定性分析があることも分かった。「定量分析に入らない日本人による英語の講義も定性分析では評価される」と助言を受けた。日本人の教員による講義でも教育内容を磨けば、評価につながるのだ。

一方、欧米やアジアの有力大学は高評価につながるプレゼンテーション用資料を独自に作成していた。香港科技大学などは資料作成に十分な予算を確保。評価機関からのデータ提供などの要求や質問に的確に対応できる体制を整えていた。

原教授は初めて知ることばかりで「目からうろこが落ちる思いだった」と振り返る。日本の大学は世界で戦える実力を持っているのに、それを説明できる体制が整わず、世界ランキン[illegible]で過小評価されて損を[illegible]いる。「いまや大学の国際[illegible]競争はビジネスと同じ。[illegible]後は一丸となって取り組[illegible]戦略が必要だ」と訴える[illegible]

世界の先頭を走るの[illegible]マサチューセッツ工科大[illegible]（MIT）だ。QSのラ[illegible]キングでは2年連続の[illegible]位。その強さは何か。

「MITは来年から大教[illegible]室で1人の教員が教える[illegible]義をやめる」。エリック[illegible]グリムソンMIT副学長[illegible]3月に来日し、新たな教[illegible]改革に挑む考えを示した[illegible]

従来型のMOOC（大[illegible]模公開オンライン講座[illegible]はなく、SPOC（小規模[illegible]限定オンライン講座）と[illegible]ぶ方式だ。学生は1日の[illegible]で好きな時間を選び、[illegible]で学べるようになる。[illegible]はクイズや基礎問題を[illegible]

[illegible]ため、どこ[illegible]は事前に把[illegible]員は最初か[illegible]」（原[illegible]MITは[illegible]化形を提[illegible]オン講義や[illegible]的だった。[illegible]スタンフォ[illegible]の競争を繰[illegible]革新的な学[illegible]勢を崩さな[illegible]首位を走[illegible]、日本も[illegible]学の東工[illegible]い。「欧[illegible]キャッチア[illegible]」（原教[illegible]は強い。東[illegible]年度以降、[illegible]講義内容、[illegible]回刷新する[illegible]過小評価を[illegible]のトップを[illegible]始動する。

MITの新しい取り組み

MITのオンラインコース		MOOC
大学	運営	プラットフォーム
在学生（反転授業を重視）	受講者	誰でも可
取得可	単位	不可（一部可）
必須（少人数、有料）	講義	参加自由（ほぼ無料）

（注）反転授業は空き時間にオンライン教材で基礎を学び、授業では応用分野の課題に取り組む

原正彦東工大教授

Nikkei Sangyo 2014.05.26.

世界大学ランキングに挑む ①

大学

アジアの理工系躍進

日本勢、巻き返し図る

政府の成長戦略の一環として、日本の大学は今後10年で世界の大学ランキングの100位以内に10校が入る目標を掲げ、国際競争力の強化に乗り出した。アジアの有力大学は研究開発力などを伸ばして存在感を強めている。巻き返しに動く日本の大学の姿を紹介する。

文部科学省は4月に30校の「スーパーグローバル大学」を公募して重点支援する方針を発表した。年間予算は77億円。世界100位以内を目指すトップ型の10校に最大で年間5億円を支援。グローバルけん引型の20校に3億円を上限に最長10年間の支援をする。支援対象は9月までに決める。

文科省は「現行制度にとらわれない、変わろうとする大学を支援したい」（国際企画室の有賀理室長）と大学の変革に期待する。大学側の関心は極めて高い。例えば、東京工業大学は、世界のトップ大学との交流協定の戦略的な締結を促進し、学生や教員の相互交流を推進する」目的を掲げて、支援の申請準備を進めている。

世界大学ランキングは英タイムズ・ハイヤー・エデュケーション（THE）と英クアクアレリ・シモンズ（QS）が有名。いずれも論文引用件数、留学生や外国人教員の比率などを判定して順位を発表している。2013年のランキングを見ると、THEは東京大学、京都大学の2校が100位以内。QSは東工大や東北大学、名古屋大学、大阪大学を加えた計6校がランク入りしている。

東工大は三島良直学長が「世界の理工大学トップリーグを構築し、2030年までにベスト10に入ることを目指す」と宣言する。ランキングの低迷に危機感も強い。

2月に大岡山キャンパス（東京・目黒）で開かれ[illegible]グローバル・ワークショ[illegible]プ「アジアの飛躍、豊[illegible]未来に向けて」は東工[illegible]関係者にアジアの有力大[illegible]の強さを実感させた。[illegible]った大学はシンガポール[illegible]南洋理工大学（NTU）[illegible]香港科技大学（HK[illegible]T）、韓国科学技術院[illegible]

THEのランキング

	2011年	12年	13年
東京工業大学（日本）	108位	128	125
韓国科学技術院（韓国）	94	68	56
香港科学技術大学（中国）	62	65	57
南洋理工大学（シンガポール）	169	86	76
マサチューセッツ工科大学（米国）	7	5	5

QSのランキング

	2011年	12年	13年
東京工業大学（日本）	57位	65	66
韓国科学技術院（韓国）	90	63	60
香港科学技術大学（中国）	40	33	34
南洋理工大学（シンガポール）	58	47	41
マサチューセッツ工科大学（米国）	3	1	1

Nikkei Sangyo 2014.05.19.

東京工業大学
Tokyo Institute of Technology

CAMPUS Asia Research Review

campusasia.jp

東京工業大学
Tokyo Institute of Technology

Strategy of International Collaboration

Re-Inventing Japan Project & Top Global Univ Project
世界展開力強化事業 & スーパーグローバル大学創成支援