

# 高専



# K O S E N

## Colleges of Technology

2011

*We foster creative, practical and professional engineers!*



(Photographs on the cover)

- Robot contest
- English presentation contest
- KOSEN Experience Program for Asian Students
- Programming contest
- Overseas Internship Program 2010
- Design competition



### Institute of National Colleges of Technology, Japan

- The Institute of National Colleges of Technology, Japan was founded in April 2004 as an organization to establish and operate National Colleges of Technology throughout Japan.
- Our aim is to utilize the advantages of scale by becoming a single corporate body throughout the country, while operating "attractive National Colleges of Technology with unique brilliance."

# Characteristics of the Colleges of Technology "KOSEN"

- Regular courses providing a five-year integrated system of education
- Advanced engineering courses providing two-year advanced programs
- Systematic curricula with general and specialized subjects
- Professional education that focuses on experimentation and demonstration
- Internships in cooperation with local industries
- Highly talented academic staff having diverse backgrounds
- All-round education through student dormitory life and extracurricular activities
- Nationwide competitions for ideas and technical skills such as robot and programming contests
- Various career opportunities
  - Courses after graduating from regular courses (5 years)  
Approx. 55% of graduates acquire employment (Approx. 20 job offers per student)  
Approx. 45% of graduates advance to higher education (Advanced engineering courses or colleges/universities)
  - Courses after graduating from advanced engineering courses (2 years)  
Approx. 65% of graduates acquire employment (Approx. 30 job offers per student)  
Approx. 35% of graduates advance to higher education (graduate schools)



Visits to factories, study tours

## Practical and creative education

- General and specialized education through systematic curricula
- Experimentation, demonstration, internships, and co-op education
- JABEE-certified programs
- International exchange



Demonstration using machine tools



Class on information studies using computers

## Admission

- Junior high school graduates
- Highly motivated students
- Selection of future courses at an early stage

Regular courses at a College of Technology (for an associate degree)

Advanced engineering courses at a College of Technology  
College / University

Graduate school

## After graduation

- Various career opportunities
- Engineers with extensive practical creativity

## Character building

- Student dormitories, extracurricular activities
- Athletic meets of nationwide Colleges of Technology
- Robot, programming, design, and speech contests
- Small-class education



Architecture class in an exclusive classroom



Students learning the basics of engineering using motors, etc.



Experiments in material engineering

## DATA

■ **Number of colleges** (as of April 1, 2011):  
51 (55 campuses)

■ **Number of Departments and Admission Capacity** (as of April 1, 2011)

	Departments	Admission Capacity	Current students	(Female students included)	(International students included)
Regular courses (for an associate degree)	235	9,400	49,874	(8,459)	[462]
Advanced engineering courses	119	1,044	3,380	(387)	[4]
Total		10,444	53,254	(8,846)	[466]

(\* "International students" is as of May 2010)

■ **Number of Departments and Admission Capacity by subjects in regular courses** (2011)

Category	Engineering						Other (*)	Total
	Mechanical engineering	Electrical and electric engineering	Information and telecommunication engineering	Chemical engineering	Architecture, civil and environmental engineering	Maritime technology		
Departments	51	68	41	31	36	5	3	235 Courses
Admission Capacity	2,040	2,720	1,640	1,240	1,440	200	120	9,400

(\* "Other" courses include management information, communication and information and international business)

■ **Number of staff members** (as of May 1, 2011)

Total	Academic staff	Office staff	Technical staff, etc.
6,302	3,890	1,698	714

■ **Budget** (as of April 1, 2011):

81.9 billion yen (in academic year 2011)

■ **Tuition** (as of April 1, 2011):

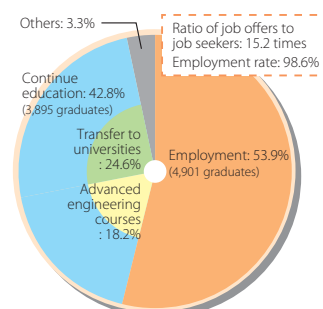
Annual tuition: 234,600 yen

(Note: Students in the 1<sup>st</sup> to 3<sup>rd</sup> years are eligible for national high school student aid.)

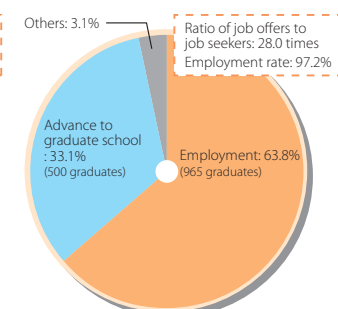
■ **Courses after graduation (employment or advanced education)**

- Graduates of a College of Technology are highly valued by the industrial sector as practical and creative engineers.
- The employment rate of the graduates is nearly 100%.  
[Graduates are employed in various industries such as manufacturing (automotive, electronics, chemical engineering, plants, etc.), information and communications, power and gas supply, construction, transportation, government agencies, and others.]
- The demand for graduates from the Colleges of Technology is increasing due to the aging of current engineers and decreasing youth population.
- Graduates seeking to receive further education after a College of Technology may opt for the advanced engineering courses or transfer to a university.  
[Many graduates advance to the Nagaoka and Toyohashi Universities of Technology founded by the government for graduates of the Colleges of Technology or the engineering departments of other national universities.]

■ **Courses after graduating from regular courses of Colleges of Technology** (in academic year 2010 [9,096 graduates])



■ **Courses after completing advanced engineering courses of the Colleges of Technology** (in academic year 2010 [1,512 students completed])



[Major universities to which to transfer]  
Nagaoka University of Technology, Toyohashi University of Technology, Kyushu Institute of Technology, University of Tsukuba, Chiba University, Tokyo University of Agriculture and Technology, Kumamoto University, Kanazawa University, Osaka University, University of Electro-Communications, etc.

[Major graduate schools to which to advance]  
Kyushu Institute of Technology, Tokyo Institute of Technology, Nara Institute of Science and Technology, University of Tsukuba, Toyohashi University of Technology, Japan Advanced Institute of Science and Technology, Tohoku University, Nagaoka University of Technology, Kyushu Institute of Technology, Osaka University, etc.

# Student Life

- **Complete facilities of student dormitories**  
Experience in communal life, development of self-reliance, and support from night-duty staff and older students
- **Robot contest**  
Programming contest  
Design competition  
English Presentation contest  
Various types of nationwide competitions to foster flexible ideas and creativity  
Athletic meets of Colleges of Technology
- **Extracurricular activities**  
Various athletic and cultural club activities, Colleges of Technology Festival organized by the students



Volatility study meeting in the dormitory



Athletic meets of nationwide Colleges of Technology (Kendo)



Typical dorm room



Robot contest (robot shooting an arrow at a target)



Design competition (students presenting their own spatial designs)



Performance by cultural clubs



Colleges of Technology Festival



Programming contest (students demonstrating their own programs)

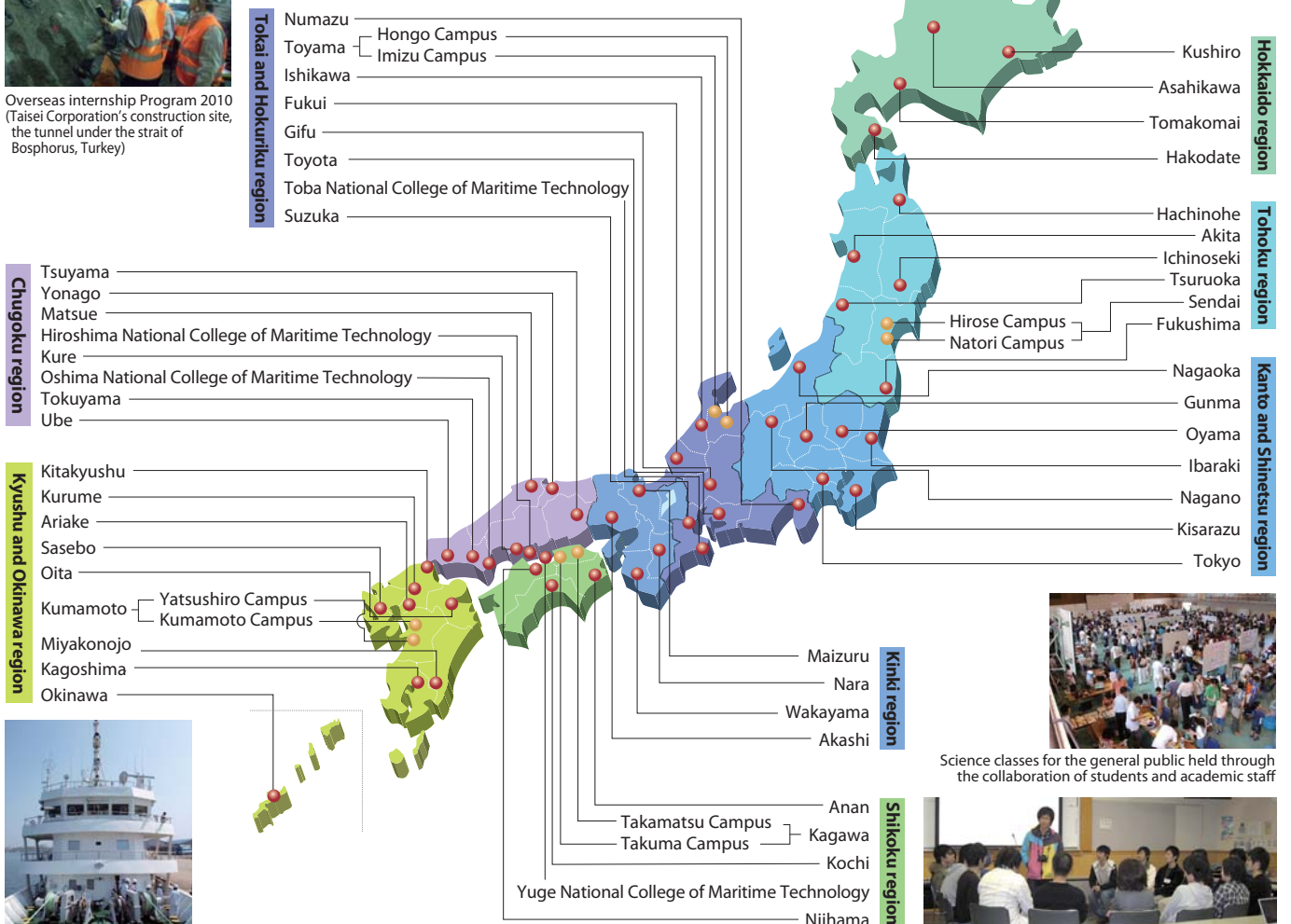


English Presentation contest (students giving a speech in English)

# Nationwide National Colleges of Technology (as of April 2011)



Overseas internship Program 2010 (Taisei Corporation's construction site, the tunnel under the strait of Bosphorus, Turkey)



Hands-on training on a training ship

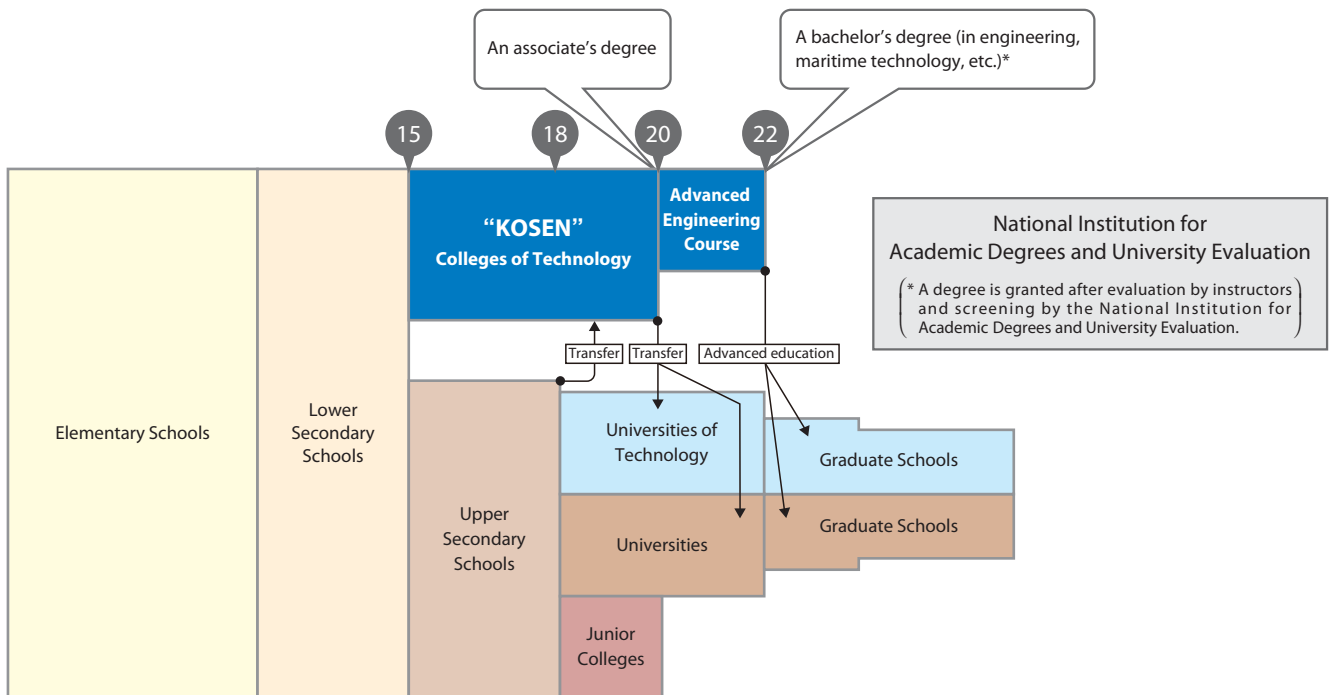


Science classes for the general public held through the collaboration of students and academic staff



Students receiving instruction from system engineers of leading IT companies at the IT Leader Development Camp

## Position in the national education system



### 【About KOSEN】

“KOSEN” (The National Colleges of Technology), in response to urgent demand from industry, were established in fiscal 1962 as institutes of higher education to nurture leading practical engineers through a 5-year program of integrated continuous education following graduation from junior high school, focusing on experimentation, demonstration, and hands-on practice.

For 50 years since then, KOSEN has been turning out excellent human resources that supported the high economic growth period, enjoying a high job opening-to-application ratio and nearly a 100% employment rate irrespective of economic fluctuations. Moreover, KOSEN graduates have been highly commended by industry.

In recent years, more KOSEN graduates have opted to take the specialized courses offered by KOSEN or to transfer to universities instead of seeking jobs, thus allowing them to have a wider choice of career paths.

By taking advantage of the fact that KOSEN in Japan operate under a single entity, the Institute of National Colleges of Technology is introducing an overseas internship program and a singular undertaking of contributions for tuition and training funds, as well as offering practical education in collaboration with industry and supporting the cultivation of human resources. Moreover, in April 2009, the “Center for International Student Exchange,” a shared facility for KOSEN in Japan, was set up at Okinawa KOSEN. The center will accelerate interaction with foreign students by accepting foreign students for KOSEN and providing them with education, and then help in the dispatch of Japanese students abroad.

In October 2009, due to the restructuring of eight KOSEN colleges in four regions, four new KOSEN colleges was established. This drastic restructuring will help realign the departments of regular courses in response to structural changes in society and industry, improve the quality of education, upgrade the specialized courses to meet the need to cultivate personnel with outstanding specialist capabilities, and strengthen cooperative functions in line with the characteristics of the local community.



< Symbol of the Institute of National College of Technology >

The first letter of the Japanese acronym for the (Institute of) National Colleges of Technology in the Roman alphabet is “K”, whose shape is the basis for an image of a flying bird which is depicted to express both the institute’s role as the source of all information and students living together at the schools in a rich natural environment to acquire a broad vision for the future along with practical techniques. The blue background indicates vigorous young students and their technical skills. The five white lines symbolize the policy of five-year integrated education in specialized fields (practice and experience), as well as the development and advancement of both the students and Colleges, and the great progress and contribution of graduates in various fields.

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