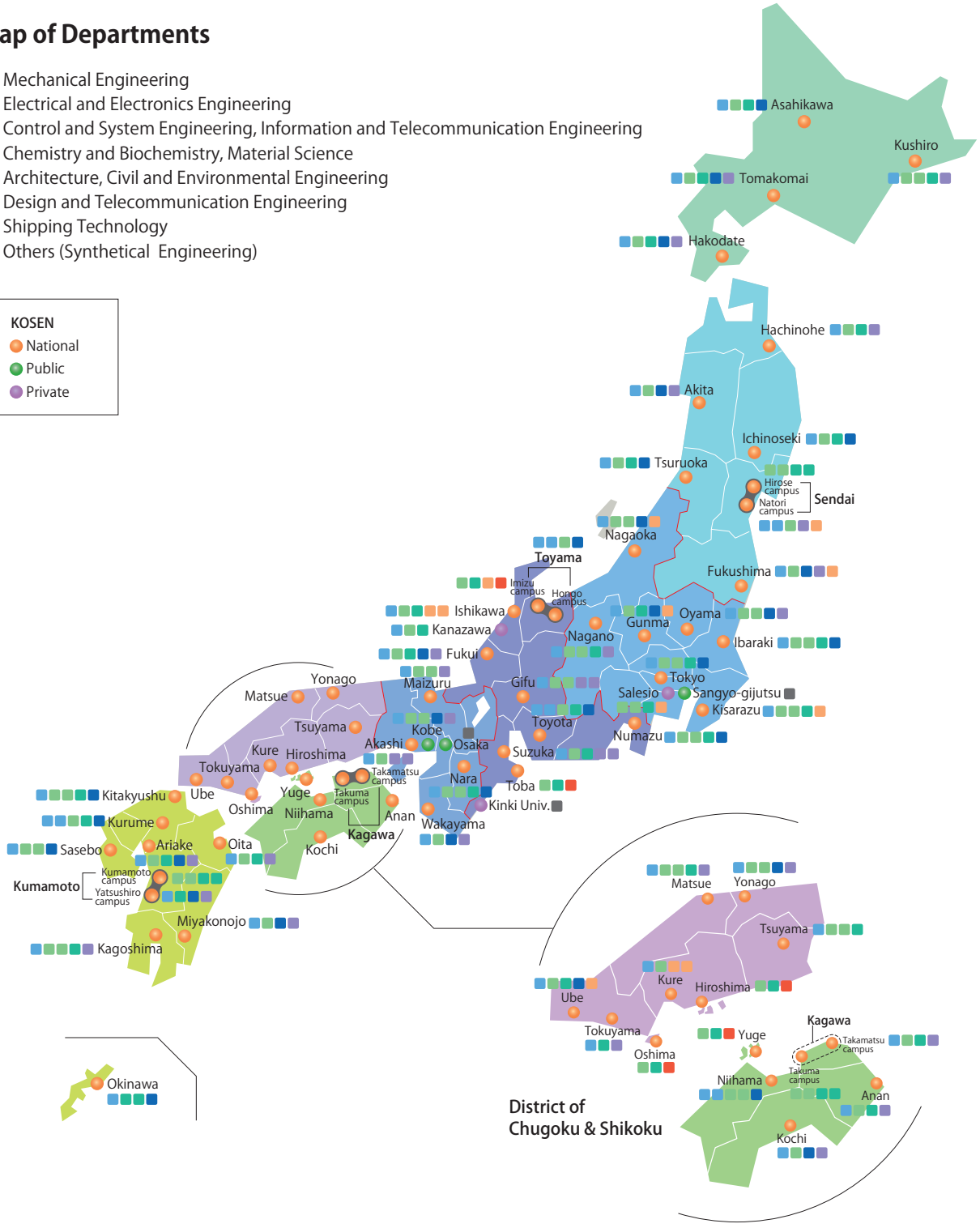
## Map of Departments

- Mechanical Engineering
- Electrical and Electronics Engineering
- Control and System Engineering, Information and Telecommunication Engineering
- Chemistry and Biochemistry, Material Science
- Architecture, Civil and Environmental Engineering
- Design and Telecommunication Engineering
- Shipping Technology
- Others (Synthetical Engineering)

KOSEN
- National
- Public
- Private





# KOSEN
## Institute of National Colleges of Technology, Japan

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Phone. 042-662-3120 FAX. 042-662-3131

**Tamachi CIC Office:** Campus Innovation Center 4F 3-3-6 Shibaura, Minato-ku, Tokyo 108-0023
Phone. 03-5484-6285 FAX. 03-3453-7023


**http://www.kosen-k.go.jp/english/index.html**

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A Guidebook for Engineering Education in

# KOSEN

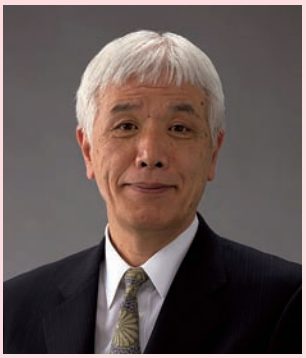
## Colleges of Technology, Japan

STUDY in JAPAN

*"KOSEN" is named from the abbreviation of "Koutou(Superior)," "Senmon (Professional)" and "Gakkou(School)" which applies to Colleges of Technology in general.*
*"KOSEN" is well known amongst manufacturing and development companies which support Japan as a top country for science and engineering in the world.*

*We foster creative, practical and professional engineers!*

KOSEN
Institute of National Colleges of Technology, Japan



**Yujiro HAYASHI, Dr. Eng.**
**President**

# *Aiming to foster creative and practical technical engineers*

Colleges of technology (KOSEN) were first founded in 1962, and since then, about 310,000 students have graduated during the 46 years so far. The Institute of National Colleges of Technology, Japan (INCT), which organizes 51 KOSEN (55 Campuses) including the newly established Okinawa KOSEN, was established in April 2004 as a single legal entity, and it has become a massive-scale institution which has approximately 50,000 students and 6,300 academic / administrative staff.

The mission of the KOSEN, which were established in response to a strong demand from industry, is to foster creative and practical technical engineers. In order to accomplish this aim, the KOSEN conduct practical and professional engineering education based on a five-year integrated system with general learning and specialized learning organized systematically.

About 60% of students find employment after completing the five-year associate degree course, and 40% of them go on to a two-year advanced course, or transfer to a university and receive a bachelor's degree. Some of them continue their study in postgraduate schools. I am convinced that the variety of career courses after graduation creates many possibilities for their careers, and leads to the production of excellent talents such as practical and creative engineers, entrepreneurs, managers, and researchers, who can be inventive and have problem-solving skills. Receiving extremely high acclaim in personnel training from industry, KOSEN are conducting positive activities in relation to technological innovation from the local community and technology with global competitiveness, and cooperating with industry and government.

"They are widely admired internationally, not only for the quality of the high-level vocational training they offer, but also for their degree of responsiveness to the needs of Japanese industry, especially the manufacturing sector. [Text omitted] We, like countless other overseas evaluators, were impressed by their management, quality and innovation." These are remarks of the OECD research committee that investigated the situation of the higher education of Japan in 2006. They expressed great admiration about the education of KOSEN in their report.

A big issue of KOSEN in the future is to cultivate global engineers corresponding to the globalization of industry and the higher education. Therefore, each KOSEN is making efforts to enhance substantial activities such as English teaching, overseas internship programs, international exchange of students and staff, and the technical cooperation. Various strategies have been discussed and carried out especially in attempting to expand the acceptance of international students under the plan of Japanese Government aiming at accepting 300,000 international students for the entire educational facility by 2020.

I believe KOSEN, which train practical and creative engineers under close cooperation with industry, are able to contribute to students from developing countries and to those countries themselves. KOSEN have played an important role in the economic and technology-based national development in Japan. I am hoping that KOSEN will grow and contribute further as "KOSEN in the world" in the future, and I would appreciate your great support.

# Characteristics of KOSEN

**Regular Course**

- Five years of consistent engineering education from 15 years old.
- Possibility of continuing further study in the two-year advanced course.
- Curriculum emphasizing scientific experiments, workshop training and practical manufacturing skills.
- Small classes, allowing close attention to students. Detailed teaching and assistance by dedicated teachers.
- Student dormitory service
- Inter-college competitions, such as the Robot Contest, Programming Contest, Design Contest and so on.
- International activities, such as teacher and student exchange (470 international students).
- Accreditation by JABEE as a qualified engineering education program.
- A wide variety of career courses are available after graduation, from employment to advancing to higher level education.
- A very good reputation both in industry and in academia.

**Advanced Course**

- PBL (Project-Based Learning) on practical engineering tasks.
- A long–term internship (over a month) and COOP (cooperative education)
- Accreditation by JABEE as a qualified engineering education program.

## "We, like countless other overseas evaluators,were impressed by their management, quality and innovation."

**— from OECD* Reviews of Tertiary Education in Japan** * Organisation for Economic Co-operation and Development

The following is extracted from the original:

*(P.16 first paragraph)*

There is one notable exception to this portrayal, which is worthy of note. As Tables 1 and 2 indicate, when it comes to kosen, 87.3% of the institutions and 87.5% of the students are in publicly funded, national institutions, organised through the Institute of National Colleges of Technology. They provide vocational education for those between the ages of 15 and 20, with the possibility of "topping up" to a full degree. They are widely admired internationally, not only for the quality of the high-level vocational training they offer, but also for their degree of responsiveness to the needs of Japanese industry, especially the manufacturing sector. They also provide a socially inclusive progression pathway for students from lower socio-economic groups in Japan. We, like countless other overseas evaluators, were impressed by their management, quality and innovation.

Mission of OECD visit to Matsue Kosen

*(P.25 third paragraph)*

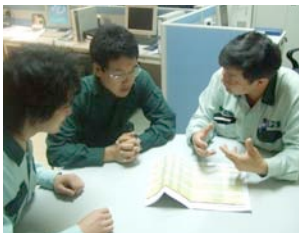
The exception to this is the kosen. They are effectively planned and coordinated through the Institute of National Colleges of Technology and combine high levels of quality assurance, innovative pedagogy, attentiveness to stakeholder needs (especially employers) and a wide geographical spread. They also provide access to tertiary education from families whose children have traditionally been underrepresented - those from lower socio-economic groups, from rural areas, etc. We believe that the success of these colleges owes something to the mixture of planning at the national level allied to operational autonomy and responsiveness to markets at the local level.

# Recent activities for further internationalization of KOSEN

■ Establishment of **"Center for international students exchange"** in Okinawa KOSEN in order to study, plan and take actions necessary for promoting international activities of all KOSENs in April 2009.

■ Introduction of **overseas internship program** under the agreements with Japanese major companies in March 2009.

Tsuneishi Heavy Industries (Cebu) Inc. (Philippines)


Mitsui Phenols Singapore Pte. Ltd. Corporation(Singapore)

■ Holding **"Asian symposium on Ecotechnology"** annually, in Japan and other Asian countries.

■ **Comprehensive agreement** on educational exchange between the Institute of National Colleges of Technology and 3 polytechnics in Singapore in September 2009.

■ Cooperation for training teachers in the field of industrial automation technology at Anatolia vocational school in Turkey under **JICA project** from 2007.

# International Students in KOSEN

KOSEN welcome International Students from various countries as follows:

## Number of International Students

(as of May 1, 2009)

| | MEXT scholarship | | | Malaysian gov.scholarship | | | Privately financed | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regular | Advanced | Total | Regular | Advanced | Total | Regular | Advanced | Total | Regular | Advanced | Total |
| Malaysia | | | 0 | 224 | | 224 | | 1 | 1 | 224 | 1 | 225 |
| Laos | 46 | | 46 | | | 0 | | 2 | 2 | 46 | 2 | 48 |
| Vietnam | 44 | | 44 | | | 0 | | | 0 | 44 | 0 | 44 |
| Mongolia | 44 | | 44 | | | 0 | | | 0 | 44 | 0 | 44 |
| Indonesia | 38 | 1 | 39 | | | 0 | 1 | | 1 | 39 | 1 | 40 |
| Sri-Lanka | 16 | | 16 | | | 0 | | | 0 | 16 | 0 | 16 |
| Cambodia | 8 | | 8 | | | 0 | | | 0 | 8 | 0 | 8 |
| Asia | 20 | 1 | 21 | | | 0 | 3 | 1 | 4 | 23 | 2 | 25 |
| Africa | 16 | | 16 | | | 0 | | 1 | 1 | 16 | 1 | 17 |
| Latin America | 3 | | 3 | | | 0 | | | 0 | 3 | 0 | 3 |
| | **235** | **2** | **237** | **224** | **0** | **224** | **4** | **5** | **9** | **463** | **7** | **470** |

### Enter the third year of KOSEN

International students enter the third year of KOSEN after they finished Preparatory School which provides Japanese language and core subjects necessary for KOSEN in Japan or your own countries.

## Third year Admission Test
## For privately funded international students

This new admission system is intended to recruit privately funded students eager to study at KOSEN based on the standard examination, in addition to international students publicly funded by the Japanese government and a foreign government.

Applicants who have completed an academic curriculum equivalent to upper secondary school enter the third year of KOSEN (equivalent to the third year of high school) at age 18 in Japan' school system.

### Outline
### Process of Entrance Examinations:

Application → Interview → Notification of results → Enrollment procedures

▸ This procedure is done during January ー March in the previous year of admission.

34 KOSEN out of 51 are participating in this admission.

For more details, please refer to our website:
**http://www.kosen-k.go.jp/english/index.htm**

### Admission Requirements

Individuals with non-Japanese nationality and without permanent residency who fulfill the following qualification and requirements by March 31 of the year of admission:

1) Qualification

Individuals who fulfill one of the following qualifications will be qualified to apply:

▸ Individuals who have completed or will complete a 12-year program of school education in a country other than Japan or equivalent as recognized by MEXT (Ministry of Education, Culture, Sports, Science and Technology)

▸ Individuals who have reached 18 years of age and fulfill one of the following requirements:

- Individuals who have been granted an International Baccalaureate Diploma from the International Baccalaureate Organization, a non-profit educational foundation founded under the Civil Codes of Switzerland, in a country other than Japan
- Individuals who have been granted the Abiturzeugnis (including the Reifezeugnis), a qualification acknowledged in the Federal Republic of Germany to enter a university, in a country other than Japan
- Individuals who have been granted the European Baccalaureate Diploma, a qualification acknowledged in the French Republic to enter a university, in a country other than Japan

2) Requirements

Applicants are required to fulfill all of the following requirements:

▸ Applicants who have taken the following subjects of the Examination for Japanese University Admission for International Students (EJU), administered by the Independent Administrative Institution Japan Student Services Organization during the past two years;

- Japanese as a Foreign Language
- Science (two subjects from Physics, Chemistry, and Biology)
- Mathematics (course 2)

**Japanese must be selected as the examination language.**

▸ Applicants who have taken TOEIC or TOEFL during the past two years

### Selection

Applicants are selected based on the required documentation, results of EJU and TOEIC or TOEFL, and an interview.

---

## Preparatory School before KOSEN
## For Government Funded International Students

・ Grantees of Japanese government scholarships finish **Tokyo Japanese Language Education Center of JASSO** in Japan for a year.

### Tokyo Japanese Language Center

Tokyo Japanese Education Center offers a One Year Course beginning in April, and a One and a Half Year Course beginning in October. Classes are formed according to student's abilities, and they teach Japanese language and Japan studies in small classes.

For students with the Japanese Government scholarship programme proceeding to Colleges of Technology, they have a special curriculum to help them in study technical fields, Japanese lessons targeted at natural science course students coming from countries other than China, and in addition, classes of mathematics, physics, information technology and English are conducted.

Note: Above are quoted from school prospectus "Invitation to Tokyo Japanese Language Education Center"

・ Grantees of Malaysian government scholarship finish the Preparatory course of **INTEC at Universiti Teknologi MARA** in Malaysia (**Course for Technical Studies to Japan (KTJ)**) for two years.

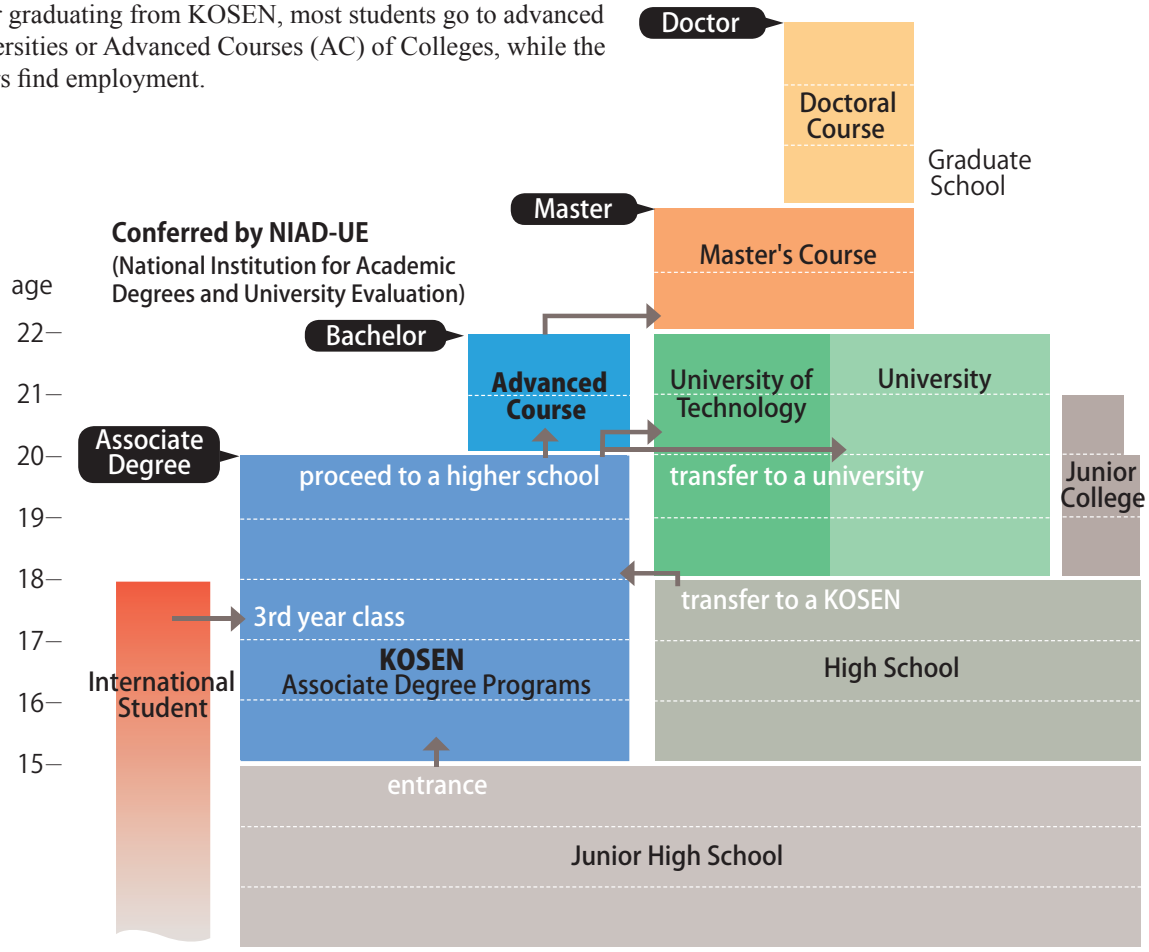
### Course for Technical Studies to Japan (KTJ) at Universiti Teknologi MARA

The programme is formulated to assist students to attain the required level and skills in the Japanese language and also to provide strong fundamental knowledge in Science and Mathematics so that they will be able to cope with the third year curriculum of National College of Technology. The preparatory curriculum is designed to meet the requirements set by Monbukagakusho(MEXT) for admission into National College of Technology.

Note: Above are quoted from the website of Universiti Teknologi Mara, "The look east policy programme"

# College of Technology System

KOSEN — five-year engineering education from 15 years old. After graduating from KOSEN, most students go to advanced universities or Advanced Courses (AC) of Colleges, while the others find employment.




## Tuition Fee

Table: Comparison with national universities

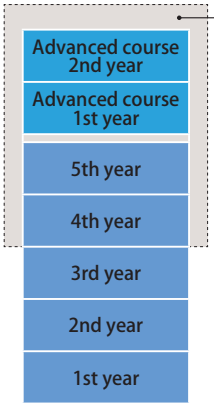
| | Admission Fee | Annual Tuition Fee |
|---|---|---|
| Kosen | 84,600 Yen | 234,600 Yen |
| National university | 282,000 Yen | 535,800 Yen |

## Dormitory Fee (/month)

| | |
|---|---|
| Boarding expenses | 800 Yen |
| Lodging fee (money for meals, utilities) | 36,000 Yen |

## Scholarships

Privately financed international students can apply for scholarships provided by the Japan Student Services Organization (JASSO).




## Program accreditation by JABEE

**JABEE (Japan Accreditation Board for Engineering Education).**

Since 2005, JABEE has been a member of the Washington Accord, an agreement which provides a mechanism for mutual recognition between signatory bodies of engineering education accreditation processes. KOSEN have been eager to get JABEE accreditation in order to ensure an internationally recognized quality assurance. Accredited programs of KOSEN correspond to the level of undergraduate engineering program at a university.

*65 educational programs of 47 KOSEN (from a total of 51 schools) have obtained JABEE accreditation

## Continuation of Education after Graduation

More than 90% of international students go on to higher education after graduation from KOSEN and get a job in Japan or Japanese Corporation in their own countries.

## List of Colleges and Universities

Nagaoka University of Technology, Toyohashi University of Technology*, The University of Tokyo, Kyoto University, Tokyo Institute of Technology, University of Tsukuba, Tohoku University, Hokkaido University, Hiroshima University, Chiba University, The University of Electro-Communications etc.

Some graduates go on to postgraduate schools.

*Nagaoka University of Technology and Toyohashi University of Technology are national universities established mainly for graduates of KOSEN.

## Employment

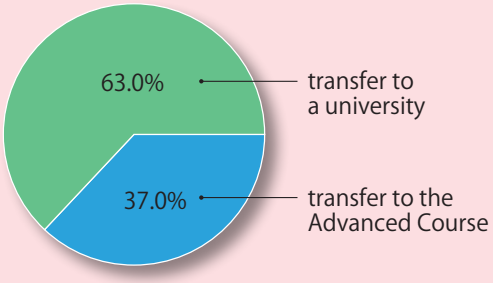
Engineering students make connections with prospective employers through the following resources:

- Internship programs in cooperation with domestic and overseas industry
- Job vacancy information

## List of Companies

NTT, Canon, Nikon, HONDA, KOMATSU, TOSHIBA, SHARP, SONY, Panasonic, HITACHI, OMRON, Asahi Kasei Corporation, TORAY, SUNTORY, Tokyo Electric Power Company, KAO, FUJITSU, Mitsubishi Heavy Industries, Ltd., Idemitsu Kosan, Nippon Yusen Kabushiki Kaisha(NYK LINE), Sumitomo Chemical etc.

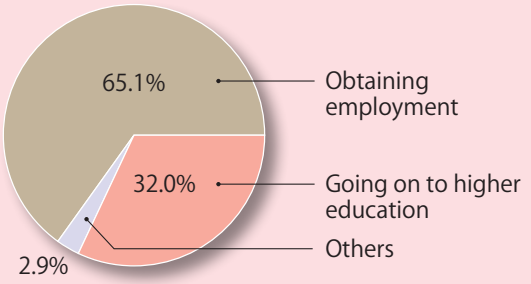
### Regular Course Graduates Going on to Higher Education (2007)



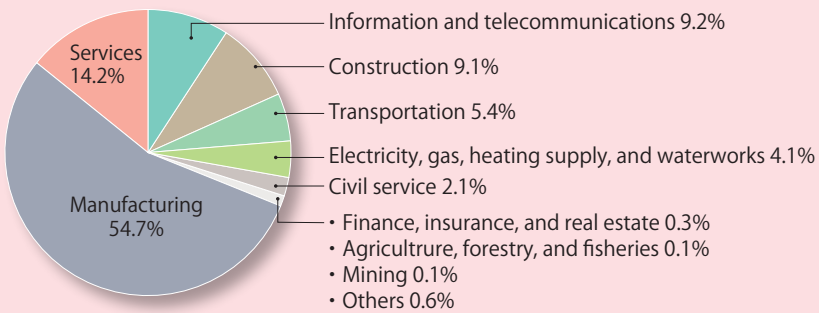

### Regular Course Graduates

| Category | 2008 |
|---|---|
| Number of graduates | 9,213 |
| Number of employed graduates | 4,871 |
| Employed graduates (%) | 52.9% |
| Average number of job offers per graduate | 24.7 |
| Graduates going on to higher education | 4,073 |
| Graduates going on to higher education (%) | 44.2% |

### Advancement Routes for Advanced Course Graduates (2007)




### Ratios of college of technology graduates by industry in 2005 (including public and private colleges of technology)



# Major Fields of KOSEN

## Departments

### Mechanical Engineering

Tokyo

The aim of our department is to educate engineers sufficiently able to adapt themselves to any field of industry, in particular the machinery industry. In our five-year college education, general education and specialized education combine effectively in order to attain this aim. We lay stress on fundamentals, design and drafting, experiments and mechanical practice. Subjects related to mechatronics are also taught to cope with recent technological innovations. The third and the fourth year students take trips to major industrial companies. Special lectures are given all through the year. Graduation research helps students to develop the ability to solve difficulties and to acquire the latest skills.

**Subjects:** Fluid Engineering, Thermal Engineering ・Measurement and Instrumentation・Mechanical Drawing, Strength Materials・Control Engineering etc.

### Chemistry and Biochemistry, Materials Science

Tokyo

Chemical technology has produced various products related to food, clothing and shelter for human beings and made a large contribution to human civilization. Further development of chemical technology now requires knowledge of biotechnology as well as knowledge of chemistry. The Department of Applied Chemistry and Biotechnology aims to cultivate engineers who will contribute to the future development of the chemical industry through studies on chemistry and biotechnology.

**Subjects:** Organic Chemistry・Inorganic Chemistry ・Analytical Chemistry・Environmental Science・Chemistry Engineering・Biochemical Engineering・Materials Engineering etc.

### Electrical and Electronics Engineering

Tokyo

The department provides a wide variety of subjects including electrical and electronic engineering, control, communications, materials, computers, measurements and energy engineering. The department offers energy and electronics courses. Each course is carefully structured to ensure that all students acquire the use of up-to-date techniques.

**Subjects:** Electric Circuits・Electronic Circuits・Programming ・Power Electronics・Information Processing・Semiconductors etc.

### Architecture, Civil and Environmental Engineering

Ishikawa

Civil engineering is a basic technology essential for creating comfortable and safe human lives by building up the infrastructure of human civilization while preserving the natural environment. Civil engineering technologies are used to map out the lines of land and city development and, accordingly, to lay out and construct such facilities as roads, railroads, power plants, water supplies, parks, tunnels, bridges and dams without destroying the valuable natural environment.

Architecture is often said to be a receptacle in which human life and culture is developed. It is created as a combined product of art and engineering, and it must at the same time be safe, beautiful and functional. Based on this idea, the department of architecture offers a curriculum consisting of various fundamental subjects which cover the social sciences, humanities and fine arts, and of specialized subjects such as structural engineering, construction engineering and environmental engineering. Hence, students can choose any field which makes the most of their personalities and talents and satisfies their desire to learn.

**Subjects:** Architectural Planning・Architectural Environmental Engineering・Design of Steel Structures・Civil Engineering ・Survey・Concrete Structural Engineering・City Planning ・Geotechnical Engineering etc.

## Control and System Engineering, Information and Telecommunication Engineering

Oyama

Control Systems Technologies are taught systematically alongside fundamental knowledge in mechanical, electrical, and information processing engineering. It is the aim of the department to cultivate engineers who are capable of utilizing their knowledge and skills in mechatronics through construction of various devices (laboratory and workshop practice).

**Subjects:** Control Engineering・Information Processing ・Instrumental Engineering・System Engineering ・Signal Processing・Electronics Circuits・Data Base ・Telecommunication System・Software Design etc.

## Shipping Technology

Yuge Maritime

Technological innovation has brought about rapid modernization in the shipping world. Shipping Technology Department makes its ultimate aim to give its students enough knowledge and technical skills for the construction of highly automated vessels. The department is composed of two courses: Nautical Science and Marine Engineering. Both courses have their own teaching programs for the students to obtain the certificate of qualification for a maritime officer or maritime engineer.

**Subjects:** Maritime Traffic Law・Oceanography・Navigation ・Seamanship・Internal Combustion・Hydoro-mechanical Science・Advanced Ship Movement Dynamics ・Thermodynamics・Electrical Instrumentation, etc.

# Advanced Course

The Advanced Course is designed to enhance three abilities: creativity, interdisciplinary thinking, and international knowledge. Creativity is expected to develop through various experiments and simulations, research on subjects drawn from production sites, and one-month of training at a company. Interdisciplinary thinking will be promoted through classes stressing various technical areas. International knowledge is anticipated to be acquired by intensive English language education.

The Bachelor of Engineering degree requires the completion of the Advanced Course and passing the accreditation process of the National Institution for Academic Degrees.

## Mechanical & Electrical System Engineering

This advanced course aims at fostering students to be creative and practical engineers with skills from both the mechanical and electrical fields who thereby have the flexibility to research and develop the newest technologies.

## Environmental System Engineering

This advanced course aims at training creative and imaginative engineers who can carry out R&D and can flexibly cope with the problems relating to the environment and urbanization which have become more serious and widely spread.

## Chemistry and Material Engineering

The field of chemical engineering has extended into new areas of technology which covers wider aspects of our life. Chemical engineers are now concerned not only with the operation and designing of chemical plants and research and development of chemical processes to produce conventional materials, but also with biotechnology solutions to environmental problems and food and water supply, which are posing important problems to our future. Furthermore, the establishment of energy-saving bioengineering processes and development of advanced materials to be used in manufacturing artificial organs and devices of information instruments are also required.

Presentation of a report

## Contests & Competition Events

### KOSEN Robot Contest
(Commonly known as Robo-con)

Students of KOSEN across the country compete with ideas and technology on given issues. This is a nationwide educational event that allows students to experience the fascination of designing and building a robot by themselves, and to realize the importance of expressing ideas as well as the joy of creating something.

### KOSEN Programming Contest
(Commonly known as Pro-con)

Students of KOSEN across the country compete to create ideas and express themselves in information processing technology using the programming experience they have accumulated on a daily basis. As a program supporting the Lifelong Learning Festival organized by the Ministry of Education, Culture, Sports, Science and Technology, the contest is held in cooperation with local communities and the information industry.

### KOSEN Design Competition
(Commonly known as Deza-con)

Students of KOSEN across the country compete to produce designs and plans for better living environments making the best use of what they study daily. Defining design as the integration of technologies to construct human living environments, this competition is held to allow students to develop into human resources with creativity and the ability to implement their technical expertise.

### The Annual English Presentation Contest for Students in KOSEN

We hold the English Speech and Presentation Contest in order to encourage English learning at KOSEN. Speeches and presentations on science and technology are performed in this contest, and they have gained a high reputation.

### Athletic Meeting of KOSEN

Athletic students of colleges of technology who have survived regional elimination compete in 14 sporting events. This is designed to give the students opportunities to enjoy sports and enhance their sporting spirit, in addition to developing both their mental and physical health and promoting friendship between colleges of technology throughout the country.

## Students Council

There are a variety of sport clubs and student societies in each KOSEN; football, swimming, basketball, badminton, brass bands, painting, photography, and so on. Students enjoy such activities and practice hard to participate in regional and national competitions or matches.

## Academic Calendar

In most KOSEN, one academic year consists of two terms. Basic information is given below; for further information, please contact individual KOSEN websites.

### Semesters

In most KOSEN, one academic year consists of two terms as shown below.

* Term 1: April - September
* Term 2: October - March

### Vacation

Vacation dates vary among KOSEN, but are basically as follows.

* Summer Vacation: Mid July - End of August / Mid August - End of September
* Winter Vacation: Late December - Beginning of January
* Spring Vacation: Mid February - Beginning of April

## Student Dormitory

Tokyo

Each Kosen provides a dormitory room for international students ensuring that the necessary facilities and support for their student life in Japan are available to them.

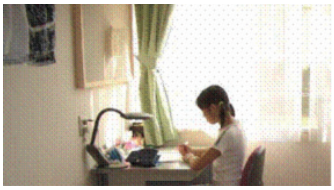
Kosen dormitories provide students with security. Teachers or staff stay throughout the night in the dormitory and care for the students. If a student falls ill, a teacher or staff will accompany him/her to a local hospital for medical treatment. Further, all dormitory buildings are for one or the other gender, and the buildings for female students have special security facilities such as an electronic door gate, a security camera, and an alarm.

All dormitories have catering facilities that provide meals for both domestic and international students. They, however, are not designed for Islamic students or vegetarians. Therefore, each dormitory has made available communal kitchen-dining facilities for these international students. These facilities are equipped with a cooker, refrigerator, freezer, and a microwave oven. During school vacation, international students are able to stay in the dormitory and use these facilities.

All international students are allowed to stay in the dormitory until they graduate. Students, however, should follow each dormitory's regulation; regulations vary among dormitories. The common rules to all dormitories are as follows: No smoking, No drinking, Lights out before midnight, and No entry during daytime on school days.

Rooms allocated to international students are different from dormitory to dormitory. Most of them, however, have one or two bedrooms with a desk, central heating, and air-conditioning. All dormitories have a laundromat that is shared with other Japanese students. Some dormitories provide access to the Internet via the college LAN.

Fees vary among Kosens. It generally costs 35,000～45,000 yen per month for the room, food, and the use of the facilities. For further information, please contact each Kosen's Dormitory. You also need to budget for the following items: clothes, a mobile phone, social activities, etc. You can purchase daily essentials in town.



Tokyo

Tokyo

Toyota

## From Graduates—1

### Mr. Ben Foo Ming Sheng

**Profile**

**Birthplace:** Penang, Malaysia
(age: 25)

**Educational record:**

• Penang Free School, Malaysia (High School)
• PPKTJ KL, Malaysia and (former) ISI, Tokyo (Japanese language and preparatory course)
• Suzuka National College of Technology, Mie Prefecture (Chemical and Biochemical Engineering Department, Diploma Degree)
• Tokyo University of Agriculture and Technology, Tokyo (Chemical System Engineering, Bachelor Degree)

**Present situation:** Tokyo University of Agriculture and Technology, Tokyo (Management of Technology, Master's Degree)

***TWO roads diverged in a yellow wood,***
***And sorry I could not travel both***
***…….***
***I took the one less traveled by,***
***And that has made all the difference.***
***-The Road Not Taken, Robert Frost (1874 –1963)-***

*Road to the Land of the Rising Sun*

I always wanted to study abroad ever since I was in High School, mainly because I wanted to experience a new environment and to get new prospective in life. Australia, America or the UK would be a good destination as I'm used to using English as a language but I was searching for a different route as there are already many Malaysian students there.

The chance came by when I got offer for the scholarship from the Government of Malaysia under the Look East Policy, a program to study in Kosen in Japan. I never thought Japan would be the place I landed on but it is a stepping stone for me to continue on my dream to study abroad. Japan: Land of the Rising Sun, leading-edge technology, fascinating cultures, *mangas* and *animes*. It's definitely the place that offers a good platform of education.

*The culture shock*

At first, I thought I was quite ready after the first year of preparatory course in Kuala Lumpur, Malaysia, but studying in class and using Japanese as spoken language are two different things. I was glad that I had another year of preparatory course in (former) ISI, Tokyo. Indeed, classes from early morning to late evening, the "only Japanese" environment had helped in improving the language. Also getting involved in the school choir and Shinagawa Rover Scouts helps me getting into the new community.

*From the Eastern Capital to the Land of Ise*

After a year of experience in the big metropolitan Tokyo, I decided to continue my study in Suzuka National College of Technology. I majored in Chemical and Biochemical Engineering because Chemistry is the Mother of Science and Chemical Engineering involved many parts of our life; food, water, environment, plastics etc. Memorizing chemical terms and lectures in Kansai Dialect were not easy. Friends and seniors were helpful in my studies.

The Kendo Team was also a good memory during my three years in Suzuka Kosen. Tough practices in hot summer and cold winter, not forgetting the furious but kind Mr Hosono, the master of the team.

***"Keizoku wa chikara ni nari"***

(direct translation, "continuation leads to power")

That was the proverb taught by Mr Hosono and that was the word I kept on in mind even today. I gained more than just good memories but also a good master and a good circle of friends.

*One step after another*

I was interested in the leading technology in Environmental Process that Japan has and I continued on to Tokyo University of Agriculture and Technology for my

Bachelor Degree in Chemical System Engineering. The course offers the accreditation from Japan Accreditation Board for Engineering Education (JABEE). My study was on catalyst to eliminate Volatile Organic Compound (VOC).

However, I realized that management also plays an important role in bringing technology to the competitive global market. Instead of pursuing to a Engineering Course for my Master's Degree, I chose to continue on in Management of Technology, majoring in Technological Risk Management.

***Stay foolish, Stay hungry***
***-Steve Jobs, CEO Apple Inc.-***

*Be proactive*

Being proactive is important. With the fast changes in environment and globalization, we have to open up our senses and be alert to the changes. Also, we have to be proactive chasing our own goals and dreams as they don't just come to us easily. Last but not least, be proactive and open up to various fields.

## From Graduates—2

### Mr.Buyanjargal SHIRNEN

**Profile**

**Birthplace:** Ulangom, Mongolia
(age: 26)

**Educational record:**

• (Former) Uvs #1 Secondary School, Ulangom, Mongolia
• Computer Science and Management school, Mongolian University of Science and Technology (MUST), Mongolia
• (Former) The Japanese Language School of the International Students Institute, Tokyo, Japan
• Sasebo National College of Technology, Nagasaki Prefecture, Japan (Semi -Bachelor Degree in Electro-Control Engineering)
• Chiba University, Chiba Prefecture, Japan (Bachelor Degree in Electronic and Mechanical Engineering)

**Presently:** Chiba University, Chiba, Japan (A candidate for the Master Degree in Artificial System Designing Engineering)

**1. Why KOSEN?!**

Ever since I met my high school senior who was studying in KOSEN, I had decided to study in Japan. The senior once came on his vacation back to Mongolia with his Malaysian friend and introduced me the life and study in Japan. His talk really excited me and made my interest in KOSEN, Japan, and foreigners burst off.

The chance, the Japanese Government Scholarship, came by in 2002, when I was in Computer Science Engineering Faculty at MUST. I chose the examination for KOSEN, but not for UNIVERSITY and SENMON, since I had some understanding of KOSEN where I could have much more engineering education and practice.

Before coming to Japan, I had decided to go on to higher education because there were opportunities to continue your study in bachelor, master, and doctoral degrees. I have felt now that KOSEN graduates have more practical knowledge and independence on their own in their further studies rather than the other students in universities.

One last thing I want to mention about KOSEN is that even you could work as an engineer in Japan after your graduation, which means you would already have some knowledge and skills as an engineer.

**2. Welcome to KOSEN!**

After only one year language course, I transferred to SASEBO KOSEN where I studied Electro-Control Engineering for three years. The very first 3 months were honestly not easy to get used to the new environment. The local Nagasaki dialect, dormitory life, and the classes in Japanese were new. Thanks to my Japanese tutor, even now my good friend, class mates, professors, dormitory staff, and the people in Sasebo, however, I could get over the months and got used to it. They supported me in any ways; I learned from my tutor how to write my assignment

in Japanese, asked him to check and correct my writings in the language. I also attended Karate club and ROBOCON club, and that helped me have fun times at KOSEN.

I especially appreciate my professor Mr. Makino, who was a former engineer for one of the biggest Japanese firms and also a KOSEN graduate, for his permanent inspiration and teaching me how interesting electro-control engineering was. He always gave us the catch phrase: "Sekibun wa Ai, Bibun wa Dream", which means "The mathematical Integral is Love, the Differential is Dream". By using the phrase, he made me understand the concept of Integral and Differential Control theory. I learned from him how to consider academic things in actual life. I here remain the phrase open to you to think it deeply.

Though KOSENs are in rural areas, the people are warm and kind, the environment is much quite focusing on your study. Also, international student division officers at any KOSEN are really kind and supportive, and create the students opportunities and appropriate environment not only for study but also for experiencing the local Japanese cultures. I have experience in ceramic, tea ceremony, and Ikebana, arranging flowers, and so on. Further, the professors, many of them are used to work in industries, and they have rich practical and theoretical knowledge. Thus, they could teach you both practical and academic knowledge.

At last, I am always proud of studying in Sasebo, Nagasaki where the first open area to the foreign countries was while Japan was the closed country in Sakoku period.

### 3. Be ambitious!

There is always opportunity, but do not miss it by being unaware of. Being ambitious will give you eyes. For the future KOSEN students, seek for the opportunity to attend it if you want to study both practical and theoretical engineering in Japan. To the present students, good luck for their future study or work and let us be ambitious to achieve our goals.

## From Graduates—3

### Mr. Sam Ann Rahok

**Profile**

**Birthplace:** Cambodia (age: 30 )
**Educational record:** *The Japanese Language School of the International Students Institute * Maizuru KOSEN, Electrical Engineering * Utsunomiya University, Electronics and Electrical Engineering
* Utsunomiya University, Information and Control System Engineering *Utsunomiya University, System Design Engineering
**Present situation:** Utsunomiya University Graduate school doctoral degree course, System Design Engineering

## 1. Introduction

I am a foreign student from Cambodia. I came to Japan in the year 2000 when I got a Japanese government scholarship. Before that I was a second year student in ITC (Institute of Technology in Cambodia) in Phnom Penh.

## 2. About My Study

In my first year in Japan, I studied Japanese language in Tokyo. After that I transferred to become a third year student in the field of Electrical Engineering at Maizuru National College of Technology in Kyoto. After spending three years there, I transferred to become a third year student in the bachelor course in the field of Electronics and Electrical Engineering at Utsunomiya University in Tochigi Prefecture. After I finished my bachelor's degree, I continued my study to the Master's and PhD level in the same school. Now I am in my second year of my PhD course.

## 3. The Deciding Factor for Joining the School

In Cambodia, whenever people talk about Japan that talk will be about technology. Like other Cambodians, I am crazy about Japanese technology. I remember when I was about 12 my father bought a Sony Cassette Player made in Japan for me as a present. I love it so much and it still works fine even now. That was the reason that I fell in love with Japanese technology, and I always had a dream that I will come to Japan to learn technology to make my own electronics equipments. Now my dream of coming to Japan has come true but the dream of making my own electronics equipments has not because I have changed my mind to study in the field of control systems instead of circuit design. Now I am doing research on mobile robots.

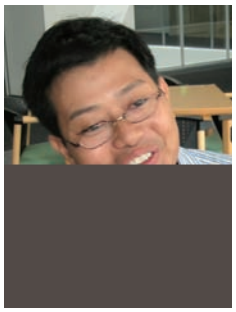
## 4. About My Student Life (College Life)

When I first came to Japan, I knew nothing about the Japanese language. So, in my first year Japanese course, I started from the lowest level class. The class has about 40 students from different countries and English was been used in the class until we could speak Japanese a little bit. In the Japanese school, physics, chemistry, mathematics were also taught in Japanese to make us be able to read books written in Japanese and that was very helpful when I transferred to college. However, since when I was in Japanese school I did not do my best in learning Japanese, when I first went to college it was very hard for me to understand the lessons and communicate with classmates and teachers. But fortunately, most of the lessons in the third year in college were all about physics, chemistry and mathematics, which I had done at the university in my country and at the Japanese school, so I could concentrate only on upgrading my Japanese. It took me about one year to get used to it. In the forth year, I started learning specialized subjects such as electrical / electronics, electromagnetics and so on. Those subjects were so useful for my graduate research in the final year at the college and university. Based on my experience, I think college is the best place to study specialized subjects because in college students can study a subject over a long period. For some subjects, in university they take only five or six months but in the college they take two or three years, thanks to which students can understand more details. In addition, college students have more time to do experiments than university students, which it is very important to completely understand the theory that has been taught in the class.

## 5. For the International Students

When I was studying Japanese in the Japanese school, I did not concentrate and do all my best. So, when I went to college, it was so stressful because I could not understand the lessons and communicate with my classmates. It made me waste about one year to restudy by myself and I always regret that time. I hope that you will not do the same as me. Another piece of advice that I would like to give to you is to make as many friends as possible. When you come here, you are far away from home. So when you have troubles no one can help you beside your friends. I am a person who used to have many troubles up to now. I can't count how many times I wanted to quit school and go home, but my friends always gave me good advice whenever I talked to them. Without my friends, I could not have continued my study up until today.

## From Graduates—4



### Mr. Thi Ha

**Profile**

**Birthplace:** Myanmar (age: 35 )
**Educational record:** Second year Institute of technology (In Myanmar) → , came to Japan after finishing the second year
* Kure KOSEN for associate degree ( Civil Engineering)
• Hiroshima University for bachelor ( Civil Engineering)
• Hiroshima University, Graduate school of Engineering for Master & PhD (Social and Environmental Engineering)
**Present occupation**: Consulting Engineers, NIPPON KOEI Co., LTD.

**Hold a big dream, set your target high!**

***—The teachers, my friends at KOSEN and my host families…they gave me a warm welcome, and Kure is now my second home town. I believe Japanese firms will accept foreign students who have high skills and knowledge and no language barrier to work with them. Have a big dream and set your target high!—Thi Ha***

**—Thank you for taking time out of your busy schedule for this interview. You are from Myanmar and graduated from Kure KOSEN. Could you tell me why you chose Japan for your study abroad?**

I think countries for studying abroad for young people from Myanmar will be Japan, USA, UK, Australia, Canada, Singapore and so on. As for me, I had a dream to study in Japan since I was a high school student. Because Japan has a high level technology and there is no doubt that I can obtain high level skills and can contribute to my country with that technology in future.

In fact, I wanted to study in the electronics field at first because electronics technology is very widespread in Japan and I had an image that Japan equaled a country of electronics. But finally I decided to study civil engineering, because my country was a developing country and it really needs civil engineers for basic infrastructure and public works.

**—Why did you decide to study at KOSEN?**

When I was a 1st year student at an institute of technology in Myanmar, I knew a scholarship program of the Japanese Government for young Myanmar students to study in Japan as a part of the ODA project of the Japanese Government. To take this opportunity, I started to collect the information to study abroad and begun studying Japanese with a basic course.

In fact, I didn't know about KOSEN too much, because we did not have much information about KOSEN in those days. In Myanmar, there were two kinds of system to apply for Japanese government scholarships at that time, one for government servants for higher education and the second for young students for undergraduate courses. At that time, the Japanese government offered the KOSEN course for the young students and so I applied for this course.

**—So, you decided to apply for a Japanese government scholarship program when you were still studying in your university. Why did you come to Japan after you finished second year in your university?**

Ok, I must explain the education system in Myanmar. In my country we have only 11 years education to finish high school but we need 12 years education to apply for the Japanese government scholarship for undergraduate courses. So, I applied to the scholarship after I finished the first year, and then the study abroad procedures took some time and so, as a result, I came to Japan after I finished the second year of my university.

**—You transferred to Hiroshima University. Could you tell me why you decided to study at university after you finished KOSEN?**

Yes, after I finished the KOSEN course, I decided to go on to a university course because I was thinking about work with Japanese firm, so it was better for foreign students to obtain advanced techniques. Therefore, I decided to transfer to the third year of university after I finished KOSEN.

**—Did you think you had any time lag by transferring from KOSEN to university compared with direct enrollment to university?**

I didn't think I had any time lag. Because, in general in Japan, foreign students need one or two years to study Japanese and other basic subjects before taking an entrance examination for university. That means they will need three or four years to become a third year student in university in the case of direct enrollment to university.

who were strict to juniors, guided me in my study and around Oshima. One day, I participated in a walking competition in Oshima, and I could communicate with the local people. They told me where there was good fishing, so I fished and gave fish to the neighborhood, and they gave me back vegetables. The barter exchange life helped me save money greatly.

The big event to complete the Nautical Science Course was one year of on-board training on the ocean-going training ships of the National Institute for Sea Training after four and a half years of study. I had experienced training on the sailing ship Nippon Maru and a motor ship for six months each. It was very significant for me to experience group living on board, surrounded by the open sea, and I also experienced various cultures from many countries through this unique curriculum to sail around the world.

### University

After graduation from KOSEN, I wanted to study about marine traffic management in harbor sea areas, hence I transferred to the third year of the Department of Maritime System Engineering at the Tokyo University of Mercantile Marine with a recommendation for my advancement from KOSEN. The transferred students like me needed to get much credit recognition to finish in a short term because I had only two more years from the third year. In addition, I had to work part–time jobs. It was very hard in those days. However, I aimed to go on to graduate school and I encouraged myself not to give it up. In the end, I was able to complete the bachelor course.

### Graduate school

At graduate school, I joined in research to develop an Autonomous Traffic Management System using information from AIS (Automatic Identification System) in harbor sea areas. I acquired my doctorate for "A study on Autonomous Traffic Management Systems Based on Planned Routes and Navigational Information Transmitted by AIS". In order to improve the safety and the efficiency of ship operations, this system calculates the optimal routes of all ships in the area using planned route information. It is expected that this system will greatly contribute to the reduction of the possibility of collision in congested sea areas and raise the level of marine traffic management.

### Present

After graduate school, I got employed by Mitsui O.S.K. Lines, Ltd. in April 2008. I belong to the Seafarer Group of the Marine Safety Division which recruits excellent seamen for safe voyages. Coincidentally, I have been in charge of the scholarship program that my company sponsors for the Vietnam Maritime University where I had been for one year before coming to Japan.

This is my thirteen years' experience in Japan. Before stopping my story, I want to tell you one thing: "Think positively and work hard all the time! It will definitely carry its own reward!"

Lastly, I would like to thank the people who guided me to study and took care of me, from the Japanese Language School, Oshima KOSEN, the Tokyo University of Mercantile Marine, and the Tokyo University of Marine Science and Technology, for giving me a great environment to study in and supporting me.