

### **Hirose Campus**

National Institute of Technology, Sendai College, Hirose Campus 4-16-1 Ayashi-Chuo, Aoba-ku, Sendai-shi, Miyagi 989-3128, Japan

TEL: +81-22-391-5508 E-mail: soumu@sendai-nct.ac.jp

URL: https://www.sendai-nct.ac.jp/english/

### **ACCESS**

Take the Senzan line (JR) from Sendai Station and disembark at Ayashi Station. It takes about 25 min by train. The school is 15 min on foot from Ayashi Station.

Take the bus from Sendai Station for Sakunami Hot Springs, Jogi, and Shirasawa Depot, and disembark at Sendai Kosen, Hirose Campus. It takes about 45 min by bus. The school is 5 min on foot from the bus stop.

### **Natori Campus**

National Institute of Technology, Sendai College, Natori Campus 48 Nodayama, Medeshima-Shiote, Natori-shi, Miyagi 981-1239, Japan

TEL: +81-22-381-0253 E-mail: shomu@sendai-nct.ac.jp URL: https://www.sendai-nct.ac.jp/english/

**ACCESS** 

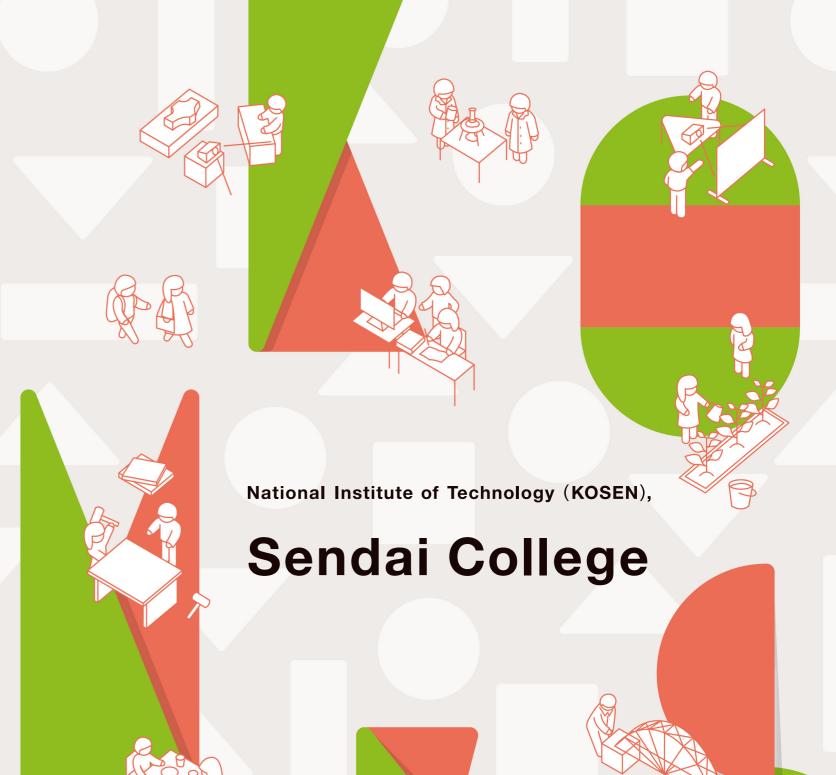
and disembark at Natori Station (JR); then walk 25 min on foot. Take the bus [Natori] (Prefectural Cancer Center line) at (Natori Station - West Entrance) and disembark at [Sendai Kosen, Natori Campus]; then walk 5 min on foot.











**SENDAI KOSEN CAMPUS GUIDE** 





### Welcome to

## **SENDAI KOSEN**

National Institute of Technology, Sendai College (Sendai KOSEN) is a technical institution of higher education located in Miyagi, Japan. It is composed of two campuses – Hirose Campus and Natori Campus. The Hirose Campus is located in Ayashi, Aoba-ku, Sendai City. The Natori Campus is located in Medeshima, Natori City. Both campuses are surrounded by beautiful nature, where students enjoy the scenery of each season as they study. Sendai KOSEN maintains excellent relations with many foreign universities, allowing many foreign students to study at Sendai KOSEN every year.





### Jogi Nyorai Saihoji Temple

Jogi Nyorai Saihoji Temple is a historic Jodo-shu Buddhist temple in Sendai City, Japan. It has heard the prayers of its visitors for 800 years and helped them realize their hopes and dreams. Visitors can enjoy the beautiful scenery of each season as well as local specialties like the triangular deep-fried tofu.

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### Leirai Gorge

Leirai Gorge is a beautiful gorge with gigantic and oddly shaped rocks formed by erosional work of Natori River. The rocks look as if they are hanging over cliffs and close in on visitors. Nozoki Bridge is also a sightseeing spot visited by many couples who wish to take a look at a heart shaped indentation in a rock under the bridge. There is a rumor that seeing this heart will bring happiness to couples.







### Sendai City

Sendai City in Miyagi Prefecture, located to the northeast of Tokyo, is the largest city in the Tohoku region. Hirose River and Mount Aoba, which are located in the vicinity of the city center, as well as the downtown street-side greenery have led to Sendai City's nickname - City of Trees.



### **Sendai Castle Site**

The ruins of feudal lord Date Masamune's castle can be seen at Sendai Castle Site. The castle was built in a natural fortress protected by cliffs to the east and the south. It is said that the omission of a castle tower was intentional to avoid the vigilance of Tokugawa Ieyasu, the Shogun of the period. The equestrian statue of Masamune on the hill is also famous as the symbol of Sendai.



### Miyagi

**Hirose Campus** 



## STARLIGHT FANTASY SENDAI PAGEANT OF STARLIGHT

Every year, Sendai City, known as the City of Trees, becomes the City of Light. The "STAR-LIGHT FANTASY SENDAI PAGEANT OF STAR-LIGHT" is a winter tradition. In this special event, one hundred and sixty zelkova trees that line Jozenji Street, a main street in Sendai, are illuminated with approximately six hundred thousand LED lights.



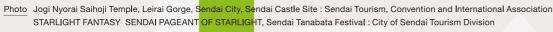
### Sendai Tanabata Festival

The Sendai Tanabata Festival, a tradition since the days of Date Masamune, is held every year in August. During the festival, downtown Sendai and its surrounding commercial avenues are decorated with colorful Tanabata decorations. Every year, over two million tourists crowd the streets of Sendai to see the beautiful decorations.





Natori Campus



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## **School Life and Activities**

### Annual Events

- Entrance Ceremony
- Freshman Training Camp
- 5 Sports Day
- Off-Campus Training (2nd ~ 3rd)
  - First Semester Midterm Exam
- Tohoku Area KOSEN
   Athletic Tournament
   Open Campus
  - Summer Closure
     KOSEN Athletic
     Tournament
- First Semester Final Exam
  - Off-Campus Training (Hirose 3rd)
- october 10
  - Programming Contest
  - KOSEN Festival
  - Tohoku Area Robot Contest
- Hovembe,
- Study Tour(4th)Academia-Industry
- Collaboration Symposium
   Second Semester
- Midterm Exam
- Robot Contest



- Design CompetitionWinter Closure



 English Presentation Contest

Second Semester

 Second Semester Final Exam(5th)

Final Exam

• Graduation Research
Presentation(5th)



- Graduation Ceremony
- End-of-school-year Closure



### **Sports Day**

All college members - students, faculty, and staff participate in this most fun, exciting sports event.



### **KOSEN Festival**

There are many fun and interesting activities including stage performances, various contests, and food stands.



### **KOSEN Athletic Tournament**

This is the most important sports tournament for KOSEN students. Qualified teams can participate in the Nationwide KOSEN Athletic Tournament.



### **Study Tour**

During the 4th grade, students will visit the Kansai or Kyushu region in Japan or travel abroad to visit various company manufacturing sites.

## Club Activities

There are various athletic events, and teams unique to KOSEN. KOSEN also has many cultural clubs. The clubs at SENDAI KOSEN have succeeded in various official competitions.



## **Dormitory Life**





Both Hirose Campus and Natori Campus have their own dormitories for those coming from remote places.

Dormitories are provided on both campuses for students coming from remote places. The dormitories are operated voluntarily under the guidance of Ryoseikai, composed of dormitory students. The dormitory is an educational facility to help cultivate well-rounded character through disciplined dormitory life. In addition, it provides a convenient environment for learning. Students develop their own character through friendly competition. The dormitory offers good opportunities for students to

















develop their social skills.









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# A Campus for Future Engineers

Manufacturing :: Factory

(Hirose Campus)



**Creative Education Center** 

Natori Campus



Classroom

(Hirose & Natori Campus)

## FACILITIES

★ Cafeteria/Terrace (Hirose & Natori Campus)





Computer Room
(Hirose & Natori Campus)

Library

(Hirose & Natori Campus)

### Laboratory

## Technology for Interaction with Machines

We are conducting research on technology that enables people to interact with machines. Such technology enables smooth interactions with machines, supporting people's lives and work. We also use <u>unique ideas</u> and challenge ourselves by participating in various contests. Some of our research accomplishments are used for the <u>KOSEN Robot Contest</u>, Solenoid Contest, and so on. (Takatoshi Suenaga Laboratory)



### Internship

The 1st grade students in the Advanced Engineering Course participate in an internship at a local company for up to 3 months. They practice problem solving and apply the skills and knowledge which they have acquired in their classes. The internship is a good opportunity for students to contribute to the local industries by using the technology that they have studied.

### **Community Contribution**

We provide open classes for local elementary and junior high school students. We are also working on an innovative agricultural project in which local children engage in rice farming. Many of our projects involve practical research to provide technical assistance to local industries and support the reconstruction of disaster areas. One could say education and research takes place through field work in our local community.

## Conference Presentation/ Symposium

KOSEN students participate in presentations and discussions in conferences within and outside of Japan where college students, graduate students, and researchers gather. Although KOSEN students are slightly younger compared to other participants, they are excellent presenters. ::



### Laboratory

### **Designing Future Communities**

We conduct research on sustainability from the perspective of hardware and software. For example, we research, plan, and design public facilities like cultural facilities. In recent years, the relationship between public facilities and the community has become an important topic of research. We shape future communities through concrete discussions everyday. (Taiyo Sakaguchi Laboratory) ::



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**Almost** 

## 100%

## employment and continuous education rate

## Destinations of Graduates

SENDAI KOSEN is a prestigious national higher educational institution. Almost all of our graduates are either employed or continuing education. (For Japanese students, employment and continuous education are in a 50-50 ratio.)

### Paths after graduation for international students in recent years

- Akita University
- Chiba University
- Ibaraki University
- Muroran Institute of Technology
- Osaka University
- The University of Electro-Communications
- Tohoku University
- Tokyo University of Agriculture and Technology
- Toyohashi University of Technology
- University of Fukui
- University of Tsukuba
- Utsunomiya University
- Panasonic Corporation
- Torishima Pump Mfg. Co., Ltd.

### Process of going to higher education and finding employment **Global Community Employment** 5th grade 4th grade 3rd grade 2nd grade Graduate School 1st grade 2nd grade KOSEN 4th grade Advanced Engineering 3rd grade Course University 2nd grade 1st grade 4th grade KOSEN Regular Course 3rd grade \*Associate Undergraduate School <sup>2nd grade</sup> 1st grade 1st grade **Junior High School**

### Voices of International Students



### **Robert Dwiputra**

Indonesia

Architecture & Design major in Sendai College → Faculty of Engineering / Dept. of Architecture (Fire & Disaster-resistant Design) in Chiba University → Chiba University Graduate School → Structural Engineering Division in NIHON SEKKEI, Inc.

Studying at Sendai College was the best moment I had in Japan! I learnt a lot, not only about my major but also about Japanese tradition and lifestyle! Sendai College gave me an excellent foundation in taking my next step!



NIT, Sendai College exchange program → Metropolia UAS, Bachelor of Engineering in Media Technology → Aalto University, M.Sc, Majoring in Information Networks, User-Centred Design

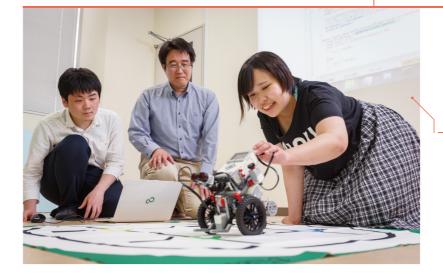
I wanted to see more of Japan than just Tokyo. I had heard that the atmosphere and the people were entirely different in the north compared to the capital region area, so I studied in NIT, Japan, Sendai College for half a year, doing a project work on Web-based language learning environment.

## Division I

### Information and Electronics Course

Students are able to take various classes on information and electronics across three courses.

- Information Systems Course
- Information and Telecommunication Systems Course
- Intelligent and Electronics Systems Course



(Hirose Campus

## **Information Systems Course**

Students learn various skills and knowledge concerning software, hardware, and communication technology. They are expected to grow as global citizens who can contribute to society through the knowledge and skills they acquire.

## Information and Telecommunication Systems Course

Students learn a wide range of skills and knowledge from communication technology and computer networking to information security. They are expected to grow as global citizens who can contribute to the development of society by applying the knowledge and skills that they have acquired.





## Intelligent and Electronics Systems Course

Students learn a wide range of knowledge and skills for electronic devices such as smart phones, software, and mechanics. They are expected to grow as global citizens who can contribute to the establishment of a safe society in which welfare and environmental preservation are made possible through well-advanced electronics technology.

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## Division I Machine, Electric and Materials Course

There are three courses related to manufacturing. Across these courses, students are able to deepen their expertise of each course while also exploring the knowledge of other fields.

- **■** Robotics Course
- Materials Science for Environment Course
- Mechanical and Energy Course

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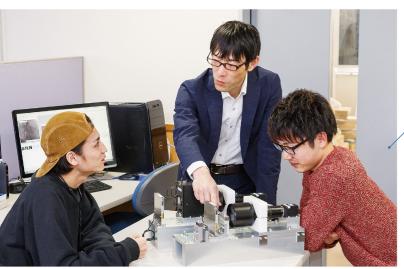
### **Robotics Course**

Students are expected to grow as global citizens. They will contribute to the development of society through the creation and application of robots. They will also apply their knowledge and skills of robotics technology such as AI (Artificial Intelligence).



Students are expected to grow as global citizens who can contribute to the sustainable development of society. They will apply theories, practical knowledge, and techniques learned from materials engineering and environmental science. They will also develop various industrial materials which are eco-friendly.





### Mechanical and **Energy Course**

Students are expected to grow as global citizens who can contribute to society through the development and application of combined and integrated technologies. Energy technology will be at the core, whilst knowledge and techniques of mechanical, electrical, and material engineering will also be acquired throughout the course.

## Division III Architectural Course

This course was specially designed to emphasize obtaining architects qualifications from the 1st grade and enhance professional education for architectural desian.

Architectural Design Course



### **Architectural Design Course**

Students systematically learn urban and architectural studies and related fields. Such fields include ergonomics, urban planning, building planning, architectural design, building environment, and building structure. We cultivate students' practical skills to solve social problems through various social contributions such as reconstruction of disaster areas and technical development.

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### Course common to Division I.II.II

■ Applied Science Course (from the 4th grade)

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Natori Campus

Students are expected to grow as global citizens who can contribute to society. They will utilize the knowledge and skills from science and engineering that they have acquired. Learning the scientific approach is at the core of this course. Skills and knowledge relating to information, electricity, electronics, mechanics, and materials are also acquired. Students systematically learn integrated subjects related to basic physics as well as various engineering fields.

## **Advanced Engineering Course**

- Division of Information and Electronic System Engineering
- Division of Production System and Design Engineering

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The Advanced Engineering Course (a 2-year course) is one of the career paths after graduation from the regular course (Department of General Engineering). The Division of Information and Electronic System Engineering (Hirose Campus) trains students with an international perspective who can solve problems by utilizing expertise in information and electronic technology.

The Division of Production System and Design Engineering (Natori Campus) trains students who are able to correspond with multiple domains based on cross-cutting engineering skills and knowledge. Such knowledge and skills allows the students to be involved in the whole process of manufacturing.

Advanced practical research education at the university level is carried out. This includes internships, academic presentations, and other research activities.



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## Students' Voices



Malaysia

1 The main reason is because Japan is a pioneer in the fields of science and technology. 2 Studying in KOSEN has given me the opportunity to explore different topics and projects that I enjoy, and encounter people who share the same interests and goals as I do. 3 As well as studying in classroom, I actually get the chance to join field trips, and conduct researches. 4 Not much free time, but, I think these hard times will eventually turn to the key to success in the future.

### Question

- 1 Why did you apply for KOSEN?
- 2 What do you like about studying in KOSEN?
- 3 What makes KOSEN appealing?
- 4 Is there anything lacking in your KOSEN life?



Thailand

1 As an exchange student, I applied for KOSEN to study computer science and technology, and to learn about Japanese language and culture. 2 I have no regret choosing this school. This place is great and I really enjoy the classes. 3 KOSEN is similar to high schools in some ways, but it is more close to universities as we focus more on special fields of study and research. 4 I have not experienced anything negative in my school life and private life.



1 I've always been interested in Japan both for its culture and its long-standing trailblazing in my field.

**Patrik Johansson** 

- 2 Plenty of space, opportunities and helpful people supporting you in learning something new.
- 3 Having lots of room in deciding which research topics are the most useful and interesting.
- 4 I left with no gripes concerning my time here.

### ⟨ 1 Department 3 Divisions 8 Courses ⟩ =

Advanced Engineering Course	2nd grade 1st grade	Division of Information and Electronic System Engineering			Division of Production System and Design Engineering				
	5th grade								Applied Scie
Department of General Engineering	4th grade	Information Systems Course	Information and Telecommunication Systems Course	Intelligent and Electronic Systems Course	Robotics Course	Materials Science for Environment Course	Mechanical and Energy Course	Architectural Design Course	Course
	3rd grade								
	2nd grade		,						
	1st grade	Division I			Division II Division II				
	Hirose Campus			Natori Campus					

Mongolia

1 When I was learning with Japanese teachers in my country,

I learned many things from Japanese physics text books. So, I

thought "When I am not even in Japan, I did learn a lot of

stuffs thanks to Japan. There must be more to learn and study

in Japan" and decided to come to Japan to study in KOSEN.

2 It is needless to mention I was more than satisfied with the

course content and teaching method. 3 I think we learn more

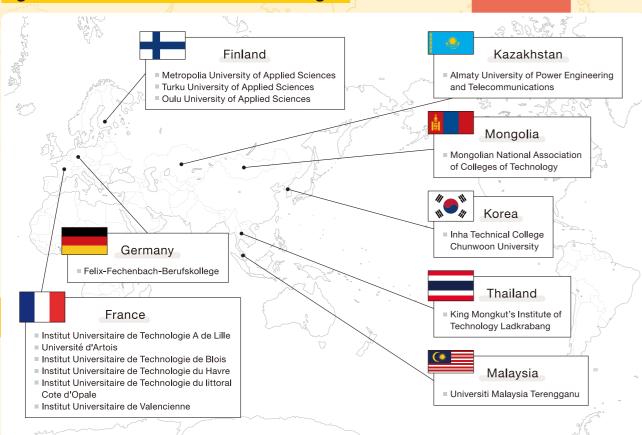
practical skills in KOSEN compared with universities. 4 Since

the day I came to KOSEN, I have never felt dissatisfaction.

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## International Academic Exchange

### Agreements on Academic Exchanges



### International Student Exchange

International student exchanges with countries such as Germany, Finland, France, and Thailand are actively conducted. We host a welcoming party for our international students where both international students and Japanese students enjoy talking and cooking together.









### We Accept Exchange Students

Sendai KOSEN actively promotes student exchange. Not only do we dispatch our students to foreign universities but also actively accept exchange students from overseas. Exchange students who have been dispatched to our school are assigned to a research laboratory according to their major or desire. Here, under the supervision and support of their supervisors, they will work on their research projects.

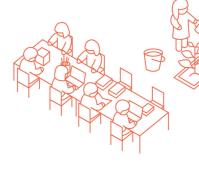


### Previous Research Topics

University	Research Subject						
IUT Lens	Verifying the correctness of theorems using a SMT Solver						
IUT Lens	Creation of multimedia contents for exchange students						
IUT Lille	Verifying Feasibility of Meyer's Framework about Theory of Programs						
MUAS -	Visualization of Plant Growth Promote Community Users Motivation						
AUPET 🔼	An Introduction to Safety Analysis with AADL						
AUPET 🔼	Search Method Using Multiple of IEEE802.15.4						
TUAS 🛨	A Case Study: Model-based Safety Analysis with AADL						
TUAS 🚻	Development of Library Management Web System						
JT Littoral Côte d'Opale	Examination of crystal growth system construction by Czochralski method						
KMITL	Preliminary Implementation of an AR Sandbox Based on Linux System and Fundamental Study of Digital Image Processing						
KMITL	AR Sandbox Project						
KMITL	Development of QR-code Detection Application using OpenCV						
KMITL	Fabricating and testing analog light communication experimental circuits of teaching materials for the beginners on electronic circuit						
KMITL	Mobile Multiple Page Application for Tourists Using HTML, JavaScript and CSS						
OUAS -	Prototype for health care monitoring system using Sigfox Technology						
NUAS Metropolia	d'Artois  Turku University of Applied Sciences  Versitaire de Technologie A de Lille  University of Applied Sciences  KMITL  King Monglut's Institute of Technology Ladkrabang  Versity of Power Engineering and Telecommunications						

## Long-term Internship in Cooperation with Industry, Schools, and Government

Exchange students can also participate in the long-term internship with hands-on experience that is implemented in the Advanced Engineering Course. This internship is made possible by cooperation from local companies. It is a golden opportunity for overseas trainees who wish to design their career in Japan.









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