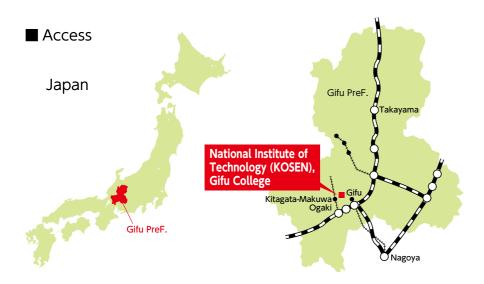
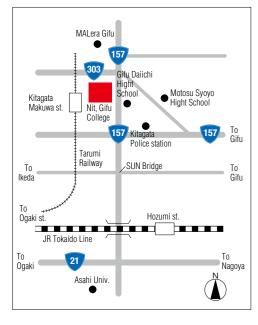
- Department of Mechanical Engineering
- Department of Electrical and Computer Engineering
- Department of Electronic Control Engineering
- Department of Civil Engineering
- Department of Architecture
- General Education (Humanities Natural Sciences)

Advanced Course

Interdisciplinary Technology Development





### (From Gifu)

bound for Gifu-Kosen by Gifu Bus(weekdays only) " Malera-Gifu " (walk 1.2km southward) Get off at Kamimakuwa bus stop of Gifu Bus(walk 1.5km northward)

(From Ogaki) Get off at Kitagata-makuwa station of Tarumi Railway(walk 1.2km northward)

## (From Hozumi)

Get off at Itonuki-Bunchosha/Malera-Minamiguchi bus stop of Gifu Bus (walk 0.7km southward)

Website http://http://www.gifu-nct.ac.jp/eng/access-e.html

# National Institute of Technology (KOSEN), Gifu College

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http://www.gifu-nct.ac.jp/eng/



# National Institute of Technology (KOSEN), Gifu College

X



# College Bulletin Gifu Kosen 2020

To pursue applications in technological and scientific discovery in order to better serve the needs of our society.



### School Logo



Selected from a number of designs submitted by the public, Professor Ryoichi Shibata's (Department of Architecture) design was adopted as our official logo. The design was created to reflect the surrounding scenic mountain landscape and expanse of sky. With the color green represents our departments and blue our advanced courses, the two colors express ever growing possibilities. The embedded deep red diamond symbolizes alumni pride in their alma mater, National Institute of Technology, Gifu College

Welcome to the official web site of Gifu National College of Technology. In April, 2004, 55 national colleges of technology out of 63 colleges of technology nationwide were brought together to form the Independent Administrative Institute of National Colleges of Technology Japan. Now 51 national colleges of technology with about 53,000 students have been rebuilt nationwide. Since Colleges of Technology are abbreviated as "KOSEN", our college is the only "KOSEN" in Gifu Prefecture. Consequently, Gifu KOSEN has been re-established as a member of this newly formed Institutions.

A "KOSEN" is an institution of higher education, including colleges and universities. It accepts junior high-school graduates, and provides a five-year education in one of the technological concentrations. At a KOSEN, students can concentrate on the study area that they major in, as they do not need to prepare for college entrance examinations. After the Gifu college, National College of Technology completion of the program, KOSEN graduates may choose to begin a career as an engineer President ITOH YOSHITO, Dr. Eng. and play an active role in the fields of Industry and Engineering. They can also choose to continue their education at our "Senko-ka (Advanced Course)" for two more years in pursuit of their bachelor's degree. Furthermore, they can also take examinations for admission as a third-year transfer student to an undergraduate program of the University of their choice. At Gifu college, National College of Technology, the aim of "the product design" is at the core of our engineering studies. Through our intensive curriculum, students acquire the advanced technical skills in order to enrich their education. While it is vital for Japan to continue to contribute to the world in the areas of high technology and information technology, international training of those who acquire advanced

technical skills will become ever more critical as well.

Our college has five departments: Mechanical Engineering, Electrical and Computer Engineering, Electronic Control Engineering, Civil Engineering and Architecture. Concerning the specific characteristics of each department, please refer to the guidance section of this homepage. Each department attaches as much importance to computerization as to fundamental knowledge. Computer literacy and practical English, in addition to the special technological concentrations offered during the five-year education term, are the necessary passports to the highly-developed, information-oriented society of the twenty-first century.

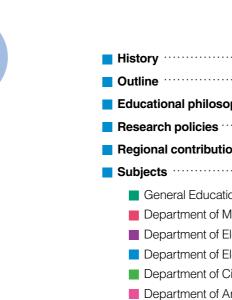
### Emblem



Our school emblem originates from the former imperial university emblem that embodies simplicity, steadfastness and tradition. Within the outline of the university emblem, the characters 'Ko Sen' are embossed with no motif

This emblem was designed in the hope that our graduates attain success as engineers who are as respected in character and professional knowledge as university graduates.





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- Regional Contribut
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# **History**







Main Building I (1964)



Planting of zelkova (1983)

| Apr-1998 | Dr. Eng. Masamitsu Kosaki, the former Professor at Toyohashi University   |
|----------|---|
| Aug-1999 | Dormitory buildings (administrative building, dining room, bathroom) we   |
| 11       | Facilities for photovoltaic power generation were installed.  |
| Apr-2000 | Restructuring of Department of Electrical Engineering into Department of El   |
| Oct-2000 | Main Building III was partly renovated. (Enlargement of classrooms)   |
| Dec-2000 | Multimedia Building was erected.  |
| Mar-2001 | The building of the Electrical and Computer Engineering Department was  |
| 11       | Main Buildings I, II and V were renovated and enlarged. (Enlargement of c   |
| Aug-2001 | The Dormitory Administration Building, the Second Women's Dormitory,  |
| Jan-2003 | A signboard of the schoolname was placed at the top of D dormitory.   |
| Apr-2003 | The commemoration ceremony for the 40th anniversary was held.   |
| Apr-2004 | Transition to the Independent Administrative Institution, Institute of Nation   |
| May-2004 | The educational program of Environmental System and Design Engineerin   |
| Apr-2006 | Dr. Eng. Tateki Sakakibara, the former Professor at Toyohashi University of   |
| Mar-2007 | Certified its compliance with the accreditation standards of the National In  |
| Apr-2009 | The educational program of Environmental System and Design Engineering  |
| Mar-2010 | The Regional Technology Center was renovated.   |
| Feb-2011 | The academic exchange agreement with Institute of Advanced Media Arts   |
| Apr-2011 | Dr. Eng. Toshihiro Kitada, the former Professor and Dean of School of Env<br>took office as the seventh President.                                |
| Jul-2011 | The domestic academic exchange agreement among Toyohashi University<br>Toyota, and Suzuka and National College of Maritime Technology of Toba.    |
| Nov-2011 | The international academic exchange agreement with Institute of Technolo  |
| Jul-2012 | The international academic exchange agreement with University of Techno   |
| Sep-2012 | The international academic exchange agreement with Faculty of Mathemat<br>Hannover, Germany.  |
| Apr-2013 | The international academic exchange agreement with University of Iowa, U  |
| Sep-2013 | The building of the Mechanical Engineering Department was renovated.  |
| Nov-2013 | The commemoration ceremony for the 50th anniversary was held.   |
| Mar-2014 | Certified its compliance with the accreditation standards of the National In University Evaluation in 2013.                                       |
| Jun-2014 | The international academic exchange agreement with TTPU, Turin Polytec Uzbekistan.  |
| Apr-2015 | The educational program of Environmental System and Design Engineerin<br>Accreditation Board of Engineering Education (JABEE).                    |
| Sep-2015 | An international academic exchange agreement with Tashkent State Techn  |
| Jan-2016 | An international academic exchange agreement with Tashkent Automobile   |
| 11       | An elevator was set in the Main Building I.   |
| Feb-2016 | An international academic exchange agreement with Institut Universitaire  |
| 11       | The building of the Civil Engineering Department was renovated.   |
| Mar-2016 | Renovation of the First Gym and some other facilities.  |
| Apr-2016 | The Advanced Course of Electronic System Engineering and the Course o<br>into one course (Advanced Course for Interdisciplinary Technology Develo |
| //       | Dr. Eng. Yoshito Ito, the former Professor of the Faculty of Civil and Environwas appointed the eighth President.                                 |
| Jan-2017 | An international academic exchange agreement with Hanoi Architectural U   |
| 11       | An international academic exchange agreement with Mientrung University  |
| Feb-2017 | An elevator was set in the Main Building V.   |
| Aug-2017 | An international academic exchange agreement with JIANGSU URBANAN   |
| Feb-2018 | An international academic exchange agreement with Universiti Tun Husse  |

Feb-2018

y of Technology, took office as the fifth President. vere renovated.

Electrical and Computer Engineering.

renovated and enlarged.

f classrooms)

, the Men's Bathroom, and the Dormitory Cafeteria were renovated

onal Colleges of Technology,Gifu College of Technology.

ring was authorized by Japanese Accreditation Board of Engineering Education (JABEE).

y of Technology, took office as the sixth President.

Institution for Academic Degrees and University Evaluation in 2006.

ring was authorized by Japanese Accreditation Board of Engineering Education (JABEE).

and Science (IAMAS).

nvironmental and Life Sciences, Toyohashi University of Technology,

ity of Technology, four National Colleges of Techonology of Gifu, Numazu,

ology, Bandung (ITB), Indonesia.

nology, Malaysia (UTM).

natics and Physics, University of

USA

Institution for Academic Degrees and

echnic University in Tashkent,

ring was authorized by Japanese

nnical University, Uzbekistan was concluded.

ile and Road Construction Institute, Uzbekistan was concluded.

e de Technologie, Lille A, France was concluded.

of Architecture and Civil Engineering were reorganized elopment)

ironmental Engineering at Nagoya University,

University, Vietnam was concluded.

ity of Civil Engineering, Vietnam was concluded.

ND RURAL CONSTRUCTION COLLEGE, China was concluded.

An international academic exchange agreement with Universiti Tun Hussein Onn Malaysia was concluded.



50th Aniversary of Founding Monument (2013)



Fifty Years of Gifu Kosen

# **Outline of NIT**

# 1. Outline

National Institute of Technology, Gifu College was established in April of 1963 as a five-year national institution of higher education with three specialized departments of Mechanical Engineering, Electrical Engineering and Civil Engineering. In 1968, the Department of Architecture, and in 1988, the Department of Electronic Control Engineering, were newly attached as the college expanded into an institution with five specialized departments. Furthermore, in order to adjust our curriculum to meet social advancement and change, the Department of Civil Engineering was restructured in 1993. Additionally, the Department of Electrical Engineering was restructured into the Department of Electrical and Computer Engineering in 2000. Further enhancement at the College of Technology included the attachment of the Faculty of Advanced Engineering in 1995, where students can acquire bachelorship, within a two-year study program. In 2003, in order to internationally assure the academic achievements and technical capabilities of the graduates of the Advanced Faculty, the systematic educational program of the Environmental System and Design Engineering for students between the fourth year of the five-year course and the second year of the Advanced Faculty was constructed. Also in that same year, the college was assessed and authorized by Japanese Accreditation Board of Engineering Education (JABEE). With the transition of all national colleges becoming Independent Administrative Institutions in 2004, the college has set forth on a mission with "further individualization, activation and enhancement" as its main objectives.

The education philosophy at the college is to instruct expert knowledge and technique and to cultivate technological abilities indispensable to proficient engineers. The characteristic of the college lies in the provision of effective, continuous five-year education that leads students to become full-fledged members of society as well as proficient engineers. In the five-year term of study, three years of upper secondary school and two years of the first half of higher education combined, students are educated under a curriculum comprised of carefully selected subjects from general education of upper secondary school as well as specialized subjects of higher education

Each department of the college has its own dis tinctive curriculum, striving to continuously modify and improve according to the changes and demands of society. Furthermore each department exercises its own admission policy. The contents of the specialized subjects instructed in our college are equivalent to university level, and various experiments and exercises with a high regard for the instruction of "Product Design" enable students to acquire practical skills necessary for appropriate application and development within each technical profession. Moreover, after completing the five-year regular course, students have the opportunity to further their studies of their specialized fields in the Faculty of Advanced Engineering, a program specifically designed to focus on advanced research and practical training.

The primary characteristic of the curriculum of the college is to develop proficient engineers who can fulfill the expectations of the industrial world. The method of education fosters a teaching environment with fewer students and a high regard for hands-on learning such as experiments, exercises and skills gractice. Statistics have revealed in recent years that nearly 45 percent of our graduates of the five-year course either attend the Advanced Faculty Program or transfer to a university to further augment their specialized education.

# **Educational philosophy**

# 1. Educational Philosophy

(1) To pursue applications in technological and scientific discovery in order to better serve the needs of our society. (2) To broaden our global perspective while playing an active role in meeting the environmental challenges of today. (3) To work at the forefront of an information-based society.

# 2. Engineer to Be Trained

An engineer who works at the forefront of an information-based society with global perspective, pursuing applications in technological and scientific discovery in order to better serve the needs of our society.

# 3. Educational policies (three policies)

#### Associated Degree Program (three policies)

#### [Diploma Policy] (Basic principles in degree conferment)

The program confers an associate degree to students who have been enrolled in the program for the set number of years, who have acquired the competences and skills listed below, who have acquired the credits as specified by each department, and who have passed the dissertation.

1. (A) Have developed ethics

Have developed ethics as an engineer who understands social and environmental problems on a global scale and who is aware of the implications of science and technology.

2. (B) Have acquired design abilities

Be able to actively plan solutions to problems when encountering new challenges in work. Have acquired design and teamwork capacities, continuing to carry out plans and produce outcomes using basic knowledge.

3. (C) Have developed communication skills

Have developed skills to describe and present in Japanese and mastered basic communication skills that can be used in the internal arena.

4. (D) Have acquired specialist knowledge/practical skills

Have acquired the capacity to understand basic knowledge in the chosen specialty and to practically engage with applications of this knowledge.

5. (E) Have developed ICT skills

### Have developed skill to use information equipment and to construct programs as necessary in the specialty.

### [Curriculum Policy] (Basic principles in curriculum design and implementation)

- The program's curriculum consists of the following in order to develop the skills listed under the Diploma Policy.
- in acquiring specialist knowledge and skills in engineering; subjects to acquire inter-cultural communication skills and ethics as an engineer. skills

Academic achievement is assessed in accordance with the details of the Diploma Policy. Each subject is marked in accordance with the written criteria based on the syllabus (overall attitude toward learning, marks on assignments, and so on).

#### [Admission Policy] (Basic principles in selection)

The program's Admission Policy is based on the Diploma Policy and is designed to select students with the following skills and motivation. More concretely, we look for students with the following qualities.

- 1. Those who strive to acquire basic knowledge
- 2. Those who would like to acquire general knowledge as well as specialist knowledge and practical skills
- 3. Those with active curiosity who would like to develop themselves as engineers
- 4. Those who would like to make contributions to society using the knowledge they gain during their studies.

#### Advanced Course Program (three policies) [Diploma Policy] (Basic principles in degree conferment)

The Program confers an advanced course degree to students who have been enrolled for the set number of years, who have acquired the competences and skills listed below, who have acquired the credits specified by each department, and who have passed the dissertation 1. Have developed ethics

- 2. Having acquired design abilities
- 3. Have developed communication skills
- 4. Have acquired specialist knowledge/skills
- 5. Have developed ICT skills

#### [Curriculum Policy] (Basic principles in curriculum design and implementation)

Subjects in the Advanced Course Program are based on mechanical engineering, electrical and computing engineering, electronic control engineering, civil engineering, architecture, and interdisciplinary areas and consist of the following three kinds. 1. Specialist development subjects: Subjects to learn practical engineering technology for advanced interdisciplinary development 2. Basics in specialist subjects: Subjects to learn the basics of advanced interdisciplinary development 3. General subjects: Subjects to acquire a wide range of foundational knowledge and language suitable for engineers

Academic achievement is assessed in accordance with the criteria specified in the Diploma Policy focusing on dissertation as a cap-stone project. Each subject is marked on the basis of the criteria specified in the syllabus (general attitudes toward learning, marks obtained in assignments and exams).

#### [Admission Policy] (Basic principles in selection)

- The Advanced Course Program looks for students with the following qualities: interdisciplinary development
- 2. Those aiming to acquire interdisciplinary development skills to realize innovative value creation in response to demands from the industry
- 3. Those who are highly motivated to learn and research interdisciplinary development having learnt basic specialist knowledge at Kosen

## 4. Educational Objectives

#### Associate Degree Program

(1) To produce engineers who possess the vision, knowledge, ambition, and character necessary for a career in science and technology. (2) To produce engineers who have abilities in basic attainment, as well as fundamental creative and application skills. (3) To produce engineers who have sufficient capabilities in international communication; in addition to advanced skills in information technology.

(4) To produce engineers who possess technological ethics and integrity.

(5) To produce engineers who will make vital contributions to society through applied scientific and technological education and research.

#### **Advanced Course Program**

- (1) To produce engineers who seek further understanding of their major fields of study, and also possess interdisciplinary insights.
- improve them with continuous efforts.
- (3) To produce engineers who have strong verbal ability in Japanese, and also international communication ability.
- region's development.

1. General Education: Subjects in humanities, social sciences, and arts to develop a wide and rich foundation of knowledge; subjects to learn academic basics necessary

2. Specialist subjects: Subjects to acquire basic skills of the specialty and to learn practical engineering skills; subjects to develop critical-thinking and problem-solving

1. Those with an international perspective aiming to acquire technical skills in manufacturing to contribute to global sustainable development through advanced

(2) To produce engineers with problem-solving capabilities who can search, organize, design and plan studies that are important to the society, and analyze, perform and

(4) To produce engineers who have the ability to organize and implement programs in their major field of study by taking advantage of cutting edge technology.

(5) To produce engineers who have a solid understanding of professional and ethical responsibilities from a diverse, global point of view, and are willing to contribute the

### 5. Specific Educational Objectives in Academic Abilities and Qualifications for Each Department and the Advanced Course

Concrete learning/educational objectives such as academic capacity, qualities, and skills to be developed in each department are detailed in the Diploma Policy under (A) Ethics, (B) Design ability, (C) Communication skills, (D) Specialist knowledge/skills, and (E) Information technology. In addition, we provide students with five watchwords. The correspondence with the Diploma Policy is shown in the following table.

# Correspondence between the Diploma Policy and educational objectives

| (Associate Degree Program)   | O shows deep i            | nvolvement, and             | ○ involvement.                |   |                                  |
|--|---------------------------|-----------------------------|-------------------------------|---|----------------------------------|
| Diploma policy<br>Educational objectives   | (A)<br>Ethics             | (B)<br>Designing<br>Ability | (C)<br>Communication<br>Skill | (D)<br>Specialist<br>knowledge/<br>practical skills | (E)<br>Information<br>Technology |
| (1) To produce engineers who possess the vision, knowledge, ambition, and<br>character necessary for a career in science and technology.               | O                         | 0                           |                               |   |                                  |
| (2) To produce engineers who have abilities in basic attainment, as well as<br>fundamental creative and application skills.                            |                           | O                           |                               | O   |                                  |
| (3) To produce engineers who have sufficient capabilities in international<br>communication; in addition to advanced skills in information technology. |                           |                             | O                             |   | 0                                |
| (4) To produce engineers who possess technological ethics and integrity  | 0                         |                             |                               |   |                                  |
| (5) To produce engineers who will make vital contributions to society through<br>applied scientific and technological education and research.          | 0                         | O                           |                               | O   |                                  |
| Watchword  | Wide background knowledge | Product Design              | Internationalization          | Deep Specialty                                      | IT                               |

◎ shows deep involvement, and ○ involvement.

# (Advanced Course Program)

| Diploma policy<br>Educational objectives  | (A)<br>Ethics             | (B)<br>Designing<br>Ability | (C)<br>Communication<br>Skill | (D)<br>Knowledge and<br>Ability of the<br>Specialized Field | (E)<br>Information<br>Technology |
|---|---------------------------|-----------------------------|-------------------------------|---|----------------------------------|
| (1) To produce engineers who seek further understanding of their major fields<br>of study, and also possess interdisciplinary insights.   |                           |                             |                               | O   |                                  |
| (2) To produce engineers with problemsolving capabilities who can search, organize, design and plan studies that are important to the society, and analyze, perform and improve them with continuous efforts. |                           | O                           |                               |   |                                  |
| (3) To produce engineers who have strong verbal ability in Japanese, and also<br>international communication ability.   |                           |                             | O                             |   |                                  |
| (4) To produce engineers who have the ability to organize and implement<br>programs in their major field of study by taking advantage of cutting edge<br>technology.  |                           |                             |                               |   | 0                                |
| (5) To produce engineers who have a solid understanding of professional and<br>ethical responsibilities from a diverse, global point of view, and are willing<br>to contribute the region's development.      | O                         |                             |                               |   |                                  |
| Watchword   | Wide background knowledge | Product Design              | Internationalization          | Deep Specialty  | IT                               |

# **Research policies**

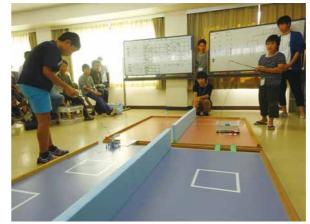
- 1. To promote the teaching staff's specialist research as well as to communicate its outcomes widely.
- Techno Center.
- 3. To further stimulate research by providing guidance and information on acquiring competitive external funding.
- 4. To support research promotion and publication through the president's discretionary budget.
- 5. To provide guidance on intellectual property rights to promote/support patent application.

# **Regional contributions**

- communicate their outcomes widely.
- community and in developing next-generation human resources.
- 3. To promote support for science and math education and information education for elementary school and junior high school children.
- 4. To contribute to the local community by taking up various roles.

# Scenes from NIT's regional contribution (open classes)





Kinokuni Robot Competition

2. To promote joint research projects that contribute to the sustainable development of local industry and society by liaising with industry and the government using the

1. To actively engage with projects of the Gifu Association of Regional Alliances and others to promote industry-academy-government collaboration in the community and

2. To enhance the program of open classes, visiting lectures, and opening up of the library in order to play a role as the educational base of manufacturing in the local

Making electronic musical instruments: Electronic handicraft using micro computers



Making decorative lights with LEDs

# **General Education**

**Humanities** 

### Natural Sciences http://www.gifu-nct.ac.jp/jinbun/ http://www.gifu-nct.ac.jp/sizen/







# General Education

In the 21st century, an industrial technical expert will be expected without fail to have a wide variety of knowledge in any field of human activities as well as highlydeveloped technology. This is why even those who specialize in technology should learn liberal arts, natural science and other subjects in addition to their own specialized fields. Accordingly in our college, special attention is given to the acquirement of the subjects for general education, which correspond to those of senior high schools in lower grades and those of universites in higher grades. Those subjects are, however, interrelated from lower grades to higher grades so that students can acquire a large quantity of knowledge as consistently and effectively as possible within the limit of five years. Another advantage of the general education in our college is that there are many substantial facilities and equipments which can be freely utilized for class activities. By means of these educational aids, the general education of our college is being effectively carried on.

# The Engineers to Be Trained in General Education (Humanities)

Technical knowledge and specialties associated with technology are undeniably important to the present age. Additionally, exhaustive research efforts to attain knowledge with respect to international and historical circumstances coupled with insight based on the foursquare ethic are also required. Furthermore, let us not underestimate the importance of applying motivational development and learning ability into the aforementioned categories.

Human resources inevitably handle resources of information, knowledge, and technologies. The department aims to provide for the educational development, cultural enrichment and practical skills which can be applied to each respective technological field.

Based on the background criteria mentioned above, this department lists the criteria of Engineers in Training as follows:

#### Engineer to Be Trained

1. An engineer who can think about social problems with broad outlook and ethical sense by way of understanding historic and cultural background of the human race and respecting a viewpoint of other people and countries.

2. An engineer who can communicate in a bilingual environment.

3. An engineer who has cultural, geographic, and ethical perspecitive.

## The Engineers to Be Trained in General Education (Natural Sciences)

To utilize and develop well-served engineering for human beings, it is necessary to understand the rules of physics and chemistry as a basis of engineering and develop a scientific way of thinking. Since mathematics is the means that is required indispensability to express a scientific rule, engineers should learn its skills and ways of thinking adequately

Furthermore, in order to live a healthy humanistic life using outcomes of technologies in the modern society, it is necessary to acquire the knowledge of healthcare and to understand the effects for physical education to give one's mind and body through his or her own learning experience.

Based on the background criteria mentioned above, this department lists the figure of the engineers to be trained as follows:

#### Engineers to Be Trained

1. An engineer who has fundamental knowledge of mathematics, physics, and chemistry, and can apply them to a specialized field.

2. An engineer who has knowledge about the health of mind and body, and can live a healthy life.

## Concrete Educational Objectives for Achievement and Qualification to Be Attained in the Department of General Education

- 1. To understand historic and cultural background of the human race, and to learn the basics of outlook on ethic in order to capture social problems in deference to a viewpoint of other people and countries.
- 2. To acquire healthcare ability and physical strength in order to be an engineer with healthy mind and body, and to bring up breadth of mind and do his or her life wealthily through keen appreciation of arts, sense of cooperation, creativeness, imaginativeness.
- 3. To acquire the fundamental ability to describe, present, and discuss in Japanese.
- 4. To acquire the basic communication skills in English and acquire global perspectives through learning other foreign languages.
- 5. To acquire the fundamental knowledge of mathematics and natural science and the ability to solve problems with them.

The educational objectives mentioned above are common to each specialized department corresponding to an associate degree course.

# Curriculum of General Education(Students enrolled after 2018)

| 1st                |   | 2nd                |   | 3rd                    |   | 4th                |                            |           | 5th              |
|--------------------|---|--------------------|---|------------------------|---|--------------------|----------------------------|-----------|------------------|
| Japanese A         | 2 | Japanese           | 2 | Japanese               | 2 | Japanese           | 1                          | English A | 2                |
| Japanese B         | 2 | Ethics             | 2 | Politics and Economics | 2 | Modern Social      | 2                          | Chinese   | 2                |
| World History      | 2 | Jpanese History    | 2 | Mathematics A I        | 2 | Studies and Law    | 2                          |           |                  |
| Geography          | 2 | Mathematics A I    | 2 | Mathematics A II       | 2 | Physical Education | 2                          |           |                  |
| Mathematics A I    | 2 | Mathematics A II   | 2 | Physical Education     | 2 | English A          | 2                          |           |                  |
| Mathematics A II   | 2 | Mathematics B      | 2 | English A              | 2 | German             | 2                          |           |                  |
| Mathematics B      | 2 | Physics B I        | 2 | English C              | 1 |                    |                            |           |                  |
| Physics A          | 1 | Physics B II       | 2 |                        |   |                    |                            | 1 mar     |                  |
| Chemistry A        | 2 | Chemistry B        | 2 |                        |   |                    |                            |           |                  |
| General Science    | 1 | Physical Education | 2 |                        |   |                    | 10.1 m                     | 1         |                  |
| Health Education   | 2 | English A          | 2 |                        |   |                    |                            |           | 市協争<br>の取<br>存在し |
| Physical Education | 2 | English B          | 1 |                        |   |                    | 11.8                       |           | 現在も              |
| Art                | 1 | English C          | 2 |                        |   |                    | (1344)<br>(1374)<br>(1374) |           | E A              |
| Music              | 1 |                    |   |                        |   |                    |                            |           | -                |
| English A          | 2 |                    |   |                        |   | -                  |                            |           |                  |
| English B          | 2 |                    |   |                        |   |                    |                            |           |                  |
| English C          | 2 |                    |   |                        |   |                    | TATE                       |           |                  |

### Academic Staff

| Title               |      | Name                | Degree  | Subjects in charge                              |
|---------------------|------|---------------------|---------|---|
|                     | (©2) | UEHARA, Toshiyuki   | D. Eng. | Chemistry                                       |
|                     | (©1) | KAMEYAMA, Taichi    | M. Ed.  | English   |
|                     |      | MIYAGUCHI, Noriyuki | M. A.   | Japanese  |
|                     |      | KUBOTA, Keiji       | M. Ed.  | Politics and Economics, Ethics                  |
| Professor           |      | NAKASHIMA, Izumi    | M. Sc.  | Mathematics                                     |
|                     | (01) | YAMAMOTO, Hiroki    |         | Health and Physical Education                   |
|                     | (02) | NAKAJIMA, Yasutaka  | D. A.   | Japanese  |
|                     |      | OKAZAKI, Takanobu   | D. Sc.  | Mathematics                                     |
|                     | (%)  | MAGUSA, Atsushi     |         | Health and Physical Education                   |
|                     |      | NONOMURA, Sakiko    | M. A.   | English   |
| Associate           |      | KAN, Nahomi         | D. Sc.  | Physics   |
| Professor           |      | KITAGAWA, Shinya    | D. Sc.  | Mathematics                                     |
|                     |      | SUGAHARA, Takashi   | D. A.   | English   |
|                     |      | SORA, Kenta         | M. Ed.  | Modern Social Studies and Law and World History |
|                     |      | KATADA, Yoko        | Ph. D.  | Japanese  |
|                     |      | KOBAYAKAWA, Yugo    | D. Ec.  | Geography and Ethics                            |
| Lecturer            |      | SATAKE, Naoki       | M. Ed.  | English   |
|                     |      | YAGI, Shintaro      | D. Sc.  | Mathematics                                     |
|                     |      | WATANABE, Shin      | D. Sc.  | Physics and Chemistry                           |
| Assistant Professor |      | AKAGAWA, Yoshiho    | D. Sc.  | Mathematics                                     |
| ASSISTALIT LIGESSOL |      | KATSUNO, Daisuke    | M. Ed.  | Health and Physical Education                   |
| Tomporory Drofosoor |      | OKADA, Shozo        | M. Sc.  | Mathematics                                     |
| Temporary Professor |      | SHIMIZU, Akira      |         | English   |

◎1 Chairman of Department (Liberal Arts) ○1 Dean of Student Affairs

\* Director of Counseling Service center





e-Learning in English Class



Electronic Blackboard being used in Ethics Class

©2 Chairman of Department (Science) ○2 Dean of Dormitory Affairs

Mathematics Class



Physical Education Class

# **Department of Mechanical Engineering**

http://www.gifu-nct.ac.jp/mecha/



### Department of Mechanical Engineering

The purpose of this department is to turn out mechanical engineers with practical and creative ability in the field for both designing and manufacturing machines. The curriculum of this department is arranged to achieve this purpose and the textbooks adopted in the classes from 3rd to 5th year are the same level as those used in university undergraduate classes. Moreover, practical subjects such as machinery design and drafting, engineering practice, and mechanical engineering experiments are adopted by skilled expert staff members and the latest equipment.

The curriculum of this department has been revised every five years to fit the current development of the transportation industry dealing with aircraft and automobiles, information technology and robotics to provide the timely human resources needed in the industrial and manufacturing world. The teachers in this department whose fields are mechanical engineering or peripheral areas have respective themes of research that not only provide the high quality-education but also allow them to be active researchers

The courses from which students graduate in this department give them a wide range of expertise. One half of them eventually work in manufacturing companies as engineers in general management positions. The other half enter third-year classes of the university department to promote their abilities as mechanical engineers and increase their general human abilities.

### The Engineers to Be Trained and the Educational Objectives in the Department of Mechanical Engineering

Mechanical engineering is a cross-disciplinary field forming the basis of technology for "Product Design". "Product Design" consists of the two phases: 1) machine design (the planning phase for manufacturing machine products), and 2) machine work (the phase for embodying products).

Machine design is an effusion of creative activities realized by consolidating the wisdom and experiences of mechanical engineers. It is therefore essential for students aspiring to be mechanical engineers to learn mathematics and physics, which constitute the basis for machine design technique and information technology. Furthermore, based on this science and technology, they must learn subjects related to the dynamics like "Material dynamics", "Hydrodynamics", "Thermodynamics", and "Mechanical dynamics"

Machine work is a sublime, creative process to embody the images of products created by machine design technicians for real products. Mechanical engineers assume heavy responsibilities for finding out and realizing the most appropriate machining conditions under the prescribed, restricted conditions concerning 1) economical efficiency, 2) quality, 3) term of work and 4) environmental preservation and safety. Students hoping to be mechanical engineers must learn not only practical skills on operation of production machinery, but also subjects connected directly with production engineering like "Manufacturing engineering", "Instrumentation engineering", "Control engineering", and "Production engineering"

Moreover, it is necessary for a mechanical engineer to acquire IT technology as a tool to accomplish "Product Design" effectively. In addition, to play an active part as a member of domestic and foreign "Product Design teams," communication skill and sociability on the basis of outlook on ethic are required. As for the students aiming at a mechanical engineer, nourishment of these ability must be necessary.

#### Engineer to Be Trained

An engineer who has basics scholarship to play an active part as a mechanical engineer in the global community and who learns information processing and analysis ability that can deal with a sudden change of social situation

### Educational Objectives

#### (A) To exercise ethical practices.

- (A-1) To possess basic ideas of ethical standards and practices, in addition to understanding the historical backgrounds, cultures and viewpoints worldwide. To comprehend social issues and environmental problems on a global scale.
- (A-2) To exercise ethical practices mentioned above as an mechanical engineer whose responsibility within the sphere of the technology of mechanical engineering and its impact on the global environment is not diminished.
- (A-3) To acquire health care ability and physical strength, to foster ability of appreciating arts, cooperativeness, creativity, and to enrich breadth of mind and finally his/her life, in order to become the engineer whose mind and body are healthy together.

#### (B) To acquire designing ability.

- (B-1) To acquire the ability to understand problems of machine technology while realizing new challenges and opportunities in order to provide solutions voluntarily within a framework of ideas
- (B-2) To acquire the comprehensive designing ability to organize the results obtained in a paper, pursuing a plan steadily for analysis based on fundamental knowledge of mechanical engineering.

#### (C) To acquire communication skills.

- (C-1) To acquire the ability to describe, present, and discuss in Japanese.
- (C-2) To acquire the basic communication skill acceptable by international standards.
- (D) To acquire the knowledge and ability of mechanical engineering, cross-disciplinary fields forming the basis of it and the surrounding crossdisciplinary fields.
- (D-1) To acquire the fundamental knowledge of mathematics and natural science and the ability to solve problems with them.
- (D-2) To acquire the fundamental knowledge and ability of the fundamental engineering (design and the system, information and logic, materials, and mechanics).
- (D-3) To acquire the knowledge and ability of the cross-fields within the mechanical engineering structure and the surrounding cross-disciplinary ones (environment, creation, energy, measurement and control, safety, etc.)

- (D-4) To acquire basics knowledge as a mechanical design engineer and to acquire the following four abilities for depth and systematization of knowledge (1) Ability about the dynamics of materials to design the machinery whose strength is guaranteed and can be used safely (2) Ability to grasp dynamic behavior of air or fluid, and to apply it to a mechanical design
- (3) Ability to evaluate thermal pattern for power of machinery or its efficiency in terms of dynamics, and to apply it to a mechanical design
- (4) Ability to understand dynamic behavior about motion or vibration of machinery to apply it to a mechanical design
- (D-5) To develop the basic ability of combining the knowledge of mechanical engineering and different technical fields from mechanical engineering, and simultaneously stimulate student interest

### (E) To acquire information technology.

<Reau

Fundamentals

Manufacturing

(Subtotal)

To acquire the skill of designing for the information processing system, fully utilizing information devices.

# Curriculum of Department of Mechanical Engineering

| 1st                 |   | 2nd                                     |   |                                |
|---------------------|---|---|---|--------------------------------|
| ired Subjects>      |   | <pre></pre>                             |   | <pre>(Requi</pre>              |
| of<br>g Engineering | 3 | Metal Cutting and Casting<br>Process I  | 1 | Applied Physic<br>Fundamentals |
|                     | 3 | Metal Cutting and Casting<br>Process II | 1 | Mechanics                      |
|                     |   | Information Literacy                    | 1 | Strength of Ma                 |
|                     |   | Machinery Design and<br>Drafting I      | 2 | Material Techn                 |
|                     |   | Mechanical Engineering<br>Practice I    | 3 | Instrumentatior<br>Technology  |
|                     |   | (Subtotal)                              | 8 | Machine Desig                  |

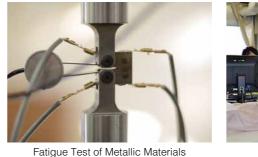


Mechaical Engineering Practice

## Academic Staff

| Title                  | Name                       | e                   | Degree  | Subjects in charge              |
|------------------------|----------------------------|---------------------|---------|---------------------------------|
|                        | © (Chairman of Department) | KATOH, Kohzoh       | D. Eng. | Metal Deformation Processings   |
|                        |                            | OGURI, Hisakazu     | M. Eng. | Strength of Materials           |
| Professor              |                            | ISHIMARU, Kazuhiro  | D. Eng. | Thermodynamics                  |
|                        | (※1)                       | KATAMINE, Eiji      | D. Eng. | Machine Design                  |
|                        | (*2)                       | YAMADA, Minoru      | D. Eng. | Control Engineering             |
|                        |                            | MIYAFUJI, Yoshitaka | D. Eng. | Mechanical Engineering Practice |
|                        | (**3)                      | YAMAMOTO, Takahisa  | D. Eng. | Heat Transfer                   |
| Associate<br>Professor |                            | NAKAYA, Jun         | D. Eng. | Fluid Mechanics                 |
|                        |                            | KOHNO, Takuya       | D. Eng. | Applied Physics                 |
|                        | SHI                        | MAMOTO, Kumiko      | D. Eng. | Material Techonology            |
| Lecturer               |                            | KUMADA, Keigo       | D. Eng. | Machinery Design and Drafting   |

\*1 Assistant Dean of Advance Course \*2 Director of Technical Education Division \*3 Director of International Affairs Office



| 3rd                                   |           | 4th                           |    | 5th                                    |          |
|---------------------------------------|-----------|-------------------------------|----|--|----------|
| (Required Subjects)                   | $\rangle$ | <pre> Required Subjects</pre> |    | (Required Subjects)                    | <b>,</b> |
| Applied Physics I                     | 2         | Applied Mathematics I         | 2  | Production Engineering                 | 1        |
| Fundamentals of                       | 2         | Applied Mathematics II        | 1  | Engineering Ethics                     | 1        |
| Mechanics                             | _         | Applied Mathematics III       | 1  | Graduation Research                    | 6        |
| Mechanism                             | 2         | Applied Physics II            | 1  | (Elective Subjects)                    |          |
| Strength of Materials I               | 2         | Machinery Dynamics I          | 1  | Applied Physics III                    | 2        |
| Material Technology I                 | 1         | Strength of Materials II      | 1  | Fluid Mechanics II                     | 2        |
| Instrumentation<br>Technology         | 1         | Strength of Materials III     | 1  | Fluid Mechanics III                    | 2        |
| Machine Design I                      | 1         | Fluid Mechanics I             | 2  | Thermodynamics II                      | 2        |
| Information Processing I              | 1         | Thermodynamics I              | 2  | Energy Engineering                     | 2        |
| Numerical Calculation                 | 1         | Material Technology II        | 1  | Heat Transfer                          | 2        |
| Machinery Design and                  |           | Metal Deformation Process I   | 1  | Material Technology III                | 2        |
| Drafting II                           | 2         | Control Engineering I         | 1  | Metal Deformation Process ${\rm I\!I}$ | 2        |
| Mechanical Engineering                | 2         | Machine Design II             | 1  | Control Engineering II                 | 2        |
| Experiment I                          | 2         | Information Processing II     | 1  | Introduction to Electrical             | 2        |
| Mechanical Engineering<br>Practice II | 3         | Mechanical Engineering        | 2  | and Electronic Engineering             |          |
| (Subtotal)                            | 20        | Experiment II                 | -  | Engineering Analysis                   | 2        |
| (Subiolal)                            | 20        | Engineering Practice          | 3  | Theory of Elasticity                   | 2        |
|                                       |           | Topics of Mechanical          | 2  | Theory of Plasticity                   | 2        |
|                                       |           | Engineering                   |    | System Engineering                     | 2        |
|                                       |           | (Subtotal)                    | 25 | Mechatronics                           | 2        |
|                                       |           |                               |    | Robot Engineering                      | 2        |
|                                       |           |                               |    | Total Credits                          | 32       |



Engineering Analysis



Total of Nesessary Credits 22and

more

on Elective Subjects

Fundamentals of Manufacturing Engineering

# **Department of Electrical** and Computer Engineering

http://www.gifu-nct.ac.jp/elec/



### Department of Electrical and Computer Engineering

The department was originally the Department of Electrical Engineering established in 1963. In the spring of 2000, the department was reorganized to become the Department of Electrical and Computer Engineering. The objectives of developing this department are to pursue and develop the newest technologies not only in electrical and electronic engineering, but also in information engineering, to train professionals for electronic and information industries. Two courses, electrical and electronic engineering course and computer engineering course, are designed for students who have completed their first 3-year study in order to give them the opportunity to obtain deeper knowledge of specialized fields according to students' individual needs.

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The department's first 3-year curriculum concentrates on basic subjects in physics and mathematics along with subjects stressing the fundamentals of electrical, electronic and computer engineering, such as electronics, circuit theory, electromagnetics, electronic materials science, and programming languages. The curriculum also provides extensive laboratory work to enable students to become familiar with operating principles in related fields. A variety of laboratories equipped with workstations, computer networking terminals, lasers, communication systems, semiconductor manufacturing system, and other related equipment of the newest type are available.

Students of electrical and electronic engineering course are required to study specialized subjects, including advanced digital circuits and systems, microwave engineering, transmission engineering, and advanced electro-magnetics. Students of computer engineering course are required to study specialized subjects, including information theory, signal processing, data structures and algorithms, and mathematics in computer sciences. Moreover, a lot of elective subjects, such as optical engineering, control theory, opto-quantum electronics, network operating systems, artificial intelligence, and image processing are also provided. Ultimately, students can acquire competence to cope with the ever-progressing, high-technology industries. Further details on the Department of Electrical and Computer Engineering are available at our department web site: http://www.gifu-nct. ac.jp/elec/index-e. html/

### The Educational Objectives of the Department of Electrical and Computer Engineering

In order to train an international and ethical engineer who can respond to the ever-progressing technical landscape, the Electrical and Information Engineering Department aims to provide our students with an education by developing a critical and fundamental understanding of technology within the multi-layered fields of electricity, electronics and information technology, which forms the foundation of the information society.

To achieve our goal we have introduced a curriculum that follows a path that allows for each student to individually select their own course of specialized study during the final fourth and fifth years of their technical education.

Our aim is to produce engineers by applying a curriculum that divides into two courses, namely, the Electric and Electronic Engineering Course and the Information Engineering Course. Additionally, our students strive to acquire an equal balance in fundamental knowledge encompassing every facet of electricity, the electronics, and information. Aspiring engineers will undergo thorough training in order to fulfill the professional requirements of his or her specialized trade

The expression and the table below respectively show the image of "Engineer to Be Trained" and the educational objectives of the Electrical and Information Engineering with respect to the criteria set by the JABEE program:

#### Engineer to Be Trained

Engineers who acquired fundamental knowledge encompassing every facet of electricity, the electronics, and information in equal balance, and the ability to undergo thorough training in order to fulfill the professional requirements of his or her specialized trade.

### Educational Objectives

#### (A) To exercise ethical practices.

- (A-1) To possess basic ethical standards and practices. in addition to understanding the historical backgrounds, cultures and viewpoints worldwide. And to comprehend social issues and environmental problems on a global scale.
- (A-2) To exercise basic ethical practices as an engineer who has increasing responsibility within the sphere of electricity, the electronics, and the information technology and its impact on the global environment.
- (A-3) To possess the health and physical strength to be a healthy engineer. To become appreciative, cooperative, creative and imaginative, so as to live an affluent life. (B) To acquire the ability to design.
- (B-1) To acquire the ability to understand technical problems and/or new issues concerning electricity, the electronics, and the information technology while realizing new challenges and opportunities in order to provide solutions voluntarily within a framework of ideas.
- (B-2) To acquire the comprehensive designing ability concerning electricity, electronics, and information technology to organize the results obtained in a paper, pursuing a plan steadily for analysis based on fundamental knowledge.
- (C) To acquire skill in communicating.
- (C-1) To acquire basic ability to describe, present, and discuss in Japanese.
- (C-2) To acquire the basic communication skill acceptable by international standards.
- (D) To acquire knowledge and the ability with in a specific interdisciplinary field in addition to outside domains that encompass electricity, electronics, and information engineering
- (D-1) To acquire the ability to solve problems with basic knowledge of mathematics and natural sciences.
- (D-2) To acquire the fundamental knowledge and skills of design systems, information, logic, material, dynamics and technology.
- (D-3) To acquire basic knowledge and applied ability in a common field (environment, energy, measurement, control, creation, and safety, etc.) to an interdisciplinary field in the surrounding field of electricity, the electron, and the information engineering.
- (D-4) To acquire the basic knowledge of each specialized field in an electric, electronic course and the information course, and acquire the ability that problems can be solved based on the application of basic knowledge obtained in each course.
- (1) To acquire the basic understanding of electronic, electronic and information technology and the ability to apply this knowledge
- (2) Electric and electronic course
- To possess the ability to acquire the basic knowledge of electric and electronic engineering and the applied skills.
- (3) Information engineering course
- To possess the ability to acquire the basic knowledge of electronic and information engineering and the applied skills.
- (E) To acquire information technology skills
- To master information instruments, and acquire the ability to complete construction of projects, and the reporting with an information processing system such as programming needed with in a specialized field.

# Curriculum of Department of Electrical and Computer Engineering

2

| 1st                         |        |
|-----------------------------|--------|
| <pre></pre>                 | 3<br>3 |
| 2nd                         |        |
| <pre></pre>                 |        |
| Electric Circuit I          | 2      |
| ogic in Computer Scienc     | 1      |
| Programming and Its Seminar | 2      |

3

Flectrical and Computer

(Subtotal)

Engineering Laboratories

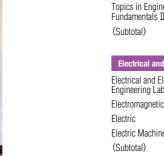
Flectromagnetics Electric Electrical and Computer Engineering Fundamental Seminar Electric Circuit Engineering 2 Computer Architecture 2 Programming and Its Seminar Scientific and Technical Enalish Electrical and Computer 4 Engineering Laboratories (Subtotal) 20

3rd (Required Subjects)

Applied Mathematics A

Applied Physics I





Tesla coil made by students



Alumni Lecturers

### Academic Staff

| Name            |  |   |   |
|-----------------|--|---|---|
|                 |  | Degree  | Subjects in charge  |
| TOKORO,         | Tetsuro  | D. Eng.   | High Voltage Engineering, Electric Circuits I   |
| KUMAZAK         | , Hironori   | D. Eng.   | Electromagnetics $I \cdot I$ , Engineering Ethics   |
| YASUDA, M       | 1akoto   | D. Eng.   | Mathematics in Computer Science, Artificial Intelligence  |
| DEGUCHI,        | Toshinori  | D. Eng.   | Data Structures and Algorithms Formal Language Theory   |
| TOMITA, N       | utuwo  | D. Eng.   | Power Electronics, Power Generation and Transformation Engineering  |
| (**1) HABUCHI,  | Hitoe  | D. Eng.   | Electromagnetics $I \cdot \mathbb{I}$ , Optical Engineering   |
| (**2) YAMADA, I | lirobumi   | D. Eng.   | Programming and Its Seminar, Information Theory   |
| TOMITA, Is      | ao   | D. Sc.  | Electrical and Computer Engineering Fundamental Seminar, Applied Physics I $\cdot  \mathbb{I}$  |
| IIDA, Tamio     | )  | D. Eng.   | Electric Circuits I $\cdot  {\rm I\hspace{1em}I}$ , Electronics I   |
| TAJIMA, Ko      | oji  | D. Eng.   | Computer Architecture, Software Engineering   |
| SHIRAKI, E      | iji  | D. Eng.   | Electrical and Computer Engineering Laboratories, Opto-Quantum Electronics  |
| SHIBATA, `      | ⁄oshihide  | D. Eng.   | Electrical and Computer Engineering Laboratories, Scientific and Technical English  |
| HORIUCHI        | Sakie  | D. Eng.   | Electrical and Computer Engineering Laboratories, Operating Systems and Databases   |
| ()<br>()        | YASUDA, M<br>) DEGUCHI,<br>TOMITA, M<br>*1) HABUCHI,<br>*2) YAMADA, H<br>TOMITA, Is:<br>IIDA, Tamic<br>TAJIMA, Kc<br>SHIRAKI, E<br>SHIBATA, Y<br>HORIUCHI, | YASUDA, Makoto         DEGUCHI, Toshinori         TOMITA, Mutuwo         **1)       HABUCHI, Hitoe         **2)       YAMADA, Hirobumi         TOMITA, Isao       IIDA, Tamio         TAJIMA, Koji       SHIRAKI, Eiji         SHIBATA, Yoshihide       HORIUCHI, Sakie | YASUDA, Makoto       D. Eng.         (D)       DEGUCHI, Toshinori       D. Eng.         TOMITA, Mutuwo       D. Eng.         **1)       HABUCHI, Hitoe       D. Eng.         **2)       YAMADA, Hirobumi       D. Eng.         TOMITA, Isao       D. Sc.       IIDA, Tamio         IIDA, Tamio       D. Eng.       SHIRAKI, Eiji         SHIBATA, Yoshihide       D. Eng.         HORIUCHI, Sakie       D. Eng. |

14

| -   | -  |
|---|----|
| 4th   |    |
| <pre></pre>   |    |
| Common Subjects                                     |    |
| Applied Mathematics B                               | 2  |
| Applied Mathematics C                               | 1  |
| Applied Mathematics D                               | 1  |
| Applied Physics I                                   | 2  |
| Electromagnetics                                    | 1  |
| Electronics I                                       | 2  |
| Electrical and Computer<br>Engineering Seminar I    | 1  |
| Electrical and Computer<br>Engineering Seminar II   | 1  |
| Computer Networks                                   | 2  |
| Switching Circuit Theory                            | 1  |
| Numerical Analysis                                  | 2  |
| Signal Processing                                   | 2  |
| Electrical and Computer<br>Engineeribg Laboratories | 2  |
| Topics in Engineering<br>Fundamentals I             | 1  |
| Topics in Engineering<br>Fundamentals II            | 1  |
| (Subtotal)  | 22 |
|   |    |

|   | 5     |
|---|-------|
| <pre></pre>   |       |
| Common Subjects                                       |       |
| Engineering Ethics                                    | 1     |
| Graduation Research                                   | 6     |
| (Subtotal)  | 7     |
| Electrical and Electronic C                           | ourse |
| Electrical and Electronic<br>Engineering Laboratories | 4     |
| (Subtotal)  | 4     |
| Computer Engineering Co                               | ourse |
| Computer Engineering<br>Laboratories                  | 4     |
| (Subtotal)  | 4     |
|   |       |
|   |       |
|   |       |

| th  |    |
|---|----|
| <pre> Elective Subjects</pre>                         |    |
| Common Subjects                                       |    |
| Power Generation and<br>Transformation<br>Engineering | 2  |
| Laws and Requlations of<br>Electricity                | 2  |
| Power Electoronics                                    | 2  |
| Power Electronics                                     | 2  |
| Electrical Materials                                  | 2  |
| Control Theory  | 2  |
| Opto-Quantum Electronics                              | 2  |
| Radio Wave Propagation<br>and Its Electronic Devices  | 2  |
| Electronic Measurements                               | 2  |
| Electronics II  | 2  |
| Applied Physics II                                    | 2  |
| Communication<br>Engineering                          | 2  |
| Software Engineering                                  | 2  |
| Programming Language<br>Theory                        | 2  |
| Operating Systems and<br>Databases                    | 2  |
| Computer Graphics and<br>Interfaces                   | 2  |
| (Subtotal)  | 32 |
|   |    |

| l Electronic            | Course |
|-------------------------|--------|
| lectronic<br>poratories | 2      |
| s II                    | 1      |
|                         | 1      |
| ery                     | 2      |
|                         | 6      |
| ngineering (            | Course |
| iginooning (            | 500100 |
| neering                 | 2      |
|                         |        |

| Computer Engineering<br>Laboratories | 2 |
|--------------------------------------|---|
| Information Theory                   | 1 |
| Data Structures and<br>Algorithms    | 1 |
| Formal Language Theory               | 1 |
| Mathematics in Computer Science      | 1 |
| (Subtotal)                           | 6 |



Alumni Lecturers

# **Department of Electronic Control Engineering**

http://www.gifu-nct.ac.jp/elcon/





## Department of Electronic Control Engineering

In the modern society, development is earnestly desired with a system which provides humans with sufficient aid not only in simple work but also in intelligent jobs, and furthermore allows a variety of operations to be conducted for humans. Humans can grasp the affairs surrounding them through their sensory organs including eyes and ears, and can carry out various kinds of actions by thinking with their brains accompanied with the use of their hands and feet. Also in order to make use of the maneuvers referred above, by means of any devices, similar processings such as sensing and perception (eyes and ears), recognition and judgment (brains), control (hands and feet), etc. come to be required. Urgent appearance is required with intelligence-oriented systems allowing such processings to be completed autonomously without using human hands throughout the whole course of the operations. Intelligence-oriented systems are on the threshold of realization in all the fields ranging from establishment of production facilities in factories and plants, manufacture and construction of automobiles, aircraft, electronic apparatus, intelligent buildings, communication systems, medical equipment, promotion of bio-technology, etc. the production of household electric appliances. In our electronic control engineering department, fundamental technology to develop systems to conduct such intelligent actions are dealt with an extensive scale. In this department, specific subjects related to measurement, control, information, and computers together with advanced theories concerning robotics engineering, system control engineering, etc. are also learned in addition to acquisition of the fundamental knowledge of electric, electronic, and mechanic systems. Meanwhile, importance is also attached to experiments and exercises, and thorough performances are also being made in our experiments and exercises of electronic control engineering, robotics control, information processings, etc.

As stated above, our department aims at educating those engineers who will be competent enough to be engaged in development of creative systems which are designed to conduct intelligent actions for humans by accomplishing realization of the systems oriented toward intelligence by means of electronic-control /information-control technoloay

## The Educational Objectives of the Department of Electronic Control Engineering

Our aim is to cultivate engineers who are able to respond in a flexible manner to various technologies and meet the challenges of recent progress made in electronic control technology. Our educational objectives are to foster students who can familiarize themselves with the advancement and segmentation of electronic control technology and operate electronic control systems by applying the fundamental skills they have acquired. The social role of the department is to cultivate human resources who can make use of comprehensive skills of mechanics, electrics, electronics, and information technology and creatively develop more advanced and environmentally friendly intellectual systems

Based on the above criteria, the Department of Electronic Control Engineering upholds its "Engineer to Be Trained" and its "Educational Objectives" below:

#### Engineer to Be Trained

An engineer who has acquired the fundamental knowledge and perspectives of mechanics, electrics, electronics, and information technology. An engineer who, on the basis of electronic control and information technology, has acquired the creative ability to improve and develop technology in order to serve the needs of the international community

### Educational Objectives

#### (A) To exercise ethical practices.

- (A-1) To possess ethical standards and practices and comprehend social issues, in addition to understanding the historical backgrounds, cultures and viewpoints on a worldwide basis
- (A-2) To exercise ethical practices as an engineer who has an increasing responsibility within the sphere of electronic control engineering and its impact on the global environment
- (A-3) To exercise good health care and have the physical strength to be a physically healthy engineer. To enrich his/her life, as a mentally healthy engineer, by cultivating the appreciation of art, the spirit of cooperation, creativity, and imagination.

#### (B) To acquire designing ability.

- (B-1) To acquire the ability to understand technical applications in electrics, electronics, information and control technology, and mechanics while realizing new challenges and opportunities in order to provide solutions voluntarily within a framework of ideas.
- (B-2) To acquire the comprehensive designing ability to organize the results obtained in a paper. In addition to pursue a plan steadily for analysis based on fundamental knowledge of electrics, electronics, information and control technology, and mechanics.

#### (C) To acquire communication skills.

- (C-1) To acquire the ability to describe, present, and discuss in Japanese.
- (C-2) To acquire the basic communication skill acceptable by international standards.
- (D) To acquire the knowledge and ability of electronic control engineering and cross-disciplinary fields forming an understanding of the surrounding cross-disciplinary fields.
- (D-1) To acquire the fundamental knowledge of mathematics and natural science and the ability to solve problems with them.
- (D-2) To acquire the fundamental knowledge and practical skills of engineering such as the design, system, information, logic, materials, and dynamics.
- (D-3) To acquire the fundamental knowledge and practical skills of the cross-fields between the electronic control engineering fields and the surrounding crossdisciplinary ones (environment, energy, measurement and control, creation, safety, etc.).
- (D-4) To acquire the basic knowledge of electronic control engineering, and develop the ability to operate electronic control systems by applying this basic knowledge In addition, the ability to master the technical knowledge and skills to serve the social needs.
- (1) To acquire the basic knowledge and viewpoints in the field of electronic control, on the basis of electrics and electronics.

#### (E) To acquire information technology.

To acquire the ability to perform, plan, develop and do representations within the information processing system. For example programming skills necessary in his/her specialized field, to fully utilize information devices.

### Curriculum of Department of Electronic Control Engineering

| ISt   |   |
|---|---|
| (Required Subjects)                               |   |
| Introduction to Electronic<br>Control Engineering | 1 |
| Workshop Practice I                               | 2 |
| (Subtotal)  | 3 |

(Required Subjects) Information Processing I 2 Fundamentals of Electricity Digital Circuits I Design and Drafting Workshop Practice II (Subtotal)

Applied Physics Information Pro Electromagnetic Electric Circuits Electronic Circu

2

2



Advanced Engineering Experiments

#### Academic Staff

| Title               | Name                       |                       | Degree                | Subjects in charge                              |
|---------------------|----------------------------|-----------------------|-----------------------|---|
|                     | © (Chairman of Department) | FUJITA, Kazuhiko      | D. Eng.               | Electromagnetics Electronic Devices             |
|                     |                            | MORIGUCHI, Hirofumi   | D. Sci.               | Applied Mathematics                             |
| Professor           | (0)                        | KITAGAWA, Hideo       | D. Eng.               | Robotics Applied Robotics                       |
|                     |                            | FUKUNAGA, Tetsuya     | D. Eng.               | Electromagnetics Computer Architecture          |
|                     |                            | ENDO, Noboru          | D. Eng.               | Systems Control Information Processing          |
| Associate           |                            | KOBAYASHI, Yoshimitsu | D. Eng.               | Kinematics of Machinery Engineering Experiments |
| Professor           |                            | KURIYAMA, Yoshifumi   | D. Eng.               | Workshop Practice Strength of Materials         |
| Lecturer            |                            | KUROYAMA,Takanobu     | D. Eng.               | Control Engineering Measurement Engineering     |
| Assistant Professor |                            | OGISO, Satoki         | D.Hum.Inf.,<br>D.Eng. | Engineering Experiments Electronic Circuits     |

O Dean of Research Affairs





Three-dimensional processing machine

| 3rd  |    |
|--|----|
| <pre></pre>                                      |    |
| Applied Mathematics A                            | 1  |
| Applied Physics I                                | 2  |
| Information Processing ${\rm I\hspace{-0.5mm}I}$ | 2  |
| Electromagnetics I                               | 2  |
| Electric Circuits I                              | 2  |
| Electronic Circuits                              | 2  |
| Digital Circuits II                              | 1  |
| Kinematics of Machinery I                        | 2  |
| Strength of Materials I                          | 2  |
| Engineering Experiments I                        | 4  |
| (Subtotal)                                       | 20 |
|  |    |

|   | 4th   |    |
|---|---|----|
|   | <pre></pre>                                   |    |
|   | Applied Mathematics B                         | 2  |
|   | Applied Mathematics C                         | 1  |
|   | Applied Mathematics D                         | 1  |
|   | Applied Physics I                             | 2  |
|   | Information Processing ${\rm I\!I}$           | 2  |
|   | Electromagnetics II                           | 2  |
|   | Electric Circuits II                          | 1  |
|   | Measurement Engineering                       | 2  |
|   | Control Engineering                           | 2  |
|   | Kinematics of Machinery ${\rm I\!I}$          | 1  |
| ) | Strength of Materials ${\rm I\!I}$            | 1  |
|   | Engineering Experiments ${\rm I\!I}$          | 4  |
|   | Advanced Engineering<br>Seminar               | 2  |
|   | Fundamental Research of<br>Electronic Control | 2  |
|   | (Subtotal)                                    | 25 |
|   |   |    |

| 5th  |                 |
|--|-----------------|
| Required Subjects                                  | s>              |
| Systems Control I                                  | 2               |
| Electric Power Devices I                           | 2               |
| Electronic Devices I                               | 2               |
| Robotics I   | 2               |
| Applied Computer<br>Engineering                    | 2               |
| Engineering Ethics                                 | 1               |
| Graduation Research                                | 9               |
| (Subtotal)   | 20              |
| (Elective Subjects)                                | $\rangle$       |
| Applied Physics II                                 | 2               |
| Systems Control II                                 | 2               |
| Electric Power Devices ${\rm I\!I}$                | 2               |
| Electronic Devices II                              | 2               |
| Robotics II  | 2               |
| Applied Electronics                                | 2               |
| Electric Circuits III                              | 2               |
| Electronic Control Circuits                        | 2               |
| Electronics  | 2               |
| Computer Architecture                              | 2               |
| Kinematics of Machinery II                         | 2               |
| Total of Credits                                   | 22              |
| Total of Necessary Credits<br>on Elective Subjects | 1 O<br>and more |

Haptic Device



Lancer robot

# **Department of Civil** Engineering

http://www.gifu-nct.ac.jp/civil/



### Department of Civil Engineering

Natural disasters have often occurred in recent Japan. Especially, the unprecedented big earthquake and tsunami, called 'Tohoku Earthquake and Tsunami' on Mar. 11, 2011, recorded the greatest magnitude and brought extensive damages to the eastern part of Japan. Through the experience, we did realize that vulnerability to serious natural disasters still exists in our national land. In the damaged area, many engineers including some graduates of the Department of Civil Engineering are still working hard to reconstruct the infrastructure

The Department of Civil Engineering in Gifu National College of Technology offers programs to learn technology concerned with 'Disaster Prevention' for protecting national land from natural disasters, such as 'Infrastructure Services' for decreasing environmental impact and 'Sustainable Urban Planning' for symbiotic relationship between human and nature.

The students graduated from this department mainly take professional career related to disaster prevention plans and infrastructure services (government or local officials, employees of energy, transport and information technology companies) or design, construction and management of infrastructure facilities (construction companies, etc.). Both careers should contribute to making the society comfortable and safe. We believe that studying civil engineering is worthy of learning if you want to contribute to our society with strong public spirit.

### The Educational Objectives of the Department of Civil Engineering

Things called "infrastructure" are, for example, those supporting ordinary life in our community, such as the use of a car, electricity, and drinking water, In addition, to supporting safe and smooth social activities such as communication, distribution of goods and transportation, and, more importantly, those protecting our natural environment from natural disasters. All of them are absolutely essential for us and they will never disappearing in future. Also, to build a mechanism for achieving our objectives within the realm of "infrastructure improvement"

Japan's world's preeminent technology has significantly contributed not only to Japan but to other countries. However, in future, further consideration of acceptable environmental limits will be a high-priority issue. For sustainable human development, in coexistence with nature, it is hoped that engineers will be fostered who have the ability to realize creative urban development and infrastructure improvement in harmony with the regional history and culture.

Based on the above criteria, the Department of Civil Engineering upholds its "Engineer to Be Trained" and its "Educational Objectives" below:

#### Engineer to Be Trained

The department's goal is to develop an engineer who has acquired basic knowledge and concepts concerning infrastructure improvement and methods, and the means to protect our natural environment and support a comfortable, safe living environment. The Engineer to be trained will have utmost concern for environmental load reduction and sustainable development with the ability to positively promote infrastructure improvement to support human development.

## Educational Objectives

#### (A) To possess ethical standards and practices.

- (A-1) To possess ethical standards and practices and comprehend social issues, in addition to understanding the historical backgrounds, cultures and viewpoints worldwide
- (A-2) To recognize the necessity of ethics for an engineer engaged in civil engineering.
- (A-3) To exercise good health care and have the physical strength to be a healthy engineer. To enrich his/her life, as a mentally healthy engineer, by cultivating the appreciation of art, the spirit of cooperation, creativity, and imagination.

#### (B) To acquire the designing ability.

- (B-1) To acquire the ability to understand the technical problems and new themes concerning civil engineering and to make plans to voluntarily solve the problems.
- (B-2) To acquire the basic ability to organize the results that have been achieved in a paper and to pursue a plan for analysis and practice, based on fundamental knowledge of civil engineering.

#### (C) To acquire communication skills.

- (C-1) To acquire the ability to describe, present, and discuss in Japanese
- (C-2) To acquire the basic communication skill acceptable by international standards.
- (D) To acquire the knowledge and ability of civil engineering, cross-disciplinary fields forming the basis of it and the surrounding cross-disciplinary fields.
- (D-1) To acquire the basic knowledge of mathematics and natural science and the ability to solve problems with them.
- (D-2) To acquire the basic knowledge of engineering such as the design, system, information, logic, materials, dynamics.
- (D-3) To acquire knowledge and skills in common fields of Environmental System Design Engineering (environment, energy, measurement/control, creation, safety, etc.)
- (D-4) To acquire the following basic knowledge and concepts of civil engineering as his/her specialized field:
- (1) To acquire basic knowledge and concepts concerning infrastructure improvement to protect our national land from natural disasters and support a comfortable, safe living environment
- (2) To acquire basic knowledge and concept concerning the creation of "sustainable urban development" in harmony with nature and in consideration of environmental load reduction.
- (D-5) To be interested in some other fields within the main four fields of civil engineering (structure, hydraulics, soil, and planning/environment) different from their specialized skills, and to develop the basic ability to combine their knowledge of their skilled field with these other fields.

#### (E) To acquire information technology.

To acquire the ability of performing, planning, development and presentation with the information processing system in his/her specialized field, fully utilizing information devices. Example would be computer programming.

# Curriculum of Department of Civil Engineering

| ISU                                      |
|--|
| (Required Subjects)                      |
| Introduction to the Civil<br>Engineering |
| Computer Literacy                        |
| (Subtotal)                               |

2

3

| <pre> Required Subjects</pre>            |   | <pre> &lt; Requir</pre> |
|--|---|-------------------------|
| Surveying I                              | 1 | Applied Physics         |
| Surveying Exercises I                    | 2 | Surveying II            |
| Fundamental drawing                      | 2 | Surveying Exer          |
| Fundamental Materials of<br>Construction | 1 | Fundamental Ex          |
| Fundamental Mechanics                    | 2 | Concrete Engin          |
| (Subtotal)                               | 8 | Structural Mech         |
|  |   |                         |



Surveying Exercise

#### Academic Staff

| Title                  | Name                       |                   | Degree  | Subjects in charge                                      |
|------------------------|----------------------------|-------------------|---------|---|
|                        |                            | IWASE, Hiroyuki   | D. Eng. | Concrete Engineering Practical Concrete Engineering     |
|                        | (())                       | WADA, Kiyoshi     | D. Eng. | Hydraulic Engineering Hydraulics                        |
| Professor              | © (Chairman of Department) | YOSHIMURA, Yuji   | D. Eng. | Soil Mechanics Geotechnical Engineering                 |
|                        |                            | SUZUKI, Masato    | D. Eng. | Planning Theory in Civil Engineering Numerical Analysis |
|                        |                            | MIZUNO, Kazunori  | D. Eng. | Soil Mechanics Fundamental Mechanics                    |
|                        |                            | HIROSE, Yasuyuki  | M. Eng. | Surveying Disaster Prevention Engineering               |
|                        |                            | SUMINO, Haruhiko  | D. Eng. | Environmental Engineering Fundamental Experiments       |
| Associate<br>Professor |                            | MIZUNO, Yoshinori | D. Eng. | Structural Mechanics Design and drawing                 |
| 110103301              |                            | WATANABE, Naohiko | D. Eng. | Applied Mathematics Applied Physics                     |
|                        |                            | KIKU, Masami      | D. Eng. | Hydraulics Fundamental Experiments                      |
| Assistant Professor    |                            | KAWABATA, Mituaki | D. Eng. | Urban Engineering Urban and Traffic Planning            |

○ Dean of Academic Affairs





Tsunami wave-making experiment

# Students enrolled after 2017

on Elective Subjects

and more

| 3rd                                       |    | 4th  |    | 5th   |     |
|---|----|--|----|---|-----|
| <pre></pre>                               |    | <pre></pre>                                |    | <pre></pre>   |     |
| Applied Physics                           | 2  | Applied Mathematics                        | 2  | Experiment in Civil Engineering                         | 1.5 |
| Surveying II                              | 1  | Numerical Analysis                         | 2  | Steel Structure   | 2   |
| Surveying Exercises II                    | 2  | Spatial Information Engineering            | 1  | Sustainable Society Formation                           | 2   |
| Fundamental Experiments I                 | 3  | Design and drawing                         | 2  | Management of Construction                              | 1   |
| Concrete Engineering I                    | 2  | Fundamental Experiments ${\rm I\!I}$       | 3  | Exercise in Civil Engineering ${\rm I\hspace{-0.5mm}I}$ | 1.5 |
| Structural Mechanics I                    | 2  | Concrete Engineering ${\rm I\!I}$          | 2  | Engineering Ethics                                      | 1   |
| Hydraulics I                              | 2  | Structural Mechanics II                    | 3  | Graduation Research                                     | 8   |
| Soil Mechanics I                          | 2  | Hydraulics II                              | 3  | (Subtotal)  | 17  |
| Planning Theory in Civil<br>Engineering I | 2  | Soil Mechanics II                          | 2  | <pre></pre>   |     |
| Environmental Engineering I               | 2  | Engineering geology                        | 1  | Structural Analysis                                     | 2   |
| (Subtotal)                                | 20 | Planning Theory in Civil<br>Engineering II | 1  | Practical Concrete Engineering                          | 2   |
|   |    | Environmental Engineering II               | 2  | Geotechnical Engineering                                | 2   |
|   |    | Urban Engineering                          | 1  | River Basin Management                                  | 2   |
|   |    | Disaster Prevention Engineering            | 1  | Water Resources Engineering                             | 2   |
|   |    | Infrastructure Engineering                 | 1  | Ecosystem Management                                    | 2   |
|   |    | Exercise in Civil Engineering I            | 1  | Urban and Traffic Planning                              | 2   |
|   |    | (Subtotal)                                 | 28 | Energy Engineering                                      | 2   |
|   |    |  |    | Total of Credits  | 16  |
|   |    |  |    | Total of Necessary Credits                              | 12  |

Exhibit



Lab work

# **Department of Architecture**

http://www.gifu-nct.ac.jp/archi/



### Department of Architecture

Architecture is often said to be a receptacle in which human life and culture is developing. It is created as a combined product of art and engineering, and at the same time it must be safe, beautiful and functional.

Based on this idea, the department of architecture offers the curriculum consisting of various fundamental subjects which comprehend 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 desires of learning and creating.

Completing the five-year program, students are expected to take active roles in building industries as designers, planners, engineers and builders. Students will be qualified for the examination to become second class architect, which is a legal license of Japan, immediately after graduation, then they will be candidates for first class architect four years later.

# The Educational Objectives of the Department of Architecture

The department of Architecture aims to educate practical engineers while cultivating creative originality, by transferring the comprehensive skills of technology and culture. These skills are related to construction techniques of building and city space, environmental adjustment and constructive safety, for the purpose of constructing social space

Based on the above criteria, the Department of Architecture upholds its "Engineer to Be Trained" and its "Educational Objectives" below:

#### Engineer to Be Trained

An engineer who has, and comprehensively develops, fundamental technology and culture on the construction techniques of building and city space, environmental adjustment and constructive safety, for the purpose of constructing social space.

# Educational Objectives

(A) To possess ethical standards and practices.

- (A-1) To possess ethical standards and practices and comprehend social issues, in addition to understanding the historical backgrounds, cultures and viewpoints worldwide.
- (A-2) To exercise ethical standards and practices as an engineer, in addition to understanding the historical backgrounds and cultures in addition to comprehending social issues and environmental problems caused by construction technology.
- (A-3) To exercise good health care practices and have the physical strength to be a physically healthy engineer. To enrich his/her life, as a mentally healthy engineer, by cultivating the appreciation of art, the spirit of cooperation, creativity, and imagination

#### (B) To acquire the ability to design.

- (B-1) To acquire the ability to understand the technical problems and new themes concerning architecture and to make plans to solve the problems voluntarily using a wide variety of ideas.
- (B-2) To acquire the comprehensive ability to design and organize the results in a report or in a designing plan. In addition to successfully complete these plans based on their fundamental knowledge.
- (C) To acquire communication skills.
- (C-1) To acquire the ability to describe, present, and discuss in Japanese.
- (C-2) To acquire the basic communication skill acceptable by international standards.

#### (D) To acquire the knowledge and ability within a specialized field.

- (D-1) To acquire the fundamental knowledge of mathematics and natural science and the ability to solve problems with them.
- (D-2) To acquire the fundamental knowledge and practical skills of engineering such as the design, information, materials and dynamics.
- (D-3) To acquire the fundamental knowledge and practical skills of the cross-fields between the architecture fields and the surrounding cross-disciplinary ones (environment, energy, measurement, safety, etc.).
- (D-4) To acquire the fundamental knowledge of the technical fields of architecture and the necessary ability and skills to systematize them in the following spheres: (1) The necessary skills for designing, by developing social and local viewpoints related to architecture and city life, and by acquiring the skill of planning better living space from functional and artistic viewpoints.
- (2) The necessary skills for designing, by acquiring the methods of estimating, assessing and adjusting environmental resources to maintain the proper environment for saving energy

(3) The necessary skills for design, by planning structurally safe building space and construction form for sure social activities within a building's interior and exterior. (E) To acquire information technology.

To represent and provide explanation of previously mentioned topics by fully utilizing information devices.

# Curriculum of Department of Architecture

#### (Required Subjects) Introduction to Architecture 1 Construction Methods I 1 Architectural Drawing I 2 (Subtotal)

Construction Methods II Introduction to Spatial Design Introduction to Interior )esign History of Architecture I Architectural Drawing II

(Required Subjects)

1

2

(Subtotal)



Observation of the building during construction

### Academic Staff

| Title                  | Name                           |                    | Degree  | Subjects in charge                                |
|------------------------|--------------------------------|--------------------|---------|---|
|                        | O(Dean of Advanced Course)     | INUKAI, Toshitsugu | D. Eng. | Building Materials Reinforced Concrete Structure  |
|                        | ©(Chairman of Department) (%1) | TSURUTA, Yoshiko   | D. Eng. | Urban and Regional Planning Planning and Design   |
| Professor              |                                | OGAWA, Nobuyuki    | D. Eng. | Applied Physics Statistical Mechanics             |
|                        | (**2)                          | SHIBATA, Ryouichi  | D. Eng. | Structural Mechanics Information Processing       |
|                        |                                | AOKI, Tetsu        | D. Eng. | Environmental Engineering Architectual Equipment  |
|                        |                                | IMADA, Taichiro    | M. Eng. | Planning & Design Digital Design                  |
| Associate<br>Professor |                                | SAKURAGI, Koshi    | D. Eng. | Planning & Design Architectual Design             |
|                        |                                | SHIMIZU, Takahiro  | D. Eng. | History of Architecture Interior Design           |
| Assistant              |                                | ISHIKAWA, Ayumi    | D. Eng. | Environmental Engineering Environmental Equipment |
| Professor              |                                | YAMAMOTO, Shogo    | D. Eng. | Reinfored Concrete Structure                      |





Numerical Experimentation of RC Structure

Experiment of Architectural Structure

| 3rd   |    |
|---|----|
| <pre></pre>                                 |    |
| Applied Physics I                           | 2  |
| Digital Design I                            | 1  |
| Digital Design II                           | 1  |
| Information Processing                      | 1  |
| Structural Mechanics I                      | 2  |
| Strength of Materials                       | 1  |
| Wooden Structure                            | 1  |
| Interior Design                             | 1  |
| Interior Planning and<br>Design I           | 1  |
| Architectural Planning I                    | 2  |
| Fundamentals for<br>Environment Engineering | 1  |
| Planning and Design I                       | 4  |
| Experiment of<br>Environmental Engineering  | 1  |
| Experiment of<br>Structural Engineering     | 1  |
| (Subtotal)                                  | 20 |

#### 4th

|   | <pre></pre>                                |    |
|---|--|----|
| 2 | Applied Mathematics A                      | 2  |
|   | Applied Mathematics B                      | 1  |
|   | Applied Physics II                         | 1  |
|   | Structural Mechanics II                    | 2  |
| 2 | Building Materials I                       | 1  |
|   | Reinforced Concrete<br>Structure I         | 2  |
|   | Steel Structure I                          | 2  |
|   | Interior Planning and<br>Design II         | 2  |
|   | History of Architecture II                 | 1  |
| 2 | Architectural Planning II                  | 2  |
|   | Urban and Regional<br>Planning             | 2  |
| 1 | Environmental Society                      | 1  |
|   | Environment Engineering                    | 2  |
|   | Building Equipment                         | 2  |
| 0 | Planning and Design ${\rm I\!I}$           | 4  |
|   | Experiment of Architectural<br>Engineering | 1  |
|   | Engineering Ethics of<br>Architecture      | 1  |
|   | (Subtotal)                                 | 29 |
|   |  |    |

| 5th  |                     |
|--|---------------------|
| Required Subjects  | -                   |
| Structure II   | 1                   |
| Steel Structure II   | 1                   |
| Environment Design   | 1                   |
| Building Production  | 2                   |
| Building Law   | 2                   |
| Surveying  | 2                   |
| Disaster Prevention<br>Engineering                                     | 1                   |
| Graduation Research  | 8                   |
| (Subtotal)   | 18                  |
| Elective Subjects  | $\rangle$           |
| Soil Mechanics and<br>Foundation Engineering                           | 2                   |
| Structural Design  | 2                   |
| Advanced Topics in<br>Planning   | 2                   |
| Participative Design   | 2                   |
| History of Architecture III  | 2                   |
| Planning and Design 🎞  | 2                   |
| Building Equipment Practice  | 2                   |
| Building Marerials II  | 2                   |
| Composite structure  | 2                   |
| Total of Credits<br>Total of Necessary Credits<br>on Elective Subjects | 18<br>8<br>and more |
|  |                     |



Interior Design

# **Advanced Course**

http://www.gifu-nct.ac.jp/senkoka/



### Advanced Course

The Advanced Course provides opportunities of acquiring Bachelor's degree in Engineering for undergraduate students under the courses completed within two calendar years.

The Course at National Institute of Technology, Gifu College, diversified into both academic training and engineering experience on the basis of a five-year course of study, supervises many researches and designoriented planning's through one advanced course: "Advanced Course for Interdisciplinary Technology Development." The Advanced Course intends to cultivate not only technological potential for creative talent and refined insight into social systems but also rich human character, which are all indispensable to competent engineers.

### Advanced Course for Interdisciplinary Technology Development

On the basis of knowledge acquired during the five-year course in the Departments of Mechanical, Electrical, Information, Electronic Control and Civil Engineering and Architecture, this advanced course offers many subjects required for interdisciplinary technology development. This course aims at producing engineers who can contribute to the sustainable development of the world, based on the comprehensive design skills necessary for creating products, as well as problem-solving means integrated with newly acquired technology. In addition, Cooperation education program with Toyohashi University of Technology uses its educational resources effectively in order to develop cross-cutting and hands-on engineers who will be active in various fields such as communal societies after graduation.

### The Image of "Engineer in Training" and the Educational Objectives of the Faculty of Advanced Engineering

For the development of humanity, increased awareness must be given to the prevention of depleting resources for production and diffusion of contaminated matters that affect the ecosystem on the earth. For this reason, future "Product Design" concepts must give special consideration to preserving the global environment while simultaneously promoting the creation of a recycling society. Additional attention will be granted to this artificial environment supporting human labor and intellectual activities for the betterment of society.

The expression and the table below respectively show the image of "Engineer in Training" and the educational objectives of the Faculty of Advanced Engineering. Engineer in Training

#### Advanced Course for Interdisciplinary Technology Development

This course aims at producing engineers who promote better understanding of their specialized fields, understand technology systems of different fields, and can contribute to the sustainable development of the world, based on the comprehensive design skills necessary for creating products, as well as problem-solving means integrated with mechanical, electrical, Information, electronic control, civil engineering and architecture. Cooperation education program develops cross-cutting and hands-on engineers who have a great curiosity and expertise about scientific technology, and independently and diligently learn their specialized knowledge and skills and work on technological innovations. in the future, they will succeed in a variety of communal societies.

#### Educational Objectives

#### (A) To exercise ethical practices.

- (A-1) To possess ethical standards and practices to comprehend social issues and environmental problems on a global scale.
- (A-2) To exercise ethical practices as an engineer whose responsibility within the sphere of technology and its impact on the global environment is not diminished.

#### (B) To acquire the designing ability

- (B-1) To acquire the ability to understand technical problems and/or new issues in practice while realizing new challenges and opportunities in order to provide solutions voluntarily within a framework of ideas.
- (B-2) To acquire the comprehensive designing and teamwork ability to organize the results obtained in a paper, pursuing a plan steadily for analysis based on fundamental knowledge
- (C) To acquire communication skill.
- (C-1) To acquire the ability to describe, present and discuss in Japanese.
- (C-2) To acquire the basic communication skill acceptable by international standards.

#### (D) To acquire technical knowledge.

(D-1) To acquire the ability to solve problems with basic knowledge of mathematics and natural sciences.

- measurement, control and safety, etc.).
- (D-4) To acquire the more advanced knowledge of each specialized field.

  - specialized field as well as full comprehension of additonal varried fields.

(E) To acquire information technology skills.

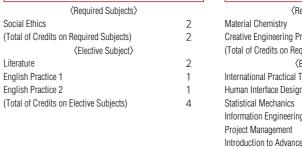
To acquire the skill of developing programs for the specialized field, fully utilizing information devices.

# Curriculum

### Advanced Course for Interdisciplinary Technology Development

|   |   | 1st   |    |   |    |  |
|---|---|---|----|---|----|--|
| General Subjects                        |   | Specialized-Foundation Subjects               |    | Specialized-Advanced Subjects               |    |  |
| Required Subjects                       |   | Required Subjects                             |    | Required Subjects                           |    |  |
| Advanced English 1                      | 2 | Life Science                                  | 2  | Advanced Experiment                         | 4  |  |
| Advanced English 2                      | 2 | Engineering of Information Processing Devices | 2  | Practical Training 1                        | 2  |  |
| (Total of Credits on Required Subjects) | 4 | Applied Physics                               | 2  | Graduation Thesis 1                         | 6  |  |
| (Elective Subject)                      |   | (Total of Credits on equired Subjects)        | 6  | (Total of Credits on Required Subjects)     | 12 |  |
| Introduction to Advanced Mathematics    | 2 | Elective Subject                              |    | (Elective Subjects)                         |    |  |
| (Total of Credits on Elective Subjects) | 2 | International Practical Training 1            | 1  | Medical and Welfare Engineering             | 2  |  |
|   |   | Computational Mechanics                       | 2  | Aerospace Engineering                       | 2  |  |
|   |   | Ecological Engineering                        | 2  | Architectural Renovation Design Methodology | 2  |  |
|   |   | Quantum Mechanics                             | 2  | Advanced Sustainable Society                | 2  |  |
|   |   | Advanced Topics in Applied Mathematics        | 2  | Environmental Material Science              | 2  |  |
|   |   | Corporate Management Introduction             | 2  | Diffusion Phenomena                         | 2  |  |
|   |   | Science Literacy Education Practice           | 2  | Circuit Theory                              | 2  |  |
|   |   | (Total of Credits on Elective Subjects)       | 13 | Fundamentals of Digital Systems             | 2  |  |
|   |   |   |    | Infrastructure Planning                     | 2  |  |
|   |   |   |    | Advanced Structural Analysis                | 2  |  |
|   |   |   |    | Environmental Control Engineering           | 2  |  |
|   |   |   |    | Practical Training 2                        | 1  |  |
|   |   |   |    | (Total of Credits on Elective Subjects)     | 23 |  |

|                          |   |  |    | Environmental Control Engineering<br>Practical Training 2<br>(Total of Credits on Elective Subjects) | 2<br>1<br>23 |
|--------------------------|---|--|----|--|--------------|
|                          |   | 2nd  |    |  |              |
| General Subjects         |   | Specialized-Foundation Subject               | s  | Specialized-Advanced Subjects  |              |
| (Required Subjects)      |   | (Required Subjects)                          |    | Required Subjects  |              |
|                          | 2 | Material Chemistry                           | 2  | Graduation Thesis 2  | 8            |
| ts on Required Subjects) | 2 | Creative Engineering Practice                | 2  | (Total of Credits on Required Subjects)  | 8            |
| <pre></pre>              |   | (Total of Credits on Required Subjects)      | 4  | Elective Subject   |              |
|                          | 2 | <pre> <elective subject=""></elective></pre> |    | Image Information Processing   | 2            |
| ce 1                     | 1 | International Practical Training 2           | 1  | Advanced Mechatronics  | 2            |
| ce 2                     | 1 | Human Interface Design                       | 2  | Aerodynamics   | 2            |
| ts on Elective Subjects) | 4 | Statistical Mechanics                        | 2  | Material Analysis  | 2            |
|                          |   | Information Engineering                      | 2  | Advanced New Energy  | 2            |
|                          |   | Project Management                           | 2  | Maintenance and Management   | 2            |
|                          |   | Introduction to Advanced Experiments         | 2  | Environmental Planning   | 2            |
|                          |   | (Total of Credits on Elective Subjects)      | 11 | Advanced Topics of Electric Machinery  | 2            |
|                          |   |  |    | Water Management Engineering   | 2            |
|                          |   |  |    | Advanced Random Vibration for Civil Engineering  | 2            |
|                          |   |  |    | Theory of Urban Planning and Design  | 2            |
|                          |   |  |    | (Total of Credits on Elective Subjects)  | 22           |







Practice of 3D printing

Advanced Experiment

(D-2) To acquire the advanced knowledge and skills of fundamental engineering (design system, information logic, material biology, dynamics and social technology). (D-3) To acquire the advanced knowledge and applied ability in a common field of Environmental System Design Engineering (environment, creation, energy,

(D-5) To acquire the ability to develop the required system with consideration to environmental issues and teamwork ability combining the knowledge of the skilled





Wooden Tower created by students at Design Competition

# **Academic** Calendar







Programming Contest

Tokai, Hokuriku region English Presentation Contest National Robot Contest

Winter Vacation begins.



College Entrance Examination February Term-End Examination



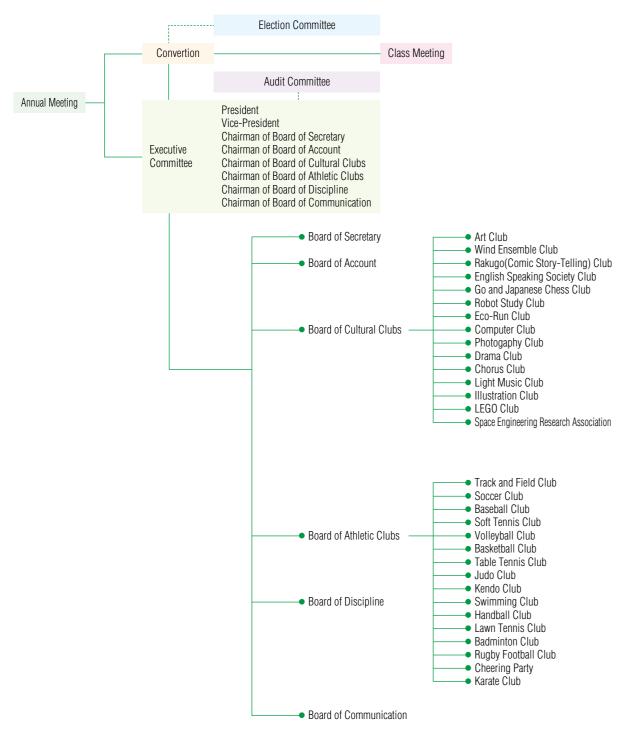
Graduation Ceremony Second Semester ends.

# **Student Council**

The Student Council aims at contributing to the fulfillment of the educational purposes of the college, offering opportunities to students for voluntary activities under the guidance of instructors. To achieve this aim, the Student Council makes every effort:

- ① to secure a happy, enriched and disciplined college life and to maintain traditional school spirit.
- (2) to develop personality by cultivating sound hobbies and rich cultural experiences.
- ③ to promote mental and physical health by effectively utilizing spare time.
- (4) to cultivate the spirit of independence and democracy through active participation in group activities.
- (5) to foster students in becoming respectable members of society through voluntary participation in every field of the college life.

# Organization of Student Council



# **Academic Exhibition**

All the fourth grade students organize an academic exhibition every year in College Festival at National Institute of Technology, Gifu College. In the exhibition, the students design, create and display their products related to their majors. Also, visitors to the exhibition can enjoy interactive exhibits. At the exhibition in 2019, students in each department displayed their products as seen in the pictures below. Not only did they display their products at the exhibition, but the students also gave presentations and answered questions from the audience. So visitors could enjoy the exhibits even without any knowledge on engineering.



Exhibition of Mechanical Eng.



Exhibition of Electronic Control Eng.



Exhibition of Architecture

Exhibition of Electrical and Computer Eng.

Exhibition of Civil Eng.

# International **Affairs Office**

IAO (International Affairs Office) is in charge of all the international activities of National Institute of Technology (KOSEN), Gifu College, including enrollment of foreign students, exchanges of students, faculty members and research collaboration with universities or other higher educational and research organizations in foreign countries.

## Enrollment of Foreign Students

Since 1991, NIT (KOSEN), Gifu College has enrolled 84 foreign students in total sponsored by either Japanese or Malaysian government, or Mongolia government. Currently, eleven international students from Malaysia, Mongolia and Cambodia are enrolled.



Skiing school in winter for the foreign students

#### Enrolled foreign students by country (1991~2020)

| Departments*      | М  | E  | D  | С | А  | Total |
|-------------------|----|----|----|---|----|-------|
| Malaysia          | 17 | 5  | 16 | 6 | 2  | 46    |
| Laos              | 0  | 6  | 0  | 0 | 0  | 6     |
| Vietnam           | 0  | 3  | 0  | 0 | 1  | 4     |
| Mongolia          | 2  | 0  | 1  | 2 | 3  | 8     |
| Indonesia         | 0  | 2  | 1  | 0 | 0  | 3     |
| Sri Lanka         | 0  | 1  | 1  | 1 | 0  | 3     |
| Combodia          | 0  | 0  | 0  | 0 | 4  | 4     |
| Other Countries ※ | 1  | 2  | 3  | 0 | 4  | 10    |
| Total             | 20 | 19 | 22 | 9 | 14 | 84    |

\* M : Department of Mechanical Engineering C : Department of Civil Engineering E : Department of Electrical and Computer Engineering A : Department of Architecture D : Department of Electronic Control Engineering

With Vice President Assoc. Prof. HQ Thang

Hanoi University of Science and Technology, Vietnam

# Our Partner Universities in the World

To promote international activities of NIT, Gifu College such as students' internship (a short-term exchange program), exchange of faculty members, research collaboration, etc., NIT (KOSEN), Gifu College has concluded comprehensive exchange agreements with foreign universities; first, Institut Teknologi Bandung (ITB), Indonesia, in November, 2011, Universiti Teknologi Malaysia (UTM) in July, 2012, University of Hannover, Germany in September, 2012, University of Iowa, USA in April, 2013 and TTPU, Turin Polytechnic University in Tashkent, Uzbekistan in June, 2014. We plan to enlarge these activities

| Country    | Institutions  | Date signed   |
|------------|---|---------------|
| Indonesia  | Institut Teknologi Bandung                          | Nov. 3, 2011  |
| Malaysia   | Universiti Teknologi Malaysia                       | Jul. 30, 2012 |
| Germany    | Universitat Hannover                                | Sep. 24, 2012 |
| U.S.A.     | University of Iowa                                  | Apr. 12, 2013 |
| Uzbekistan | Turin Polytechnic University in Tashkent            | Jun. 25, 2014 |
| //         | Tashkent State Technical University                 | Sep. 9, 2015  |
| //         | Tashkent Automobile and Road Construction Institute | Jan. 26, 2016 |
| France     | Institut Universitaire de Technologie Lille A       | Feb. 2, 2016  |
| Vietnam    | Hanoi Architectural University                      | Jan. 16, 2017 |
| //         | Mientrung University of Civil Engineering           | May. 2, 2017  |
| China      | JIANGSU URBANAND RURAL CONSTRUCTION COLLEGE         | Aug. 29, 2017 |
| Malaysia   | Universiti Tun Hussein Onn Malaysia                 | Feb. 25, 2018 |



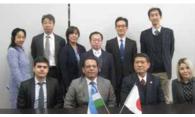
With Rector Assoc. Prof. Le Quan at Hanoi Architectural University, Vietnam



With Deputy Vice Chancellor Prof. Datuk Tajudin Ninggal at Universiti Teknologi Malaysia



With Vice Chancellor Dr.Wahid bin Razzaly at Universiti Tun Hussein Onn Malaysia



With the First Vice Rector Dr. K. Sharipov, TTPU, Turin Polytechnic University in Tashkent

# International Internship in Industry and Partner Universities

Since 2003,by the courtesy of TKY corporation(Head office in Tajimi city),NIT (KOSEN), Gifu College has sent the students in the Advanced Engineering Course to TYK America Inc. in Pittsburg, USA and TYK Ltd. in Durham, UK for their three weeks' internship. In 2012, we expanded the activity into foreign universities with which NIT (KOSEN), Gifu College has concluded comprehensive exchange agreements. Since 2013, we have accepted students from the partner universities for short term study, and these true "exchange" of students between NIT (KOSEN), Gifu College and the partner universities has started. The number of the students who participated in the exchange program is summarized in the table. These exchange activities have been supported by parent's association, alumni association of Gifu college and JASSO. In 2019, we dispatched 13 students to the partner universities while accepted 20 students from those universities.

#### International Internship

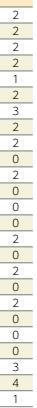
| Acader                  | nic year   | 2003 | 0045 | 0016 | 0047 | 0040 |
|-------------------------|------------|------|------|------|------|------|
| Universities & Company  | 2014       | 2015 | 2016 | 2017 | 2018 |      |
| TYK Ltd. Dispatched     |            | 22   | 2    | 2    | 2    | 2    |
| Institut Teknologi      | Dispatched | 7    | 3    | 3    | 3    | 2    |
| Bandung                 | Accepted   | 3    | 3    | 3    | 2    | 2    |
| Universiti              | Dispatched | 5    | 2    | 3    | 3    | 3    |
| Teknologi Malaysia      | Accepted   | 7    | 5    | 3    | 2    | 2    |
| University of           | Dispatched | 2    | 2    | 2    | 2    | 2    |
| Hannover                | Accepted   | 3    | 3    | 3    | 2    | 2    |
| University of Iowa      | Dispatched | 3    | 2    | 2    | 2    | 2    |
|                         | Accepted   | 2    | 3    | 3    | 2    | 2    |
| TTPU, Turin Polytechnic | Dispatched | 0    | 2    | 2    | 2    | 0    |
| University in Tashkent  | Accepted   | 0    | 4    | 3    | 2    | 2    |
| Tashkent State          | Dispatched | 0    | 0    | 0    | 0    | 0    |
| Technical University    | Accepted   | 0    | 0    | 3    | 0    | 0    |
| Institut Universitaire  | Dispatched | 0    | 0    | 0    | 0    | 0    |
| de Technologie Lille A  | Accepted   | 0    | 0    | 0    | 2    | 2    |
| Hanoi Architectual      | Dispatched | 0    | 0    | 0    | 0    | 0    |
| University              | Accepted   | 0    | 0    | 0    | 2    | 3    |
| Mientrung University    | Dispatched | 0    | 0    | 0    | 0    | 0    |
| of Civil Engineering    | Accepted   | 0    | 0    | 0    | 2    | 0    |
| Hanoi Univercity of     | Dispatched | 0    | 0    | 0    | 0    | 0    |
| Science and Technology  | Accepted   | 0    | 0    | 0    | 2    | 0    |
| Republic polytechnic    | Dispatched | 0    | 0    | 0    | 0    | 0    |
|                         | Accepted   | 0    | 0    | 2    | 3    | 3    |
| Thammasat University    | Dispatched | 0    | 0    | 0    | 0    | 0    |
| manimasat University    | Accepted   | 0    | 0    | 0    | 0    | 1    |

# Program for future-oriented human resource development

NIT (Kosen), Gifu college has conducted a program for future-oriented human resource development held at Seattle USA every summer. Around thirty students have joined this program and stayed at host families in Seattle for 10 days. During the program, the students take part in workshops for English presentations and discussions based on project-based learning. Last year the students were challenged with some problems concerning the development of the next-generation airplane and presented their idea and the solutions in the final presentation session. Furthermore, career sessions with engineers working in Boeing, Microsoft, MG-2 and some other companies in Seattle are also held as career counseling programs. The engineers talk about their experiences working in foreign countries and pieces of advice on what you should do during school days.

NIT (Kosen), Gifu college is going to conduct this program to enhance not only student's English skills but also career education.

#### 2019





University of Hannover

University of Iowa



(From activities during the internship at ITB) Tour to Toyota Motor Factory, Jakarta.Presentation on global warming at an elementary school, Bandung.



# Regional Contribution

Our school also focuses on community involvement, in which the Techno Center has taken the lead. The main aims of the center are the development of educational research and the contribution to the improvement and progress of industrial technology within the local area. The center has taken an active role in its district to achieve these goals. In addition, the Association of Regional Alliances has been established to promote regional industry and culture through the cooperation of our school's research and education. The center also actively supports seminars for the cultivation of human resources, and conducts explanation meetings and observation tours of the association's member companies.



| Projects   | Websites   |  |
|--|--|--|
| Association of Regional<br>Alliances   | http://www.gifu-nct.ac.jp/<br>techno/chikirenkei/      |  |
| Industry-Academia-<br>Government Collaboration<br>Advisors                     | http://www.gifu-nct.ac.jp/<br>techno/obrenkei/         |  |
| Instrumental analysis room   | http://www.gifu-nct.ac.jp/<br>techno/analysis/top.html |  |
| On Campus Lectures   | http://www.gifu-nct.ac.jp/<br>about/extension_lecture/ |  |
| Industry-Academia-Government<br>Collaboration and Research<br>Seeds Collection | http://www.gifu-nct.ac.jp/<br>research/teachers/       |  |



Association of Regional Alliances General Meeting

date

February 4, 2021

Schedule of Activities

Association of Regional

Alliances General Meeting

The 29rd Industry-Government-

Academic Exchange Council Technology Symposium 2020

projects



Techno Symposium

**Contents of Activities** 



Core Human Resources Training Seminar

| •••••••••••••                                      |  |
|--|--|
| projects   |  |
| Literacy-related activities debriefs and events    |  |
| Research projects betwe<br>Association of Regional |  |

| projects   | details   |
|--|---|
| Literacy-related activities, debriefs and events   | •Science Technology Exhibition in Gifu<br>City Culture Center |
| Research projects between<br>Association of Regional<br>Alliances and Gifu National<br>College of Technology | 4 research projects   |
| Gifu Network University<br>Consortium  | scheduled classes:<br>•Mathematics<br>•Experiments            |

# Contents of Activities

### Practical Trainings for Scientific and Technological Literacy

Some educational activities are required, where people come to be interested in science technology and improve their own literacy on it. First of all, students in this college (as well as teachers), who have a role in explaining such a literacy in such activities, should understand it enough. In this college, students have opportunities not only to learn technology in the classrooms, but also some activities to explain what they learned to people outside the college. Students in the colleges, as well as people outside, improve their own literacy enough through these activities. For instance, workshops and experimental lectures are held for elementary school students, junior-high school students, and adults. In advance of these workshops and lectures, students in the college produce teaching materials such as craft kits, experiment device to perform, and special applications. Themes of these activities are exploration robot, rocket, low head hydro power, earthquake disaster prevention, regional construction, and so on. They all are related to our daily lives. In these activities, students in this college explain what they learned and develop socializing skills. At the same time, people outside the college improve their own literacy on science and technology.

#### Extension courses

#### Courses

| No  | Lecture   | Department                              | Date                       | Participants  | Fee                   |  |  |
|-----|---|---|----------------------------|---|-----------------------|--|--|
| 1   | Kinokuni Robot Competiotion for Elementary<br>School Students | Mechanical<br>Engineering               | 1 8/4(Sun)<br>2 10/20(Sun) | ES students   | free                  |  |  |
| 2   | Kinokuni Robot Competiotion for Junior High School Students   | Mechanical<br>Engineering               | 1 8/4(Sun)<br>2 10/20(Sun) | JHS students  | free                  |  |  |
| 3   | Building Music Instruments- Introduction to<br>Electronics -  | Electorical and<br>Computer Engineering | 8/4(Sun)                   | JHS students<br>(5th and 6th graders are also welcomed) | 1,000JPY<br>per Robot |  |  |
| 4   | Cloisonné "Shippoyaki" Art Class                              | Tech Office                             | 8/6(Tue)                   | JHS students and older                                  | free                  |  |  |
| (5) | Interior Design - Planning your Dream<br>House -              | Architechure                            | 8/20(Tue)                  | JHS students and their parets, JHS teachers             | free                  |  |  |
| 6   | Interior Design - 3D Print Your Design -                      | Tech Office<br>Architechure             | 8/21(Wed)                  | JHS students and their parets, JHS teachers             | free                  |  |  |
| 0   | Urban Engineering - Creating a Map -                          | Civil Engineering                       | 8/31(Sat)                  | 4th, 5th and 6th graders                                | free                  |  |  |
| 8   | LED Illumination  | Tech Office                             | 9/8(Sun)                   | JHS students<br>(5th and 6th graders are also welcomed) | free                  |  |  |
| 9   | Assembling Electronic Circuits and Robots                     | Electornic Control<br>Engineering       | 9/28(Sat)                  | JHS students  | 2,500JPY<br>per Robot |  |  |

#### Classes on Demand

The college offers a lot of delivery classes in order to encourage junior Table. Title of Delivery Class implemented in fiscal 2019 high school students to experience higher education in advance. Let's Make Moving Robot with Bricks Professors visit junior high schools and teach their specialization fields: Puzzle class to Inspire your brain natural science, humanities, engineering of mechanical, electrical, Global Warming Countermeasures computer, electronic control, civil and architecture. These experiences (Microrecycling of Local Production and Consumption Type) would be precious opportunities for the students. In fiscal 2019, 3 themes (5 classes) were implemented.

JHS : Junior High school ES : Elementary school

# Library

The library provides users with various kind of information for the purposes of education and research, mainly consisting of approximately 90,000 books most of which concerns technology. Users feel open and bright atmosphere in the library with open-stack shelves located according to their categories such as qualifying tests, job-hunting, patent, etc.

The library has its annual events in each season like book-hunting, workshop on document retrieval and so on. It is open from 8:30 a.m. to 8:00 p.m. on weekdays, and from 9:00 a.m. to 4:00 p.m. on Saturdays. Studying space and opening hours (on Saturdays during the examination weeks) have been extended for the students' convenience. New learning commons have been set up, Due to renovetion in 2019.

# (1) Hours of opening

Term Monday...Friday 8:30 a.m. ... 8:00 p.m. Saturday 9:00 a.m. ... 4:00 p.m. Closing Term of Dormitory 8:30 a.m. ... 5:00 p.m.

### (2) Closed

Sundays, National Holidays, Winter Holidays (Dec. 29th... Jan. 3rd), Saturdays during Spring, Summer and Winter Vacation, End-of-the-School-Year holidays and Closing Term of Dormitory.

Notices will be given when the library is to be closed in other occasions.

| Visit our website for more       |       |
|----------------------------------|-------|
|                                  |       |
| http://www.gifu-nct.ac.jp/tosho/ | ola R |



Book Hunting

| Collection of Books |          |         | (2020.4.1) |
|---------------------|----------|---------|------------|
| Classification      | Japanese | Foreign | Total      |
| General             | 2,606    | 223     | 2,829      |
| Philosophy          | 2,950    | 192     | 3,142      |
| History             | 6,031    | 133     | 6,164      |
| Social Science      | 7,333    | 201     | 7,534      |
| Natural Science     | 15,603   | 3,815   | 19,418     |
| Technology          | 29,013   | 3,994   | 33,007     |
| Industry            | 1,184    | 29      | 1,213      |
| Arts                | 4,063    | 152     | 4,215      |
| Language            | 3,830    | 2,200   | 6,030      |
| Literature          | 13,048   | 2,413   | 15,461     |
| Total               | 85.661   | 13.352  | 99.013     |

#### **Kinds of Periodicals**

| Japanese | Foreign | Total |
|----------|---------|-------|
| 57       | 2       | 59    |

**Audio-Visual Materials** 

| DVD | 337 |
|-----|-----|
|-----|-----|



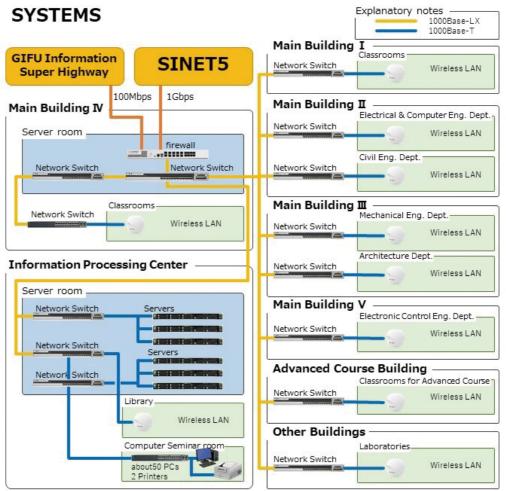
Library Appearance



Reading Room

# **Computer Center**

The Information Processing Center is a common facility which can be used for computer education, e-learning, CAI (Computer Assisted Instruction), CAD (Computer Aided Design), graduation studies, academic research and so on. The school's local network runs on the gigabit Ethernet, and is connected to SINET and Gifu Information Super Highway. Since the present system has been updated in April of 2016, About 200 PCs four classrooms in the Center run on the network boot system. They are connected to the Internet and some LMS (Learning Management Systems). The students can use them to study on the LMS, to communicate with various people by e-mail, and to search the websites.





Lecture in Seminar room



5th Seminar room

# **Dormitory**

The dormitory named "Yushiryo" is located within the college grounds, several minutes' walk to the main buildings of the college. It consists of six boarding houses with furnished rooms, three for boys (Dormitory A, C and D) and three for girls (Dormitory B, 1st Girls' Dormitory and Dormitory E). It accommodates up to 307 students. Every year, about 60 new students are permitted to live in the dormitory. Dormitory B is a mixed dormitory of Japanese and international students.

The dormitory also has a large dining hall where almost all the boarders can have meals together. The students are expected to promote their autonomyminded activities and elder students give advice and aid to younger ones.

The monthly cost is 700 yen (for double rooms in Dormitory A and 1st Girls' Dormitory) or 800 yen (for single rooms in Dormitory A and Dormitory B, C and D) to register. In addition, the following costs are required: food cost (34,700 yen a month), utility costs, common expenses, etc. (total 55,000 yen a year), air conditioner lease fees and electricity expenses (total 27,600 yen a year). (Utility costs, common expenses, etc. will be revised.) The renovation work in 1st Girls' Dormitory starts in summer this year and is scheduled to be completed in March next year.

#### **Capacity of Boarders**

| Name                 | Capacity of room | Number of Room | Capacity |
|----------------------|------------------|----------------|----------|
| Dormiton             | 2                | 41             | 90       |
| Dormitory A          | 1                | 8              | 90       |
| Dormitory B          | 1                | 36             | 36       |
| Dormitory C          | 1                | 45             | 45       |
| Dormitory D          | 1                | 84             | 84       |
| 1st Girls' Dormitory | 2                | 20             | 40       |
| Dormitory E          | 2                | 6              | 12       |
| Total                |                  | 240            | 307      |

| Current Number of Boarders (As                                     |     |     |     | s of May | 1, 2020) |       |
|--|-----|-----|-----|----------|----------|-------|
| Grade<br>Course  | 1st | 2nd | 3rd | 4th      | 5st      | Total |
| Mechanical<br>Eng.   | 0   | 0   | 0   | 0        | 0        | 0     |
| Electrical and Computer Eng.                                       | 0   | 0   | 0   | 0        | 0        | 0     |
| Electronic Eng.  | 0   | 0   | 0   | 0        | 0        | 0     |
| Civil Eng.   | 0   | 0   | 0   | 0        | 0        | 0     |
| Architecture   | 0   | 0   | 0   | 0        | 0        | 0     |
| Total  | 0   | 0   | 0   | 0        | 0        | 0     |
| Advanced Course for<br>InterdiscipIlnary<br>Technology Development | 0   | 0   |     |          |          | 0     |
| Total  | 0   | 0   |     |          |          | 0     |

\*As a measure against the new corona virus, students are not currently allowed to enter the dormitory.

\*\*The long-term international students are living in rented accommodation as the dormitory is being renovated now.(As of May 1st 2020, three male international students are living there.)



Dormitory



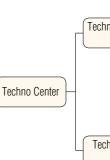
Christmas party

# **Techno Center**

Techno Center is an institution for all departments in the college. It provides with machine tools and produces devices for manufacturing education, research activities and club activities. For instance, designing and producing works for graduation research or for the NHKRobot Contest are conducted here. In addition, some short courses for visiting students to learn usage instructions of machine tools, and open classes for fundamental manufacturing technologies are held. Besides fundamental machine tools for manufacturing education, it has various kinds of newly developed multifunctioning devices with computers. Some of them are shown in Table 1. Furthermore, a comprehensive manufacturing laboratory class is set for the 4th year students of Mechanical Engineering Department. In this class, students experience the whole process from designing to producing goods.

### Table. Major equipments installed

| Equipment                  | Number |
|----------------------------|--------|
| lathe                      | 12     |
| milling machine            | 9      |
| shearing machine           | 1      |
| electric furnace           | 2      |
| CNC turning center         | 2      |
| CNC milling machine        | 1      |
| machining center           | 2      |
| electric discharge machine | 2      |
| Surface grinding machine   | 1      |
| industrial robot           | 2      |
| arc welder                 | 11     |
| gas welder                 | 2      |
| factory automation system  | 1      |







Machining Center



Instrumental Analysis Room





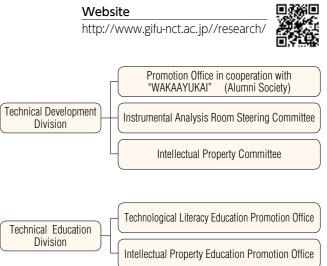
Scanning Electron Microscope, Hitachi High Technology, S-3400N

Activities of the Technological Literacy Education Promotion Office



Gifu Science Festival

HIRAMEKI Puzzle



Techno Center Organization Chart

Electric Discharge Machine



X-ray Diffractometer, Rigaku, SmartLab







Factory Automation Practice Teaching System



Fourier Transform Infrared Spectroscopy. Thermo Science, iS50

Lecture For Obtaining Competitive Funds



# Organization

| Classification      | Present        | <ul> <li>College Evenutive Committee</li> </ul>   |
|---------------------|----------------|---|
| Teaching Staff      |                | College Executive Committee   |
| President           | 1              | College Steering Committee     Faculty Meeting  |
| Professor           | 34             | Classroom Teachers' Meeting   |
| Associate Professor |                | Academic Affairs Meeting  |
|                     | 27             | Advanced Course Meeting   |
| ecturer             | 7              | Student Affairs Meeting   |
| Assistant Professor | 7              | <ul> <li>Dormitory Affairs Meeting</li> </ul>   |
| Research Assistant  | 0              | Future Plans Committee  |
| fficials            | 40             | <ul> <li>Finance and Facilities Committee</li> </ul>  |
| Total               | 116            | Entrance Examination Committee  |
|                     | 1              | <ul> <li>Committees with each special assignment</li> </ul>   |
|                     |                | <ul> <li>Public Relations Committee</li> </ul>  |
|                     |                | Personnel Committee   |
|                     |                | <ul> <li>Safety and Health Committee</li> </ul>   |
|                     |                | <ul> <li>"Spiraling Up" Committee</li> </ul>  |
|                     |                | <ul> <li>Committee for Self-Evaluation and Follow-up</li> </ul>   |
|                     |                | International Affairs Office  |
|                     |                | Human Rights Committee  |
|                     |                | Committee for Administration of Information Security  |
|                     |                | Committee for Promotion of Information Security   |
|                     |                | Specification Formulating Committee   |
|                     |                | Techno Committee     Media Committee  |
|                     |                | Counselling Service Center  |
|                     |                | Gender Equality Office  |
|                     |                | Career Support Office   |
|                     |                |   |
|                     |                | Vice-President (Dean of Academic Affairs) — Assistant Dean of Academic Affairs)   |
|                     |                | Vice-President (Dean of Research Affairs) — Assistant Dean of Research Affa   |
|                     |                | <ul> <li>Vice-President (Dean of Student Affairs) — Assistant Dean of Student Affair</li> </ul>   |
|                     |                | <ul> <li>Vice-President (Dean of Dormitory Affairs) — Assistant Dean of Dormitory Affa</li> </ul>   |
|                     | President -    | Dean of Advanced Course      Assistant Dean of Advanced Co  |
|                     |                | Chairman of Department of General Education (Liberal Arts)  |
|                     |                | Chairman of Department of General Education (Science)   |
|                     | Administrative | Chairman of Department of Mechanical Engineering Department   |
|                     | Courisi        | <ul> <li>Chairman of Department of Electrical and Computer Engineering Department</li> </ul>  |
|                     |                | <ul> <li>Chairman of Department of Electronic Control Engineering Department</li> </ul>   |
|                     |                | <ul> <li>Chairman of Department of Civil Engineering Department</li> </ul>  |
|                     |                | Chairman of Department of Architecture Department   |
|                     |                | Director of Techno Center     Director of Technical Development Divector of Technical Education Divector Divect |
|                     |                | <ul> <li>Director of Library</li> </ul>   |
|                     |                | <ul> <li>Director of Computer Center</li> </ul>   |
|                     |                | <ul> <li>Director of International Affairs Office</li> </ul>  |
|                     |                | <ul> <li>Director of Counseling Service Center</li> </ul>   |
|                     |                | <ul> <li>Director of Gender Equality Office</li> </ul>  |
|                     |                | <ul> <li>Director of Career Support Office</li> </ul>   |
|                     |                | Secretary General     Director of General Affairs Divisi     Director of Student Affairs Divisi   |
|                     |                | Director of Student Affairs Division     Director of Technical Office Chief Engineer of Technical Office  |

fairs Division Director of Technical Office
 Office
 Office

# Executives

| Title  | Name               | Title  | Name               |
|--|--------------------|--|--------------------|
| President  | ITOH, Yoshito      | Chairman of Department of<br>Civil Engineering | YOSHIMURA, Yuji    |
| Vice-President<br>(Dean of Academic Affairs)                     | WADA, Kiyoshi      | Chairman of Department of<br>Architecture      | TSURUTA, Yoshiko   |
| Vice-President<br>(Dean of Research Affairs)                     | KITAGAWA, Hideo    | Director of Techno Center                      | HABUCHI, Hitoe     |
| Vice-President<br>(Dean of Student Affairs)                      | YAMAMOTO, Hiroki   | Director of Technical Office                   | KIBAYASHI, Toru    |
| Vice-President<br>(Dean of Dormitory Affairs)                    | NAKAJIMA, Yasutaka | Director of Technical<br>Development Division  | HABUCHI, Hitoe     |
| Dean of Advanced Engineering<br>Faculty                          | INUKAI, Toshitsugu | Director of Technical<br>Education Division    | YAMADA, Minoru     |
| Assistant Dean of Advanced<br>Engineering Faculty                | KATAMINE, Eiji     | Director of Library                            | SHIBATA, Ryoichi   |
| Chairman of Department of<br>General Education (Liberal Arts)    | KAMEYAMA, Taichi   | Director of Computer Center                    | YAMADA, Hirobumi   |
| Chairman of Department of<br>General Education (Science)         | UEHARA, Toshiyuki  | Director of International Affairs Office       | YAMAMOTO, Takahisa |
| Chairman of Department of<br>Mechanical Engineering              | KATO, Kozo         | Director of Counseling Service Center          | MAGUSA, Atsushi    |
| Chairman of Department of<br>Electrical and Computer Engineering | DEGUCHI, Toshinori | Director of Gender Equality Office             | TSURUTA, Yoshiko   |
| Chairman of Department of<br>Electronic Control Engineering      | FUJITA, Kazuhiko   |  |                    |

# Administrative Staff

| Title  | Name                               |                                    | Title   | Name            |  |
|--|------------------------------------|------------------------------------|---|-----------------|--|
| Secretary General  | rector of General Affairs Division |                                    | Assistant Director of General Affairs<br>Division (General Affairs) | KUNIEDA, Kazuyo |  |
| Director of General Affairs Division (Additional Post)           |                                    |                                    | Assistant Director of General Affairs (Finance)                     | TANAKA, Takeshi |  |
| Deputy Director of Student Affairs<br>Division TAKAHASHI, Toshie |                                    | Chief Engineer of Technical Office | SATO, Kenji   |                 |  |

# Health Service Staff

| Title     | Name             | Title      | Name             |
|-----------|------------------|------------|------------------|
| Physician | HORIBE, Ren      | Pharmacist | TAKADA, Hirotaka |
| Physician | YOKOYAMA, Hitomi | Counselor  | ABE, Ayato       |
| Physician | AMANO, Yuhei     | Counselor  | YAMAMOTO, Hiroyo |
| Dentist   | TAKEUCHI, Mikio  | Counselor  | NODA, Hiromi     |

# Specially Appointed Faculty

| Title                         | Name          |
|-------------------------------|---------------|
| Specially Appointed Professor | SUZUKI, Takao |

# Curriculum

# General Education

|                   |   |                                  |         | Students enrolled after 20 |       |         |       |     |        |  |  |
|-------------------|---|----------------------------------|---------|----------------------------|-------|---------|-------|-----|--------|--|--|
|                   | ç.,   | bjects                           | Credits |                            | Credi | ts by ( | Grade |     | Notes  |  |  |
|                   | Ju  | bjects                           | Cieuns  | 1st                        | 2nd   | 3rd     | 4th   | 5th | NOICES |  |  |
|                   | Ja  | Japanese A                       | 2       | 2                          |       |         |       |     |        |  |  |
|                   | Japanese  | Japanese B                       | 2       | 2                          |       |         |       |     |        |  |  |
|                   | ese   | Japanese                         | 5       |                            | 2     | 2       | 1     |     |        |  |  |
|                   |   | Ethics                           | 2       |                            | 2     |         |       |     |        |  |  |
|                   |   | Politics and Economics           | 2       |                            |       | 2       |       |     |        |  |  |
|                   | (0  | World History                    | 2       | 2                          |       |         |       |     |        |  |  |
|                   | Social  | Japanese History                 | 2       |                            | 2     |         |       |     |        |  |  |
|                   | al  | Geography                        | 2       | 2                          |       |         |       |     |        |  |  |
|                   |   | Modern Social<br>Studies and Law | 2       |                            |       |         | 2     |     |        |  |  |
|                   | Mat   | Mathematics A I                  | 6       | 2                          | 2     | 2       |       |     | ×1     |  |  |
|                   | Mathematics   | Mathematics A II                 | 6       | 2                          | 2     | 2       |       |     | *1     |  |  |
|                   | atics   | Mathematics B                    | 4       | 2                          | 2     |         |       |     | *2     |  |  |
| Required Subjects |   | Physics A                        | 1       | 1                          |       |         |       |     |        |  |  |
|                   |   | Physics B I                      | 2       |                            | 2     |         |       |     |        |  |  |
| S pe              | Scie  | Physics B II                     | 2       |                            | 2     |         |       |     |        |  |  |
| bj                | Science   | Chemistry A                      | 2       | 2                          |       |         |       |     |        |  |  |
| ects              |   | Chemistry B                      | 2       |                            | 2     |         |       |     |        |  |  |
|                   |   | General Science                  | 1       | 1                          |       |         |       |     |        |  |  |
|                   | Health ar<br>Edu<br>Require                           | Health<br>Education              | 2       | 2                          |       |         |       |     |        |  |  |
|                   | Health and Physical<br>Education<br>Required Subjects | Physical<br>Education            | 8       | 2                          | 2     | 2       | 2     |     |        |  |  |
|                   | ArtArtRequired<br>Subjects                            | Art                              | 1       | 1                          |       |         |       |     |        |  |  |
|                   | equired<br>ects                                       | Music                            | 1       | 1                          |       |         |       |     |        |  |  |
|                   |   | English A                        | 10      | 2                          | 2     | 2       | 2     | 2   |        |  |  |
|                   | Foreign<br>Languege                                   | English B                        | 3       | 2                          | 1     |         |       |     |        |  |  |
|                   | eign<br>ueg   | English C                        | 5       | 2                          | 2     | 1       |       |     |        |  |  |
|                   |   | German/Chinese                   | 4       |                            |       |         | 2     | 2   |        |  |  |
| Tota              | al of Credit  | ts Offered                       | 81      | 30                         | 25    | 13      | 9     | 4   |        |  |  |
|                   |   | sary Credits                     | 81      | 30                         | 25    | 13      | 9     | 4   |        |  |  |
| Hor               | ne Room A   | Activities                       | 3       | 1                          | 1     | 1       |       |     |        |  |  |
| *1                | analysis  |                                  |         |                            |       |         |       |     |        |  |  |

%2 algebra

# Department of Mechanical Engineering

|                   |   |            | Students enrolled after 201 |     |     |     |            |       |  |  |
|-------------------|---|------------|-----------------------------|-----|-----|-----|------------|-------|--|--|
|                   | Subjects  | Credits    |                             |     |     |     | -          | Notes |  |  |
|                   |   |            | 1st                         | 2nd | 3rd | 4th | 5th        | Notes |  |  |
|                   | Applied Mathematics I                           | 2          |                             |     |     | 2   |            |       |  |  |
|                   | Applied Mathematics II                          | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Applied Mathematics III                         | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Applied Physics I                               | 2          |                             |     | 2   |     |            |       |  |  |
|                   | Applied Physics II                              | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Fundamentals of Mechanics                       | 2          |                             |     | 2   |     |            |       |  |  |
|                   | Mechanism                                       | 2          |                             |     | 2   |     |            |       |  |  |
|                   | Machinery Dynamics I                            | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Machinery Dynamics II                           | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Strength of Materials I                         | 2          |                             |     | 2   |     |            |       |  |  |
|                   | Strength of Materials II                        | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Strength of Materials III                       | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Fluid Mechanics I                               | 2          |                             |     |     | 2   |            |       |  |  |
|                   | Thermodynamics I                                | 2          |                             |     |     | 2   |            |       |  |  |
|                   | Material Technology I                           | 1          |                             |     | 1   |     |            |       |  |  |
|                   | Material Technology II                          | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Metal Cutting and Casting Process I             | 1          |                             | 1   |     |     |            |       |  |  |
| Re                | Metal Cutting and Casting Process II            | 1          |                             | 1   |     |     |            |       |  |  |
| ġ.                | Metal Deformation Process I                     | 1          |                             |     |     | 1   |            |       |  |  |
| ed                | Production Engineering                          | 1          |                             |     |     |     | 1          |       |  |  |
| Sub               | Control Engineering I                           | 1          |                             |     |     | 1   |            |       |  |  |
| Required Subjects | Instrumentation Engineering                     | 1          |                             |     | 1   |     |            |       |  |  |
| 5                 | Machine Design I                                | 1          |                             |     | 1   |     |            |       |  |  |
| ļ                 | Machine Design II                               | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Computer Literacy                               | 1          |                             | 1   |     |     |            |       |  |  |
|                   | Information Processing I                        | 1          |                             |     | 1   |     |            |       |  |  |
|                   | Information Processing II                       | 1          |                             |     |     | 1   |            |       |  |  |
|                   | Numerical Calculation I                         | 1          |                             |     | 1   |     |            |       |  |  |
|                   | Fundamentals of Manufacturing Engineering       | 3          | 3                           |     |     |     |            |       |  |  |
|                   | Machinery Design and Drafting I                 | 2          |                             | 2   |     |     |            |       |  |  |
|                   | Machinery Design and Drafting II                | 2          |                             |     | 2   |     |            |       |  |  |
|                   | Mechanical Engineering Experiment I             | 2          |                             |     | 2   |     |            |       |  |  |
|                   | Mechanical Engineering Experiment ${\mathbb I}$ | 2          |                             |     |     | 2   |            |       |  |  |
|                   | Mechanical Engineering Practice I               | 3          |                             | 3   |     |     |            |       |  |  |
|                   | Mechanical Engineering Practice II              | 3          |                             |     | 3   |     |            |       |  |  |
|                   | Engineering Practice                            | 3          |                             |     |     | 3   |            |       |  |  |
|                   | Topics of Mechanical Engineering                | 2          |                             |     |     | 2   |            |       |  |  |
|                   | Engineering Ethics                              | 1          |                             |     |     |     | 1          |       |  |  |
|                   | Graduation Research                             | 6          |                             |     |     |     | 6          |       |  |  |
|                   | Total of Credits                                | 64         | 3                           | 8   | 20  | 25  | 8          |       |  |  |
|                   | Applied Physic III                              | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Fluid Mechanics II                              | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Fluid Mechanics III                             | 2          |                             |     |     |     | 2          |       |  |  |
| [                 | Thermodynamics II                               | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Energy Engineering                              | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Heat Transfer                                   | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Material Technology III                         | 2          |                             |     |     |     | 2          |       |  |  |
| _                 | Metal Deformation Process II                    | 2          |                             |     |     |     | 2          |       |  |  |
| lect              | Control Engineering II                          | 2          |                             |     |     |     | 2          |       |  |  |
| Elective Subjects | Introduction to Electrical                      | 2          |                             |     |     |     | 2          |       |  |  |
| Sub               | and Electronic Engineering                      | 2          |                             |     |     |     | 2          |       |  |  |
| ject              | Engineering Analysis                            | 2          |                             |     |     |     | 2          |       |  |  |
| S                 | Theory of Elasticity                            | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Theory of Plasticity                            | 2          |                             |     |     |     | 2          |       |  |  |
|                   | System Engineering                              | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Mechatronics                                    | 2          |                             |     |     |     | 2          |       |  |  |
|                   | Robot Engineering                               | 2          |                             |     |     |     | 2          |       |  |  |
| ĺ                 | Total Credits                                   | 32         |                             |     |     |     | 32         |       |  |  |
|                   | Total of Nesessary Credits                      | 22and more |                             |     |     |     | 22and mars |       |  |  |
|                   | on Elective Subjects                            | 22and more |                             |     |     |     | 22and more |       |  |  |
| Total             | of All Credits                                  | 96         | 3                           | 8   | 20  | 25  | 40         |       |  |  |
|                   | Necessary Credits on Specialized Subjects       | 86and more | 3                           | 8   | 20  | 25  | 30and more |       |  |  |
|                   |   | 81         | 30                          | 25  | 13  | 9   | 4          |       |  |  |
| l otal o          | f Necessary Credits on General Subjects         |            | 30                          | 20  | 13  | 9   | 4          |       |  |  |

# Department of Electrical and Computer Engineering

(Electrical and Electronic Course)

|                   |                   | Subjects   | Credits    | 0   | Credit | s by | Grad | е          | Note |
|-------------------|-------------------|--|------------|-----|--------|------|------|------------|------|
|                   |                   | Subjects   | Credits    | 1st | 2nd    | 3rd  | 4th  | 5th        | Note |
|                   |                   | Applied Mathematics A  | 1          |     |        | 1    |      |            |      |
|                   |                   | Applied Mathematics B  | 2          |     |        |      | 2    |            |      |
|                   |                   | Applied Mathematics C  | 1          |     |        |      | 1    |            |      |
|                   |                   | Applied Mathematics D  | 1          |     |        |      | 1    |            |      |
|                   |                   | Applied Physics I  | 4          |     |        | 2    | 2    |            |      |
|                   |                   | Electromagnetics I   | 3          |     |        | 2    | 1    |            |      |
|                   |                   | Electric Circuit I   | 4          |     | 2      | 2    |      |            |      |
|                   |                   | Electronics I  | 2          |     |        |      | 2    |            |      |
|                   |                   | Electrical and Computer  | 2          |     |        | 2    |      |            |      |
|                   |                   | Engineering Fundamental Seminar  | 0          |     |        | 0    |      |            |      |
|                   |                   | Electronic Circuit Engineering   | 2          |     |        | 2    |      |            |      |
|                   |                   | Electrical and Computer  | 1          |     |        |      | 1    |            |      |
|                   | 8                 | Engineering Seminar I  |            |     |        |      |      |            |      |
|                   | m                 | Electrical and Computer  | 1          |     |        |      | 1    |            |      |
| т                 | 9                 | Engineering Seminar II   | 2          |     |        |      | 0    |            |      |
| equ               | Common subjects   | Computer Networks  | 1          |     | 1      |      | 2    |            |      |
| ired              | ects              | Logic in Computer Science<br>Computer Architecture                         | 2          |     | 1      | 2    |      |            |      |
| Required Subjects |                   | Switching Circuit Theory   | 1          |     |        | 2    | 1    |            |      |
| jeci              |                   | Numerical Analysis   | 2          |     |        |      | 2    |            |      |
| S                 |                   | Signal Processing  | 2          |     |        |      | 2    |            |      |
|                   |                   | Programming and Its Seminar  | 4          |     | 2      | 2    | 2    |            |      |
|                   |                   | Scientific and Technical English   | 1          |     | 2      | 1    |      |            |      |
|                   |                   | Engineering Ethics   | 1          |     |        |      |      | 1          |      |
|                   |                   | Design Drafting  | 3          | 3   |        |      |      |            |      |
|                   |                   | Electrical and Computer  |            | 0   |        |      |      |            |      |
|                   |                   | Engineering Laboratories   | 9          |     | 3      | 4    | 2    |            |      |
|                   |                   | Topics in Engineering Fundamentals I                                       | 1          |     |        |      | 1    |            |      |
|                   |                   | Topics in Engineering Fundamentals II                                      | 1          |     |        |      | 1    |            |      |
|                   |                   | Graduation Research  | 6          |     |        |      |      | 6          |      |
|                   | \$                | Electrical and Electronic Engineering Laboratories                         | 6          |     |        |      | 2    | 4          |      |
|                   | Decif             | Electromagnetics II  | 1          |     |        |      | 1    |            |      |
|                   | ic s              | Electric Circuit II  | 1          |     |        |      | 1    |            |      |
|                   | specific subjects | Electric Machinery   | 2          |     |        |      | 2    |            |      |
|                   | cts               | Total of Credit  | 70         | 3   | 8      | 20   | 28   | 11         |      |
|                   | Power             | Generation and Transformation Engineering                                  | 2          |     |        |      |      | 2          |      |
|                   | Power             | Transmission and Distribution Engineering                                  | 2          |     |        |      |      | 2          |      |
|                   | Law               | s and Requlations of Electricity   | 2          |     |        |      |      | 2          |      |
|                   |                   | ver Electronics  | 2          |     |        |      |      | 2          |      |
|                   |                   | trical Materials   | 2          |     |        |      |      | 2          |      |
|                   |                   | trol Theory  | 2          |     |        |      |      | 2          |      |
| m                 |                   | o-Quantum Electronics  | 2          |     |        |      |      | 2          |      |
| Elective          |                   | Wave Propagation and Its Electronic Devices                                | 2          |     |        |      |      | 2          |      |
| Ne C              | Elec              | tronic Measurements  | 2          |     |        |      |      | 2          |      |
| jubj              |                   | tronics II   | 2          |     |        |      |      | 2          |      |
| Subjects          |                   | lied Physics II  | 2          |     |        |      |      | 2          | *1   |
| -                 |                   | nmunication Engineering  | 2          |     |        |      |      | 2          |      |
|                   |                   | ware Engineering   | 2          |     |        |      |      | 2          |      |
|                   | Ľ,                | gramming Language Theory   | 2          |     |        |      |      | 2          |      |
|                   | <u> </u>          | rating Systems and Databases   | 2          |     |        |      |      | 2          |      |
|                   | <u> </u>          | puter Graphics and Interfaces  | 2          |     |        |      |      | 2          |      |
|                   |                   | al Credits   | 32         |     |        |      |      | 32         |      |
| T. 1              |                   | of Necessary Credits on Elective Subjects                                  | 16and more | _   |        | 00   | 00   | 16and more |      |
|                   |                   | I Credits  | 102        | 3   | 8      | 20   | 28   | 43         |      |
|                   |                   | ssary Credits on Specialized Subjects<br>ssary Credits on General Subjects | 86and more | 3   | 8      | 20   | 28   | 27and more |      |
|                   | TH NPCC           | STORING ISTRUGED UN SUDIECTS   | 81         | 30  | 25     | 13   | 9    | 4          |      |

\*1 Identical with Department Electronic Control Engineering

(Computer Engineering Course) Students enrolled after 2017 Credits by Grade Notes Subjects Credits 1st 2nd 3rd 4th 5th Applied Mathematics A 1 Applied Mathematics B 2 Applied Mathematics C 1 1 Applied Mathematics D 1 1 2 2 Applied Physics I 4 Electromagnetics I 3 2 1 Electric Circuit I 4 2 2 Electronics I 2 Electrical and Computer 2 2 Engineering Fundamental Seminar Electronic Circuit Engineering 2 2 Electrical and Computer 1 1 Engineering Seminar I Cor Electrical and Computer 1 1 Engineering Seminar II Computer Networks 2 Logic in Computer Science 1 1 Computer Architecture 2 2 Switching Circuit Theory 1 1 Numerical Analysis 2 2 Signal Processing 2 2 Programming and Its Seminar 4 Scientific and Technical English 1 1 Engineering Ethics 1 1 Design Drafting 3 Electrical and Computer 9 3 4 2 Engineering Laboratories Topics in Engineering Fundamentals I 1 1 Topics in Engineering Fundamentals II 1 1 Graduation Research 6 6 Computer Engineering Laboratories 6 2 4 spe 1 Information Theory 1 Data Structures and Algorithms 1 1 
 Formal Language Theory

 8

 Mathematics in Computer Science
 Formal Language Theory 1 1 1 1 Total of Credit 70 3 8 20 28 11 Power Generation and Transformation Engineering 2 2 Power Transmission and Distribution Engineering 2 2 Laws and Regulations of Electricity 2 2 Power Electronics 2 2 Electrical Materials 2 2 Control Theory 2 2 Opto-Quantum Electronics 2 2 Radio Wave Propagation and Its Electronic Devices 2 2 Electronic Measurements 2 2 Electronics I 2 2 1 2 Applied Physics I 2 Communication Engineering 2 2 Software Engineering 2 2 2 2 Programming Language Theory Operating Systems and Databases 2 2 Computer Graphics and Interfaces 2 2 32 Total Credits 32 Total of Necessary Credits on Elective Subjects 16and more 16and more Total of All Credits 102 3 8 20 28 43 Total of Necessary Credits on Specialized Subjects 86and more 3 8 20 28 27and more Total of Necessary Credits on General Subjects 81 30 25 13 9 4 Total of Necessary Credits for Graduation 167and more 33 33 33 37 31and more

\*1 Identical with Department Electronic Control Engineering

# Curriculum

# Department of Electronic Control Engineering Department of Civil Engineering

| Department of Liectionic Control Lingmeeting<br>Students enrolled after 2019       Department of Civit Lingmeeting<br>Students enrolled after 2019         Students enrolled after 2019       Students enrolled after 2019         Students enrolled after 2019       Credits by Grade |   |            |     |               |    |    |            |       | ed afte                                  | er 2017   |            |     |               |     |    |            |          |
|--|---|------------|-----|---------------|----|----|------------|-------|--|---|------------|-----|---------------|-----|----|------------|----------|
| Sul  | ojects  | Credits    |     | Credit<br>2nd |    |    |            | Notes | Sul                                      | ojects  | Credits    |     | Credit<br>2nd |     |    |            | Notes    |
|  | Applied Mathematics A                                       | 1          | 131 | 2110          | 1  |    | Jui        |       |  | Applied Mathematics                                   | 2          | 131 | 2110          | 510 | 2  | Jui        |          |
|  | Applied Mathematics B                                       | 2          |     |               |    | 2  |            |       |  | Applied Physics                                       | 2          |     |               | 2   | 2  |            |          |
|  | Applied Mathematics C                                       | 1          |     |               |    | 1  |            |       |  | Introduction to the Civil Engineering                 | 2          | 2   |               | _   |    |            |          |
|  | Applied Mathematics D                                       | 1          |     |               |    | 1  |            |       |  | Computer Literacy                                     | 1          | 1   |               |     |    |            |          |
|  | Applied Physics I   | 4          |     |               | 2  | 2  |            |       |  | Numerical Analysis                                    | 2          |     |               |     | 2  |            |          |
|  | Information Processing I                                    | 2          |     | 2             | -  | -  |            |       |  | Surveying I   | 1          |     | 1             |     | -  |            |          |
|  | Information Processing I                                    | 2          |     | -             | 2  |    |            |       |  | Surveying Exercises I                                 | 2          |     | 2             |     |    |            |          |
|  | Information Processing II                                   | 2          |     |               | -  | 2  |            |       |  | Surveying II  | 1          |     | -             | 1   |    |            |          |
|  | Introduction to Electronic Control Engineering              | 1          | 1   |               |    | -  |            |       |  | Surveying Exercises II                                | 2          |     |               | 2   |    |            |          |
|  | Fundamentals of Electricity                                 | 1          |     | 1             |    |    |            |       |  | Spatial Information Engineering                       | 1          |     |               | -   | 1  |            |          |
|  | Electromagnetics I  | 2          |     |               | 2  |    |            |       |  | Fundamental drawing                                   | 2          |     | 2             |     |    |            |          |
|  | Electromagnetics I  | 2          |     |               | 2  | 2  |            |       |  | Design and drawing                                    | 2          |     | 2             |     | 2  |            |          |
|  | Electric Circuits I   | 2          |     |               | 2  | 2  |            |       |  | Fundamental Experiments I                             | 3          |     |               | 3   | 2  |            |          |
|  | Electric Circuits I   | 1          |     |               | 2  | 1  |            |       |  | Fundamental Experiments I                             | 3          |     |               | 3   | 3  |            |          |
|  | Electronic Circuits   | 2          |     |               | 2  | 1  |            |       |  | Experiment in Civil Engineering                       | 1.5        |     |               |     | 3  | 1.5        |          |
|  |   |            |     | 4             | 2  |    |            |       |  |   |            |     | 1             |     |    | 1.0        | <u> </u> |
|  | Digital Circuits I  | 1          |     | 1             | 4  |    |            |       |  | Fundamental Materials of Construction                 | 1          |     | 1             | 0   |    |            | <u> </u> |
| Re   | Digital Circuits II   | 1          |     |               | 1  |    |            |       |  | Concrete Engineering I                                | 2          |     |               | 2   | 0  |            | <u> </u> |
| qui  | Systems Control I   | 2          |     |               |    |    | 2          |       | -  | Concrete Engineering II                               | 2          |     |               |     | 2  |            | <u> </u> |
| Required Subjects  | Electric Power Devices I                                    | 2          |     |               |    |    | 2          |       | Required Subjects                        | Fundamental Mechanics                                 | 2          |     | 2             |     |    |            | <u> </u> |
| Sub  | Electronic Devices I  | 2          |     |               |    |    | 2          |       | uire                                     | Structural Mechanics I                                | 2          |     |               | 2   |    |            |          |
| ject   | Measurement Engineering                                     | 2          |     |               |    | 2  |            |       | S p                                      | Structural Mechanics II                               | 3          |     |               |     | 3  |            |          |
| S  | Control Engineering   | 2          |     |               |    | 2  |            |       | Jbje                                     | Steel Structures                                      | 2          |     |               |     |    | 2          |          |
|  | Robotics I  | 2          |     |               |    |    | 2          |       | cts                                      | Hydraulics I  | 2          |     |               | 2   |    |            |          |
|  | Kinematics of Machinery I                                   | 2          |     |               | 2  |    |            |       |  | Hydraulics II   | 3          |     |               |     | 3  |            |          |
|  | Kinematics of Machinery II                                  | 1          |     |               |    | 1  |            |       |  | Soil Mechanics I                                      | 2          |     |               | 2   |    |            |          |
|  | Strength of Materials I                                     | 2          |     |               | 2  |    |            |       |  | Soil Mechanics II                                     | 2          |     |               |     | 2  |            |          |
|  | Strength of Materials II                                    | 1          |     |               |    | 1  |            |       |  | Engineering geology                                   | 1          |     |               |     | 1  |            |          |
|  | Applied Computer Engineering                                | 2          |     |               |    |    | 2          |       |  | Planning Theory in Civil Engineering I                | 2          |     |               | 2   |    |            |          |
|  | Engineering Ethics  | 1          |     |               |    |    | 1          |       |  | Planning Theory in Civil Engineering II               | 1          |     |               |     | 1  |            |          |
|  | Design and Drafting   | 2          |     | 2             |    |    |            |       |  | Environmental Engineering I                           | 2          |     |               | 2   |    |            |          |
|  | Engineering Experiments I                                   | 4          |     |               | 4  |    |            |       |  | Environmental Engineering II                          | 2          |     |               |     | 2  |            |          |
|  | Engineering Experiments II                                  | 4          |     |               |    | 4  |            |       |  | Sustainable Society Formation                         | 2          |     |               |     |    | 2          |          |
|  | Advanced Engineering Seminar                                | 2          |     |               |    | 2  |            |       |  | Urban Engineering                                     | 1          |     |               |     | 1  |            |          |
|  | Workshop Practice I   | 2          | 2   |               |    |    |            |       |  | Management of Construction                            | 1          |     |               |     |    | 1          |          |
|  | Workshop Practice II  | 2          |     | 2             |    |    |            |       |  | Disaster Prevention Engineering                       | 1          |     |               |     | 1  |            |          |
|  | Fundamental Research of Electronic Control                  | 2          |     | -             |    | 2  |            |       |  | Infrastructure Engineering                            | 1          |     |               |     | 1  |            |          |
|  | Graduation Research   | 9          |     |               |    | _  | 9          |       |  | Exercise in Civil Engineering I                       | 1          |     |               |     | 1  |            |          |
|  | Total of Credits  | 76         | 3   | 8             | 20 | 25 | 20         |       |  | Exercise in Civil Engineering II                      | 1.5        |     |               |     |    | 1.5        |          |
|  | Applied Physics II  | 2          |     |               |    | 20 | 2          | *1    |  | Engineering Ethics                                    | 1          |     |               |     |    | 1          |          |
|  | Systems Control II  | 2          |     |               |    |    | 2          | /** 1 |  | Graduation Research                                   | 8          |     |               |     |    | 8          |          |
|  | Electric Power Devices II                                   | 2          |     |               |    |    | 2          |       |  | Total of Credits                                      | 76         | 3   | 8             | 20  | 28 | 17         |          |
|  | Electronic Devices II                                       | 2          |     |               |    |    | 2          |       |  | Structural Analysis                                   | 2          | 0   | 0             | 20  | 20 | 2          |          |
| m  | Robotics II   | 2          |     |               |    |    | 2          |       |  | Practical Concrete Engineering                        | 2          |     |               |     |    | 2          |          |
| Electiv  | Applied Electronics   | 2          |     |               |    |    | 2          |       |  | Geotechnical Engineering                              | 2          |     |               |     |    | 2          |          |
|  |   |            |     |               |    |    |            |       | Ē  | <u>v                                </u>              |            |     |               |     |    |            |          |
| Subjects   | Electric Circuits II  | 2          |     |               |    |    | 2          |       | lective Subjects                         | River Basin Management<br>Water Resources Engineering | 2          |     |               |     |    | 2          |          |
| ject   | Electronic Control Circuits                                 | 2          |     |               |    |    |            |       | e S                                      |   | 2          |     |               |     |    | 2          | <b></b>  |
| S  | Electronics   | 2          |     |               |    |    | 2          |       | ubje                                     | Ecosystem Management                                  | 2          |     |               |     |    | 2          | <u> </u> |
|  | Computer Architecture                                       | 2          |     |               |    |    | 2          |       | octs                                     | Urban and Traffic Planning                            | 2          |     |               |     |    | 2          |          |
|  | Kinematics of Machinery II                                  | 2          |     |               |    |    | 2          |       |  | Energy Engineering                                    | 2          |     |               |     |    | 2          | <u> </u> |
|  | Total of Credits  | 22         |     |               |    |    | 22         |       |  | Total of Credits                                      | 18         |     |               |     |    | 16         |          |
| _  | Total of Necessary Credits on Elective Subjects             | 10and more |     |               |    |    | 10and more |       |  | Total of Necessary Credits on Elective Subjects       | 12and more |     |               |     |    | 12and more |          |
|  | I of All Credits  | 98         | 3   | 8             | 20 | 25 | 42         |       |  | I of All Credits                                      | 92         | 3   | 8             | 20  | 28 | 33         |          |
|  | of Necessary Credits on Specialized Subjects                | 86and more |     | 8             | 20 | 25 | 30and more |       |  | of Necessary Credits on Specialized Subjects          | 86and more | 3   | 8             | 20  | 28 | 27and more |          |
| Total  | al of Necessary Credits on General Subjects 81 30 25 13 9 4 |            |     |               |    |    |            |       | of Necessary Credits on General Subjects | 81  | 30         | 25  | 13            | 9   | 4  |            |          |
|  | of Necessary Credits for Graduation                         | 1407 1     | 33  | 33            | 33 | 34 | 34and more |       |  | of Necessary Credits for Graduation                   | 1107       | 33  | 33            | 33  | 37 | 31and more | i .      |

# Department of Architecture

|                   | Subjects Applied Mathematics A Applied Mathematics B Applied Physics I Applied Physics II Introduction to Architecture Digital Design I | Credits 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1st     | Credit<br>2nd |          | 4th     | e<br>5th        | Note |
|-------------------|---|---|---------|---------------|----------|---------|-----------------|------|
|                   | Applied Mathematics B<br>Applied Physics I<br>Applied Physics II<br>Introduction to Architecture  | 1<br>2  | 151     | 2110          | JIU      |         | 501             |      |
|                   | Applied Mathematics B<br>Applied Physics I<br>Applied Physics II<br>Introduction to Architecture  | 1<br>2  |         |               |          |         |                 |      |
|                   | Applied Physics I<br>Applied Physics II<br>Introduction to Architecture   | 2   |         |               |          | 1       |                 |      |
|                   | Applied Physics II<br>Introduction to Architecture  |   |         |               | 2        |         |                 |      |
| -                 | Introduction to Architecture  | 1   |         |               |          | 1       |                 |      |
|                   |   | 1   | 1       |               |          |         |                 |      |
|                   |   | 1   |         |               | 1        |         |                 |      |
|                   | Digital Design II   | 1   |         |               | 1        |         |                 |      |
|                   | Information Processing  | 1   |         |               | 1        |         |                 |      |
|                   | Structural Mechanics I  | 2   |         |               | 2        |         |                 |      |
|                   | Structural Mechanics II   | 2   |         |               |          | 2       |                 |      |
| - H               | Building Materials I  | 1   |         |               |          | 1       |                 |      |
|                   | Strength of Materials   | 1   |         |               | 1        |         |                 |      |
|                   | Construction Methods I  | 1   | 1       |               |          |         |                 |      |
|                   | Construction Methods II   | 1   |         | 1             |          |         |                 |      |
| ľ                 | Wood Structure  | 1   |         |               | 1        |         |                 |      |
|                   | Reinforced Concrete Structure I   | 2   |         |               |          | 2       |                 |      |
|                   | Reinforced Concrete Structure II  | 2   |         |               |          |         | 2               |      |
|                   | Steel Structure I   | 2   |         |               |          | 2       |                 |      |
|                   | Steel Structure II  | 2   |         |               |          |         | 2               |      |
|                   | Introduction to Spatial Design  | 1   |         | 1             |          |         |                 |      |
|                   | Introduction to Interior Design   | 1   |         | 1             |          |         |                 |      |
| Re                | Interior Design   | 1   |         |               | 1        |         |                 |      |
| Required Subjects | Interior Planning and Design  | 2   |         |               |          | 2       |                 |      |
| ä                 | History of Architecture I   | 2   |         | 2             |          |         |                 |      |
| <u> </u>          | History of Architecture II  | 1   |         |               |          | 1       |                 |      |
| octs              | Architectural Planning I  | 2   |         |               | 2        |         |                 |      |
| Γ                 | Architectural Planning II   | 2   |         |               |          | 2       |                 |      |
| Γ                 | Urban and Regional Planning   | 1   |         |               |          | 1       |                 |      |
|                   | Environmental Sociology   | 1   |         |               | 1        |         |                 |      |
|                   | Fundamentals for Environment Engineering  | 1   |         |               | 1        |         |                 |      |
|                   | Environmental Engineering   | 2   |         |               |          | 2       |                 |      |
|                   | Building Equipment  | 2   |         |               |          | 2       |                 |      |
|                   | Environment Design  | 2   |         |               |          |         | 2               |      |
|                   | Architectural Drawing I   | 2   | 2       |               |          |         |                 |      |
| L                 | Architectural Drawing II  | 2   |         | 2             |          |         |                 |      |
| L                 | Planning and Design I   | 4   |         |               | 4        |         |                 |      |
| Ļ                 | Planning and Design II  | 4   |         |               |          | 4       |                 |      |
|                   | Experiment of Environmental Engineering   | 1   |         |               | 1        |         |                 |      |
|                   | Experiment of Structural Engineering  | 1   |         |               | 1        |         |                 |      |
|                   | Engineering Ethics of Architecture  | 1   |         |               |          | 1       |                 |      |
| Ļ                 | Exercise in Architecture  | 1   |         |               |          | 1       |                 |      |
|                   | Building Production   | 2   |         |               |          |         | 2               |      |
| ļ                 | Building Law  | 2   |         |               |          |         | 2               |      |
| _                 | Surveying   | 2   |         |               |          |         | 2               |      |
|                   | Disaster Prevention Engineering   | 2   |         |               |          |         | 2               |      |
| -                 | Graduation Research   | 8   |         | -             | 00       | 00      | 8               |      |
| _                 | Total of Credits  | 79  | 4       | 7             | 20       | 26      | 22              |      |
|                   | Soil Mechanics and Foundation Engineering   | 2   |         |               |          |         | 2               |      |
| ŀ                 | Structural Design   | 2   |         |               |          |         | 2               |      |
| _                 | Advanced Topics in Planning   | 2   |         |               |          |         | 2               |      |
| Elective Subjects | Participative Design  | 2   |         |               |          |         | 2               |      |
| tive              | History of Architecture II  | 2   |         |               |          |         | 2               |      |
| St                | Planning and Design III   | 2   |         |               |          |         | 2               |      |
| iject             | Architectural Planning Practice   | 2   |         |               |          |         | 2               |      |
| s                 | Building Equipment Practice   | 2   |         |               |          |         | 2               |      |
|                   | Building Marerials II   | 2   |         |               |          |         | 2               |      |
| ŀ                 | Total of Credits  | 18<br>Zand mara                               |         |               |          |         | 18<br>7000 mars |      |
| [oto!             | Total of Necessary Credits on Elective Subjects   | 7and more                                     | A       | 7             | 20       | 26      | 7and more       |      |
|                   | of All Credits  | 97<br>Reand more                              | 4       | 7             | 20<br>20 | 26      | 40              |      |
|                   | f Necessary Credits on Specialized Subjects<br>f Necessary Credits on General Subjects  | 86and more<br>81                              | 4<br>30 | 25            | 13       | 26<br>9 | 29and more<br>4 |      |
|                   |   | 0 I<br>167and more                            |         | 32            | 33       | 35      | 4<br>33and more |      |

%1 Identical with Electrical and Computer Engineering

|                                 |                   | Subjects  | Class                     | Credits | Credits | by Grade | Note |
|---------------------------------|-------------------|---|---------------------------|---------|---------|----------|------|
|                                 |                   | -   | Method                    |         | 1st     | 2nd      | NOLE |
| 6                               | ۶æ                | Social Ethics                                   | Lecture                   | 2       | 0       | 2        |      |
|                                 | Required          | Advanced English 1                              | Lecture                   | 2       | 2       |          |      |
| 6                               | red               | Advanced English 2                              | Lecture                   | 2       | 2       | 0        |      |
| ŧ 📙                             |                   | Total of Credits on Required Sub                | Lecture                   | 6<br>2  | 4       | 2        |      |
| General Subjects                | Elective Subjects | Literature<br>English Practice 1                | Exercise                  | 2       |         | 2        |      |
|                                 | live              | English Practice 2                              | Exercise                  | 1       |         | 1        |      |
| PC                              | Sub               | Introduction to Advanced Mathematics            | Lecture                   | 2       | 2       | 1        |      |
| ^   `                           | jects             | Total of Credits on Elective Subj               |                           | 6       | 2       | 4        |      |
|                                 |                   | Credits on General Subjects                     | 5013                      | 12      | 6       | 6        |      |
|                                 |                   | Vecessary Credits on General Subj               | ects                      |         | nd mor  |          |      |
|                                 |                   | Life Science                                    | Lecture                   | 2       | 2       |          |      |
|                                 | Required Subjects | Material Chemistry                              | Lecture                   | 2       | -       | 2        |      |
|                                 | lire              | Engineering of Information Processing Devices   | Lecture                   | 2       | 2       | _        |      |
|                                 | Sp                | Applied Physics                                 | Lecture                   | 2       | 2       |          |      |
|                                 | lbje              | Creative Engineering Practice                   | Experimental and Practice | 2       | _       | 2        |      |
|                                 | cts               | Total of Credits on Required Sub                |                           | 10      | 6       | 4        |      |
| 5                               | ,                 | International Practical Training 1              | Experimental and Practice | 1       | 1       |          |      |
| Deci                            |                   | International Practical Training 2              | Experimental and Practice | 1       |         | 1        |      |
| Specialized-Foundation Subjects | :                 | Human Interface Design                          | Lecture                   | 2       |         | 2        |      |
| ª-                              | ;                 | Computational Mechanics                         | Lecture                   | 2       | 2       | -        |      |
| l en                            |                   | Ecological Engineering                          | Lecture                   | 2       | 2       |          |      |
| dat                             | E                 | Quantum Mechanics                               | Lecture                   | 2       | 2       |          |      |
| 9                               | Elective Subjects | Statistical Mechanics                           | Lecture                   | 2       | -       | 2        |      |
| Sub                             | Su Su             | Information Engineering                         | Lecture                   | 2       |         | 2        |      |
| jects                           | bjec              | Advanced Topics in Applied Mathematics          | Lecture                   | 2       | 2       | -        |      |
| "                               | ) ts              | Corporate Management Introduction               | Lecture                   | 2       | 2       |          |      |
|                                 |                   | Project Mnagement                               | Lecture                   | 2       |         | 2        |      |
|                                 |                   | Science Literacy Education Practice             | Experimental and Practice | 2       | 2       | _        |      |
|                                 |                   | Introduction to Advanced Experiments            | Lecture                   | 2       | _       | 2        |      |
|                                 |                   | Total of Credits on Elective Subj               |                           | 24      | 13      | 11       |      |
|                                 | Tota              | I of Credits on Specialized-Foundati            |                           | 34      | 19      | 15       |      |
|                                 | _                 | Advanced Experiment                             | Experimental and Practice | 4       | 4       |          |      |
|                                 | l qui             | Practical Training 1                            | Experimental and Practice | 2       | 2       |          |      |
|                                 | ed S              | Graduation Thesis 1                             | Experimental and Practice | 6       | 6       |          |      |
|                                 | Required Subjects | Graduation Thesis 2                             | Experimental and Practice | 8       |         | 8        |      |
| Cherialized Cubierte            | ects              | Total of Credits on Required Sub                | jects                     | 20      | 12      | 8        |      |
| 7Pd                             |                   | Medical and Welfare Engineering                 | Lecture                   | 2       | 2       |          |      |
| ŝ.                              |                   | Image Information Processing                    | Lecture                   | 2       |         | 2        |      |
| E                               |                   | Advanced Mechatronics                           | Lecture                   | 2       |         | 2        |      |
| ″                               |                   | Aerospace Engineering                           | Lecture                   | 2       | 2       |          |      |
|                                 |                   | Aerodynamics                                    | Lecture                   | 2       |         | 2        |      |
|                                 |                   | Material Analysis                               | Lecture                   | 2       |         | 2        |      |
| Specialized-Advanced Subjects   | '                 | Architectural Renovation Design Methodology     | Lecture                   | 2       | 2       |          |      |
| lali                            | :                 | Advanced Sustainable Society                    | Lecture                   | 2       | 2       |          |      |
| zed-                            |                   | Advanced New Energy                             | Lecture                   | 2       |         | 2        |      |
| Â                               | :                 | Maintenance and Management                      | Lecture                   | 2       |         | 2        |      |
| anc                             | Elective Subjects | Environmental Material Science                  | Lecture                   | 2       | 2       |          |      |
| ed                              | . Iš              | Environmental Planning                          | Lecture                   | 2       |         | 2        |      |
| jub j                           | Sub               | Diffusion Phenomena                             | Lecture                   | 2       | 2       |          |      |
| ects                            | jects             | Circuit Theory                                  | Lecture                   | 2       | 2       |          |      |
|                                 | 0                 | Advanced Topics of Electric Machinery           | Lecture                   | 2       |         | 2        |      |
|                                 |                   | Fundamentals of Digital Systems                 | Lecture                   | 2       | 2       |          |      |
|                                 |                   | Infrastructure Planning                         | Lecture                   | 2       | 2       |          |      |
|                                 |                   | Water Management Engineering                    | Lecture                   | 2       |         | 2        |      |
|                                 |                   | Advanced Random Vibration for Civil Engineering | Lecture                   | 2       |         | 2        |      |
|                                 |                   | Advanced Structural Analysis                    | Lecture                   | 2       | 2       |          |      |
|                                 |                   | Environmental Control Engineering               | Lecture                   | 2       | 2       |          |      |
|                                 |                   | Theory of Urban Planning and Design             | Lecture                   | 2       |         | 2        |      |
|                                 |                   | Practical Training 2                            | Experimental and Practice | 1       | 1       |          |      |
|                                 |                   | Total of Credits on Elective Subj               |                           | 45      | 23      | 22       |      |
|                                 |                   | al of Credits on Specialized-Advance            | ced Subjects              | 65      | 35      | 30       |      |
|                                 |                   | Credits on Specialized Subjects                 |                           | 99      | 54      | 45       |      |
| To                              | tal of I          | Vecessary Credits on Specialized S              | ubjects                   | 54 8    | and mo  | re       |      |
| otal of                         |                   |   |                           | 111     | 60      | 51       |      |
|                                 |                   | sary Credits for Graduation                     |                           | 62 /    | and mo  | ro       |      |

# Advanced Course for Interdisciplinary Technology Development

# **Students**

| Admission Capacity and Current Number of students (As of May 1, 2          |                       |             |                       |                   |                  |                  |                     |  |  |  |  |  |
|--|-----------------------|-------------|-----------------------|-------------------|------------------|------------------|---------------------|--|--|--|--|--|
| Departments  | Capacity of Admission | 1st         | 2nd                   | 3rd               | 4th              | 5th              | Total               |  |  |  |  |  |
| Mechanical Eng.  | 40                    | 44<br>(6)   | 39<br>(2)             | 49<br>(1)<br>①    | 44<br>(3)<br>①   | 37<br>(4)        | 213<br>(16)<br>②    |  |  |  |  |  |
| Electrical and Computer Eng.   | 40                    | 42<br>(5)   | 42<br>(10)            | 43<br>(4)<br>①    | 47<br>(5)        | 35<br>(4)        | 209<br>(28)<br>①    |  |  |  |  |  |
| Electronic Control Eng.  | 40                    | 42<br>(4)   | 44<br>(2)             | 44<br>(4)         | 47<br>(2)        | 37<br>(2)        | 214<br>(14)         |  |  |  |  |  |
| Civil Eng.   | 40                    | 43<br>(16)  | 43<br>(21)            | 47<br>(15)<br>①   | 45<br>(13)       | 44<br>(15)       | 222<br>(80)<br>①    |  |  |  |  |  |
| Architecture   | 40                    | 41<br>(22)  | 40<br>(23)            | 44<br>(28)        | 37<br>(15)       | 41<br>(25)<br>①  | 203<br>(113)<br>①①  |  |  |  |  |  |
| Total  | 200                   | 212<br>(53) | 208<br>(58)           | 227<br>(52)<br>32 | 220<br>(38)<br>① | 194<br>(50)<br>① | 1061<br>(251)<br>⑤2 |  |  |  |  |  |
| Advanced Course for Interdisciplinary Technology<br>Development            | 20                    | 37<br>(4)   | 35<br>(5)<br><b>1</b> |                   |                  |                  | 72<br>(9)           |  |  |  |  |  |
| Cooperative Education Program for Advanced<br>Interdisciplinary Technology | a few people          | 1           |                       |                   |                  |                  | 1                   |  |  |  |  |  |
| Total  | 20                    | 38<br>(4)   | 35<br>(5)<br><b>1</b> |                   |                  |                  | 73<br>(9)<br>2      |  |  |  |  |  |

( ) Female Students, ⊖Overseas Students, ●Prolonged absence Students

| Current Number of Overseas   | Students |          |          |          | (As of May 1, 2020) |
|------------------------------|----------|----------|----------|----------|---------------------|
| Departments                  | Grade    | Malaysia | Mongolia | Cambodia | Total               |
|                              | 3rd      |          | 1        |          | 1                   |
| Mechanical Eng.              | 4th      | 1(1)     |          |          | 1(1)                |
|                              | 5th      |          |          |          |                     |
|                              | 3rd      | 1        |          |          | 1                   |
| Electrical and Computer Eng. | 4th      |          |          |          |                     |
|                              | 5th      |          |          |          |                     |
|                              | 3rd      |          |          |          |                     |
| Electronic Control Eng.      | 4th      |          |          |          |                     |
|                              | 5th      |          |          |          |                     |
|                              | 3rd      |          | 1        |          | 1                   |
| Civil Eng.                   | 4th      |          |          |          |                     |
|                              | 5th      |          |          |          |                     |
|                              | 3rd      |          |          |          |                     |
| Architecture                 | 4th      |          |          |          |                     |
|                              | 5th      |          |          | 1        | 1                   |
| Total                        |          | 2(1)     | 2        | 1        | 5(1)                |

() Female Students

# Japan Student Services Organization

| Japan Student Services Orga                                  | anization |     |     |       |      | (2019) |
|--|-----------|-----|-----|-------|------|--------|
| Departments  | 1st       | 2nd | 3rd | 4th   | 5th  | Total  |
| Mechanical Eng.  |           | 1   |     |       | 3(1) | 4(1)   |
| Electrical and Computer Eng.                                 |           | 1   | 1   | 4 * 1 |      | 6      |
| Electronic Control Eng.                                      |           | 3   | 1   | 2     | 1    | 7      |
| Civil Eng.   |           |     | 2   |       | 1    | 3      |
| Architecture   |           | 1   | 1   | 2(2)  | 2(2) | 6(4)   |
| Total  |           | 6   | 5   | 8(2)  | 7(3) | 26(5)  |
| Advanced Course for Interdisciplinary Technology Development |           |     |     |       |      |        |
| Total  |           |     |     |       |      |        |

()Famale Students

%1 Includes two students getting grant-type scholarship

# **Students**

# . . . . . .

| Departments                  | Grade | Gifu     | Aichi   | Shiga  | Other  | Total    |
|------------------------------|-------|----------|---------|--------|--------|----------|
| Departments                  | 1st   | 34(2)    | 8       | Siliga | Uner   | 42(2)    |
|                              | 2nd   | 35(1)    | 5       | 1      |        | 42(2)    |
| Mechanical Eng.              | 3rd   | 39(4)    | 6       | 1      | 1      | 50(3)    |
| Moonamoar Eng.               | 4th   | 36(1)    | 4       | 3      | 2(1)   | 41(4)    |
|                              | 5th   | 31       | 6       | 1      | 2(1)   | 37(2)    |
|                              | 1st   | 34(7)    | 7(3)    | 1      | 1      | 42(10)   |
|                              | 2nd   | 40(4)    | 5       | 1(1)   |        | 42(10)   |
| Electrical and Computer Eng. | 3rd   | 38(3)    | 5(1)    | 1      |        | 45(5)    |
| loonida and compator Eng.    | 4th   | 33(6)    | 2(1)    | 1      |        | 39(4)    |
|                              | 5th   | 40(4)    | 2       | 1      |        | 36(7)    |
|                              | 1st   | 35(1)    | 5       | 2(1)   |        | 42(2)    |
|                              | 2nd   | 35(2)    | 6       | 2      | 1      | 42(3)    |
| lectronic Control Eng.       | 3rd   | 40(5)    | 9       | 1      |        | 49(4)    |
| J.                           | 4th   | 19(1)    | 11      | 1      |        | 43(3)    |
|                              | 5th   | 29(2)    | 9       |        | 2      | 29(1)    |
|                              | 1st   | 35(18)   | 7(3)    |        |        | 42(21)   |
|                              | 2nd   | 39(11)   | 4(1)    |        | 1(1)   | 44(14)   |
| Civil Eng.                   | 3rd   | 44(15)   | 5       | 1(1)   | 1(1)   | 42(14)   |
|                              | 4th   | 36(8)    | 3       | 1      | 3(1)   | 50(15)   |
|                              | 5th   | 34(11)   | 3       |        | 1      | 39(9)    |
|                              | 1st   | 31(16)   | 4(3)    | 1      | 5(4)   | 40(23)   |
|                              | 2nd   | 34(12)   | 6(4)    | 1(1)   | 2(1)   | 44(28)   |
| Architecture                 | 3rd   | 32(19)   | 5(3)    | 1(1)   | 4(3)   | 41(18)   |
|                              | 4th   | 31(15)   | 7(4)    |        | 5(2)   | 41 (25)  |
|                              | 5th   | 30(13)   | 5       |        | 3(1)   | 41(21)   |
| Total                        |       | 842(188) | 142(30) | 23(6)  | 38(19) | 1045(24) |
| (%)                          |       | 80.6     | 13.6    | 2.2    | 3.6    | 100.0    |

# Number of Students by Home College

| -  | -     |                         |                            |                             | (*                      | (0 0) may 1, 2010) |
|--|-------|-------------------------|----------------------------|-----------------------------|-------------------------|--------------------|
| Departments  | Grade | NIT(KOSEN),Gifu College | NIT(KOSEN), Toyota College | NIT(KOSEN),Kanazawa College | NIT(KOSEN),Oita College | Total              |
| Advanced Course for Interdisciplinary Technology Development | 1st   | 34(5)                   |                            | 1                           | 1                       | 36(5)              |
| Auvanceu course foi interdisciplinary rechnology Development | 2nd   | 32(2)                   | 1                          |                             |                         | 33(2)              |
| Total  |       | 66(7)                   | 1                          | 1                           | 1                       | 69(7)              |
|  |       |                         |                            |                             |                         | ·                  |

( ) Female Students NIT=National Institute of Technology.

# Number of Applicants and Applicants/Enrollees Ratio

| Departments                  | Capacity | 2017       |       | 2018         |       | 2019       |       | 2020             |       |
|------------------------------|----------|------------|-------|--------------|-------|------------|-------|------------------|-------|
|                              |          | Applicants | Ratio | Applicants   | Ratio | Applicants | Ratio | Applicants       | Ratio |
| Mechanical Eng.              | 40       | 64(3)      | 1.6   | 70(1)        | 1.8   | 80(2)      | 2.0   | 74(9)            | 1.9   |
| Electrical and Computer Eng. | 40       | 74(6)      | 1.9   | 78(9)        | 2.0   | 85(14)     | 2.1   | 93(10)           | 2.3   |
| Electronic Control Eng.      | 40       | 88(2)      | 2.2   | 85(4)        | 2.1   | 82(4)      | 2.1   | 80(6)            | 2.0   |
| Civil Eng.                   | 40       | 61(18)     | 1.5   | 71(23)<br>1  | 1.8   | 73(25)     | 1.8   | 81 (30)<br>1 (1) | 2.0   |
| Architecture                 | 40       | 74(26)     | 1.9   | 104(44)      | 2.6   | 101(50)    | 2.5   | 93(45)           | 2.3   |
| Total                        | 200      | 361 (55)   | 1.8   | 408(81)<br>1 | 2.0   | 421(95)    | 2.1   | 421(100)<br>1(1) | 2.1   |

() Female Students, Lower column : Applicants for the Admission for Returnees

# Number of Applicants and Enrollees transfering into 4th Grade

| Departments                  | 2017       |           | 201        | 8         | 201        | 9         | 2020       |           |
|------------------------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|
|                              | Applicants | Enrollees | Applicants | Enrollees | Applicants | Enrollees | Applicants | Enrollees |
| Mechanical Eng.              |            |           |            |           |            |           |            |           |
| Electrical and Computer Eng. |            |           | 1          | 0         |            |           |            |           |
| Electronic Control Eng.      |            |           | 1          | 1         |            |           |            |           |
| Civil Eng.                   |            |           |            |           |            |           | 1          | 1         |
| Architecture                 | 1          | 0         | 1          | 1         | 3          | 1         | 2          | 1         |
| Total                        | 1          | 0         | 3          | 2         | 3          | 1         | 3          | 2         |

() Female Students

# Number of Applicants and Enrollees into Advanced Course

| 201                  | 2018                |            | 201                                       | 9  | 2020  |   |   |
|----------------------|---------------------|------------|---|--|---|---|---|
| Applicants Enrollees |                     | Applicants | Enrollees                                 | Applicants   | Enrollees   | Applicants  | Enrollees   |
|                      |                     |            |   |  |   |   |   |
|                      |                     |            |   |  |   |   |   |
| 72(2)                | 36                  | 53(4)      | 33(2)                                     | 62(5)  | 36(5)   | 67(7)   | 36(4)   |
| 72(2)                | 36                  | 53(4)      | 33(2)                                     | 62(5)  | 36(5)   | 67(7)   | 36(4)   |
|                      | Applicants<br>72(2) | 72(2) 36   | ApplicantsEnrolleesApplicants72(2)3653(4) | Applicants     Enrollees     Applicants     Enrollees       72(2)     36     53(4)     33(2) | Applicants     Enrollees     Applicants     Enrollees     Applicants       72(2)     36     53(4)     33(2)     62(5) | Applicants     Enrollees     Applicants     Enrollees     Applicants     Enrollees       72(2)     36     53(4)     33(2)     62(5)     36(5) | Applicants     Enrollees     Applicants     Enrollees     Applicants       72(2)     36     53(4)     33(2)     62(5)     36(5)     67(7) |

() Female Students

(As of May 1, 2019)

# **Future Course of Graduates**

| Year | Departments                  | Number of Graduates | Employed | Advanced to Universities | Other |
|------|------------------------------|---------------------|----------|--------------------------|-------|
|      | Mechanical Eng.              | 42                  | 22       | 20                       |       |
|      | Electrical and Computer Eng. | 34(5)               | 18(2)    | 13(2)                    | 3(1)  |
| 2016 | Electronic Control Eng.      | 39(3)               | 19(2)    | 20(1)                    |       |
| 2010 | Civil Eng.                   | 34(5)               | 23(5)    | 11                       |       |
|      | Architecture                 | 41(13)              | 26(11)   | 14(2)                    | 1     |
|      | Total                        | 190(26)             | 108(20)  | 78(5)                    | 4(1)  |
|      | Mechanical Eng.              | 37(2)               | 19(1)    | 18(1)                    |       |
|      | Electrical and Computer Eng. | 47(6)               | 20(5)    | 27(1)                    |       |
| 2017 | Electronic Control Eng.      | 40(2)               | 20(2)    | 20                       |       |
| 2017 | Civil Eng.                   | 40(15)              | 28(9)    | 12(6)                    |       |
|      | Architecture                 | 43(15)              | 29(14)   | 14(1)                    |       |
|      | Total                        | 207(40)             | 116(31)  | 91(9)                    |       |
|      | Mechanical Eng.              | 39                  | 19       | 20                       |       |
|      | Electrical and Computer Eng. | 42(4)               | 15(3)    | 25(1)                    | 2     |
| 2018 | Electronic Control Eng.      | 40(2)               | 13(1)    | 26(1)                    | 1     |
| 2010 | Civil Eng.                   | 38(11)              | 27(7)    | 11(4)                    |       |
|      | Architecture                 | 37(14)              | 24(11)   | 13(3)                    |       |
|      | Total                        | 196(31)             | 98(22)   | 95(9)                    | 3     |
|      | Mechanical Eng.              | 37(2)               | 12(1)    | 23(1)                    | 2     |
|      | Electrical and Computer Eng. | 36(7)               | 20(6)    | 15(1)                    | 1     |
| 2019 | Electronic Control Eng.      | 29(1)               | 8        | 21(1)                    |       |
| 2019 | Civil Eng.                   | 39(9)               | 25(7)    | 10                       | 4(2)  |
|      | Architecture                 | 41(21)              | 28(14)   | 12(7)                    | 1     |
|      | Total                        | 182(40)             | 93(28)   | 81(10)                   | 8(2)  |

() Female Students

# Graduates' Entrance into Advanced Course and Universities

| Vear                                     | 2017 | 2018  | 2019                                  | 2020 |
|--|------|-------|---------------------------------------|------|
| Hokkaido Univ.                           |      | 1     |                                       | 3    |
| Tohoku Univ.                             |      | 1     |                                       |      |
| Univ. of Tsukuba                         |      | 2     | 1                                     |      |
| Gunma Univ.                              |      |       | 1                                     |      |
| Chiba Univ.                              | 1    | 1     | 1                                     |      |
| Tokyo Univ.                              | •    | -     | 1                                     | 1    |
| Tokyo Insitute of Technology             | 1    |       | · · · · · · · · · · · · · · · · · · · | 1    |
| The University of Electro-Communications |      | 1     |                                       | 2    |
| Tokyo Univ. of Agriculture and Insitute  |      | · · · | 1                                     | 1    |
| Yokohama National Univ.                  |      |       | 2                                     |      |
| Niigata Univ.                            |      | 1     |                                       |      |
| Nagaoka Univ. of Technology              | 3    | 1     | 10                                    | 3    |
| Toyama Univ.                             | 5    | 1     | 10                                    | 5    |
| Kanazawa Univ.                           | 1    | 3     | 4                                     | 3    |
| Fukui Univ.                              | 2    | 1     | 1                                     | 2    |
| Univ. of Yamanashi                       | L    | 1     | 1                                     | L    |
| Shinshu Univ.                            |      | 1     |                                       | 1    |
| Gifu Univ.                               | 9    | 13    | 12                                    | 8    |
| Shizuoka Univ.                           | 1    | 15    | 12                                    | 1    |
| Nagoya Univ.                             | 3    | 4     |                                       | 1    |
| Nagoya Institute of Technology           | 1    | 4     | 5                                     | I    |
| Toyohashi Univ. of Technology            | 8    | 7     | 11                                    | 9    |
| Mie Univ.                                | 2    | 5     |                                       | 1    |
| Kyoto Institute of Technology            | Ζ    | 1     | 1                                     | 1    |
| Osaka Univ.                              | 1    | I     | 2                                     |      |
| Kobe Univ.                               | 1    | 1     | Ζ                                     | 3    |
| Nara Women Univ.                         |      | 1     | 1                                     | 1    |
| Okayama Univ.                            | 2    |       | 1                                     |      |
| Hiroshima Univ.                          | 2    | 2     | 1                                     |      |
| Yamaguchi Univ.                          | Z    | 3     | 1                                     | 2    |
|  | 1    |       |                                       | Ζ    |
| Kagawa Univ.                             | 1    | 1     | 1                                     | 1    |
| Kyushu Univ.                             |      |       |                                       |      |
| Kyushu Institute of Technology           | 1    | 1     | 1                                     | 1    |
| Kumamoto Univ.                           | 1    | 2     | 1                                     | 1    |
| Ryukyus Univ.                            |      | 1     |                                       | 1    |
| Tokyo Metropolitan Univ.                 | 1    | 1     |                                       |      |
| Osaka Prefecture Univ.                   | 1    |       |                                       |      |
| Waseda Univ.                             |      | 1     | 4                                     |      |
| Teikyo Univ.                             |      |       | 1                                     |      |
| Chiba Institute of Technology            | 1    |       |                                       |      |
| Ritsumeikan Univ.                        |      | 1     | 1                                     |      |
| NIT(KOSEN), Gifu College                 | 36   | 32    | 34                                    | 35   |
| NIT(KOSEN), Maizuru College              |      | 1     |                                       |      |
| Total                                    | 78   | 91    | 95                                    | 81   |

() Graduates of the Previous year

# **Future Course of Graduates**

# Number of the Advanced Course Graduates who entered Graduate Schools

| Year<br>Graduate school                            | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|
| Tohoku Univ.(Graduate School)                      |      |      | 1    | 1    |
| Univ. of Tsukuba (Graduate School)                 | 2    |      | 4    | 1    |
| Yokohama National Univ. (Graduate School)          |      |      | 1    |      |
| Nagaoka Univ. of Technology (Graduate School)      |      | 1    | 3    | 1    |
| Japan Advanced Institute of Science and Technology |      |      |      | 1    |
| Gifu Univ. (Graduate School)                       |      |      | 1    |      |
| Nagoya Univ. (Graduate School)                     |      | 1    |      | 1    |
| Nagoya Institute of Techonology (Graduate School)  | 1    | 3    | 1    |      |
| Toyohashi Univ. of Technology (Graduate School)    |      |      | 1    |      |
| Kyoto Univ. (Graduate School)                      |      | 1    |      |      |
| Kyoto Institute of Techonology (Graduate School)   |      |      | 1    |      |
| Osaka Univ. (Graduate School)                      | 3    |      |      |      |
| Nara Institute of Science and Technology           | 2    |      | 1    |      |
| Kyushu Univ. (Graduate School)                     |      | 1    |      | 1    |
| Total  | 8    | 7    | 14   | 6    |

() Graduates of the Previous year

# Employment

| Year | Departmente                  | Students        | Jobs      | Ratio B/A | location of e | employment | plac      | e of employ | ment               |
|------|------------------------------|-----------------|-----------|-----------|---------------|------------|-----------|-------------|--------------------|
| rear | Departments                  | Seeking a job A | offered B | Ralio D/A | Gifu          | Others     | Companies | Official    | Public Corporation |
|      | Mechanical Eng.              | 19(1)           | 680       | 35.8      | 1             | 18(1)      | 19(1)     |             |                    |
|      | Electrical and Computer Eng. | 20(5)           | 547       | 27.4      |               | 20(5)      | 20(5)     |             |                    |
| 2017 | Electronic Control Eng.      | 20(2)           | 624       | 31.2      | 4             | 17(2)      | 20(2)     | 1           |                    |
| 2017 | Civil Eng.                   | 28(9)           | 285       | 10.2      | 6(4)          | 22(5)      | 19(4)     | 9(5)        |                    |
|      | Architecture                 | 29(14)          | 291       | 10.0      | 2(1)          | 27(13)     | 29(14)    |             |                    |
|      | Total                        | 116(31)         | 2427      | 20.9      | 13(5)         | 104(26)    | 107(26)   | 10(5)       |                    |
|      | Mechanical Eng.              | 19              | 651       | 34.3      | 2             | 17         | 19        |             |                    |
|      | Electrical and Computer Eng. | 15(3)           | 738       | 49.2      |               | 15         | 15        |             |                    |
| 2018 | Electronic Control Eng.      | 13(1)           | 730       | 56.2      |               | 13         | 13        |             |                    |
| 2010 | Civil Eng.                   | 27(7)           | 352       | 13        | 6             | 21         | 17        | 10          |                    |
|      | Architecture                 | 24(11)          | 307       | 12.8      | 3             | 21         | 23        | 1           |                    |
|      | Total                        | 98(22)          | 2778      | 28.3      | 11            | 87         | 87        | 11          |                    |
|      | Mechanical Eng.              | 12(1)           | 662       | 55.2      | 1             | 11(1)      | 12(1)     |             |                    |
|      | Electrical and Computer Eng. | 20(6)           | 665       | 33.3      |               | 20(6)      | 20(6)     |             |                    |
| 2019 | Electronic Control Eng.      | 8               | 610       | 76.3      |               | 8          | 8         |             |                    |
| 2019 | Civil Eng.                   | 25(7)           | 388       | 15.5      | 5(2)          | 20(5)      | 15(2)     | 10(5)       |                    |
|      | Architecture                 | 28(14)          | 353       | 12.6      | 2(2)          | 26(12)     | 26(13)    | 2(1)        |                    |
|      | Total                        | 93(28)          | 2678      | 28.8      | 8(4)          | 85(24)     | 81(22)    | 12(6)       |                    |

() Female Students

# Advanced Course

| Year | Departments   | Graduates | Students        | Students Continuing | Others | Jobs      | Ratio B/A | location of | employment | place     | of emplo | yment              |
|------|---|-----------|-----------------|---------------------|--------|-----------|-----------|-------------|------------|-----------|----------|--------------------|
| Teal | Departments   | Graduales | Seeking a job A | Education           | Others | offered B | naliu D/A | Gifu        | Others     | Companies | Official | Public Corporation |
|      | Advanced Course for Interdisciplinary<br>Technology Development (Mechanical•<br>Electrical and Computer•Electronic Control)   | 14        | 11              | 3                   |        | 496       | 45.1      | 1           | 10         | 11        |          |                    |
| 2017 | Advanced Course for<br>Interdisciplinary Technology<br>Development (Civil • Architecture)                                     | 14(3)     | 10(3)           | 4                   |        | 186       | 18.6      | 3(2)        | 7(1)       | 6         | 4(1)     |                    |
|      | Total   | 28(3)     | 21(3)           | 7                   |        | 682       | 32.5      | 4(2)        | 17(1)      | 17        | 4(1)     |                    |
|      | Advanced Course for Interdisciplinary<br>Technology Development (Mechanical •<br>Electrical and Computer •Electronic Control) | 27        | 17              | 10                  |        | 517       | 30.4      | 2           | 15         | 17        |          |                    |
| 2018 | Advanced Course for Interdisciplinary<br>Technology Development<br>(Civil • Architecture)                                     | 11        | 5               | 4                   | 2      | 198       | 39.6      |             | 5          | 5         |          |                    |
|      | Total   | 38        | 22              | 14                  | 2      | 715       | 32.5      | 2           | 20         | 22        |          |                    |
|      | Advanced Course for Interdisciplinary<br>Technology Development (Mechanical •<br>Electrical and Computer •Electronic Control) | 21        | 17              | 4                   |        | 529       | 31.1      | 3           | 14         | 17        |          |                    |
| 2019 | Advanced Course for Interdisciplinary<br>Technology Development<br>(Civil • Architecture)                                     | 11(2)     | 9(2)            | 2                   |        | 240       | 26.7      | 3(1)        | 6(1)       | 3         | 6(2)     |                    |
| _    | Total   | 32(2)     | 26(2)           | 6                   |        | 769       | 29.6      | 6(1)        | 20(1)      | 20        | 6(2)     |                    |

() Female Students

### Operating Costs such as Income and Expenditure Grant

| Revenue                    |         | Expenditure |   |  |  |  |
|----------------------------|---------|-------------|---|--|--|--|
| Grants for Operation Costs | 112,830 | 164,756     | Education and Research Expenses         |  |  |  |
| Tuition Revenue            | 254,342 | 8,978       | Support Education and Research Expenses |  |  |  |
| Admission Fee Income       | 21,191  | 13,275      | General and Administrative Expenses     |  |  |  |
| Testing Fee Income         | 7,697   | 216,095     | Common Expenses                         |  |  |  |
| Miscellaneous Income       | 7,028   |             |   |  |  |  |
| Total                      | 403,088 | 403,104     | Total                                   |  |  |  |

# Adoption Subsidy Situation etc.

|   |        |         |         | (Unit: ¥1,000) |
|---|--------|---------|---------|----------------|
| Year           Classification                                 | 2016   | 2017    | 2018    | 2019           |
| Subsidy Budget for Construction of Facilities                 | -      | 217,620 | 120,446 | 605,421        |
| Project Cost Delivery Facility Expenses                       | -      | 22,680  | -       | 19,855         |
| Grants-in-Aid for Equipment Maintenance                       | -      | -       | -       | 37,676         |
| Human Resource Development Business for Nuclear Power Subsidy | 68     | -       | 21      | 123            |
| Grants for Promoting University Reform                        | 19,600 | 18,032  | 18,650  | 9,334          |
| Total   | 19,668 | 258,332 | 139,117 | 672,409        |

| Grants-in-Aid for Scientific Rese                              | arch   |                 |        |                 |        |                 |        | (Unit: ¥1,000)  |
|--|--------|-----------------|--------|-----------------|--------|-----------------|--------|-----------------|
| Year   |        | 2016            |        | 2017            |        | 2018            |        | 2019            |
| Classification   | Number | Funds           | Number | Funds           | Number | Funds           | Number | Funds           |
| Grant-in-Aid for Scientific Research (B)                       | 0      | 0               | 0      | 0               | 0      | 0               | 1      | 200<br>60       |
| Grant-in-Aid for Scientific Research (C)                       | 15     | 12,400<br>3,720 | 14     | 13,900<br>4,170 | 16     | 13,300<br>3,990 | 18     | 16,600<br>4,980 |
| Grant-in-Aid for Exploratory Research                          | 0      | 0               | 1      | 3,300           | 1      | 800<br>990      | 1      | 500<br>150      |
| Grant-in-Aid for Early-Career Scientists                       | 0      | 0               | 0      | 0               | 3      | 3,300           | 7      | 7,000<br>2,100  |
| Grant-in-Aid for Young Scientists (A)                          | 2      | 3,000<br>900    | 2      | 900<br>270      | 0      | 0               | 0      | 0               |
| Grant-in-Aid for Young Scientists (B)                          | 2      | 1,800<br>540    | 4      | 5,200<br>1,560  | 3      | 3,900<br>1,170  | 0      | 0               |
| Encourage Research   | 2      | 780             | 1      | 400             | 2      | 950             | 0      | 0               |
| Grant-in-Aid for starting Scientific Research                  | 0      | 0               | 0      | 0               | 0      | 0               | 0      | 0               |
| Grant-in-Aid for Publication of<br>Scientific Research Results | 0      | 0               | 1      | 700             | 0      | 0               | 0      | 0               |
| Total  | 21     | 17,980<br>5,160 | 23     | 24,400<br>6,990 | 25     | 22,250<br>6,390 | 27     | 24,300<br>7,290 |

Direct expense (upper), Overhead expense (lower)

| External I                   | External Fundings (Unit: ¥1,000) |        |        |        |        |        |        |        |        |
|------------------------------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|                              | Year                             |        | 2016   |        | 2017   |        | 2018   |        | 2019   |
| Classification               |                                  | Number | Funds  | Number | Funds  | Number | Funds  | Number | Funds  |
|                              | Funded Research                  | 3      | 13,018 | 2      | 15,835 | 3      | 2,590  | 3      | 4,205  |
| Research Funding             | Funded Projects                  | 0      | 0      | 1      | 1,427  | 2      | 673    | 1      | 1,066  |
| Such as Industry<br>academia | Contract Testing                 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| Collaboration                | Joint Research                   | 10     | 5,606  | 18     | 10,508 | 13     | 21,636 | 11     | 6,121  |
|                              | Subtotal                         | 13     | 18,624 | 21     | 27,770 | 18     | 24,899 | 15     | 11,392 |
| Dona                         | ations                           | 46     | 27,906 | 34     | 18,200 | 39     | 9,401  | 29     | 14,359 |
| Other S                      | ubsidys                          | 4      | 5,610  | 2      | 1,094  | 17     | 20,430 | 20     | 20,690 |
| To                           | tal                              | 63     | 52,140 | 57     | 47,064 | 74     | 54,730 | 64     | 46,441 |

# Land and Buildings

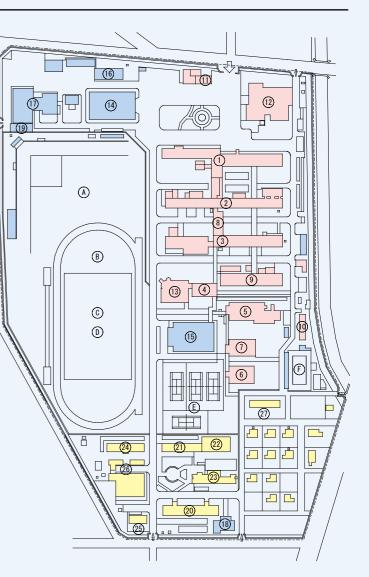
Lands

(Unit: ¥1,000)

| C  | lassification    | Area                  | Notes  |
|----|------------------|-----------------------|--|
| So | chool houses     | 50,975 m <sup>2</sup> | Baseball Ground, Soccer                        |
| Gr | rounds           | 37,870                | Rugby Ground,<br>400-Meter Track,              |
| Do | ormitory         | 10,414                | Tennis Court (4),<br>Swimming Pool (25meters×6 |
| Pe | ersonnel Housing | 7,677                 | couses), etc.                                  |
| To | otal             | 106,936               |  |

# Buildinas

| Classification          | DN  | structure | Total Floor Space |  |  |
|-------------------------|---|-----------|-------------------|--|--|
|                         | Main Building I                                       | RC3       | 4,040             |  |  |
|                         | Main Building II                                      | RC3       | 3,576             |  |  |
|                         | Main Building 🏾                                       | RC3       | 3,594             |  |  |
|                         | Main Building IV                                      | RC3       | 660               |  |  |
|                         | Main Building V                                       | RC4       | 2,491             |  |  |
|                         | Main Building VI                                      | RC4       | 1,155             |  |  |
|                         | Advanced Course Building                              | RC4       | 1,160             |  |  |
|                         | General Education Building                            | RC3       | 620               |  |  |
|                         | Techno Center   | S1        | 1,001             |  |  |
| Lecture                 | Hydrodynamic Laboratory                               | S1        | 253               |  |  |
| and<br>Research         | Room for Physical Education                           | RC1       | 43                |  |  |
|                         | Preparation Room for Civil<br>Engineering Experiments | S1        | 186               |  |  |
|                         | Preparation Room for<br>Electric Experiments          | S1        | 63                |  |  |
|                         | Room for Architecture<br>Experiments                  | S1        | 99                |  |  |
|                         | Guard Mens'Room & Garage                              | RC1       | 191               |  |  |
|                         | Library   | RC2       | 1,965             |  |  |
|                         | Welfare Hall "IBUKI"                                  | RC2       | 834               |  |  |
|                         | boiler Room etc.                                      |           | 1,586             |  |  |
|                         | Subtotal  |           | 23,517            |  |  |
|                         | Gymnasium I   | RC2+S     | 1,286             |  |  |
|                         | Gymnasium II  | RC1       | 885               |  |  |
|                         | Training Hall   | W1        | 336               |  |  |
| Physical                | Ando Memorial Hall                                    | S1•RC1    | 789               |  |  |
| Education<br>Faculities | Site of Training Camp<br>"RYOUNSO"                    | W1        | 235               |  |  |
|                         | Site of Training Camp<br>"2nd RYOUNSO"                | RC1       | 126               |  |  |
|                         | Warehouse etc.  |           | 1,233             |  |  |
|                         | Subtotal  |           | 4,890             |  |  |
|                         | Dormitory A   |           | 1,341             |  |  |
|                         | Dormitory B & C                                       |           | 1,543             |  |  |
|                         | Dormitory D   |           | 1,388             |  |  |
| Dormitory               | 1st Girls' Dormitory                                  |           | 647               |  |  |
| Domitory                | Administration Office &<br>2nd Girls' Dormitory       |           | 303               |  |  |
|                         | Dining Hall & Bath House etc.                         |           | 854               |  |  |
|                         | Subtotal  |           | 6,076             |  |  |
| Personnel<br>Housing    |   |           | 1,448             |  |  |
| Total                   |   |           | 35,931            |  |  |



- 1 Main Building I
- Main Building I
- ③ Main Building Ⅲ
- ④ Main Building Ⅳ
- (5) Main Building V
- 6 Main Building VI
- ⑦ Advanced Course Building
- ⑧ General Education Building
- (9) Techno Center
- 10 Hydrodynamic Laboratory
- 1 Guard Mens'Room & Garage
- Library
- (13) Welfare Hall "IBUKI"
- (1) Gymnasium I
- 15 Gymnasium I
- 16 Training Hall
- 1 Ando Memorial Hall
- 18 Site of Training Camp "RYOUNSO"
- (19) Site of Training Camp "2nd RYOUNSO"
- 20 Dormitory A

- 1 Dormitory B
- 2 Dormitory C
- 23 Dormitory D
- (4) 1st Girls' Dormitory
- 3 Administration Office & 2nd Girls' Dormitory
- 26 Dining Hall & Bath House etc.
- Personnel Housing
- A Baseball Ground
- B 400-Meter Track
- © Soccer Ground
- D Rugby Ground
- E Tennis Court
- (F) Swimming Pool