



National Institute of Technology, Kagawa College [Kagawa KOSEN]

Message from the President

National Institute of Technology, Kagawa College was established by the incorporation and reorganization of Takamatsu National College of Technology and Takuma National College of Technology both having the long history, on October 1st, 2009. We have seven departments at the General Education Courses and two majors at the Advanced Course. We have improved and advanced the facilities and the equipment for both education and research. We are enhancing the cooperative relationship between Takamatsu Campus and Takuma Campus, and are providing favorable environments for the education. At the General Education Course, we arrange a curriculum composed of liberal education, professional education, and practical technology education for 5 years, to develop highly qualified engineers that have a rich sense of humanity and creativity, with a competency to deal with rapid progress of science and technology and with harmony among intelligence, technology and spirit. Students



can attain as high competency as those at a university by the study for 5 years. Moreover, students can obtain the same degree of bachelor as those who graduate a university by the study for 2 years at the Advanced Course after graduation of the General Education Course.

At Takamatsu Campus, We have Industrial and Systems Engineering Division composed of Department of Mechanical Engineering, Department of Electrical and Computer Engineering, Department of Electro-Mechanical Systems Engineering and Department of Civil Engineering for the General Education Courses. We are cultivating engineers active in the region of creative manufacturing. At Takuma Campus, We have Electronics, Information and Communication Engineering Division composed of Department of Communication Network Engineering, Department of Electronic Systems Engineering, and Department of Information Engineering for the General Education Courses. We are cultivating engineers active in the region of advanced electronics, information and communication. We have Advance Course in Industrial and Systems Engineering at Takamatsu Campus and Advanced Course in Electronics, Information and Communication Engineering at Takamatsu Campus. At both Advanced Course, We are supplying educations full of intellectual stimulation and international sense, and are enhancing the Science Seminar.

We have Dormitories, Counseling Room and Career Support Center to support students' welfare, study, employment and career shaping through such as internship. We have International Exchange Promotion office to develop international exchange and collaboration in education and research, and Human Resource Development Office to develop local industries and enhance the partnership with them. We are making Academic Exchange Agreements with Overseas Universities, sending students abroad for international internship or student exchange, and promoting Cooperative Research with the Private Sector eagerly. We contribute to the wealth and advancement of our local community as a driving force of intellectual and technological progress.

Both of our campuses' long histories have seen over 19,600 students graduate and secure meaningful employment in the private sector, municipal and prefectural governmental offices, universities, and research institutes. These graduates of the colleges have displayed and exemplified an impressive work ethic and job performance, leading to high praise and evaluations given by employers. We constantly embark on new challenges and develop ourselves, inheriting the excellent traditions.

Takeshi Yao President

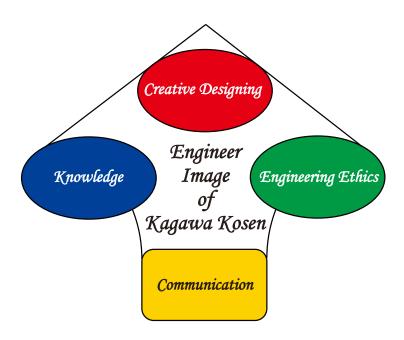
Mission and Educational Goals

- Mission of National Institute of Technology, Kagawa College: NITKC (Kagawa KOSEN)
 - To develop highly qualified engineers that have a rich sense of humanity and creativity.
 - To contribute to the wealth and advancement of our local community as a driving force of intellectual and technological progress.

■Educational Goals

Kagawa KOSEN's educational objectives, based upon a detailed and comprehensive curriculum, are as follows:

- ♦ To broaden students' minds, with the aim that they will become engineers of the future that will play an instrumental role in a sustainable society.
- To train students to have the technological Knowledge and applicable skills for coping with these fast changing times.
- ♦ To train students to be engineers of the future, who can apply their imagination to tackle the complex problems of society.
- To develop the students' intellect, as well as communication skills, in order to prepare them for international career paths.



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History

\Diamond History

April, 1962

Takamatsu National College of Technology
(Takamatsu KOSEN) **Takamatsu Campus of Kagawa KOSEN

Takuma National College of Technology (Takuma Denpa KOSEN) **Takuma Campus of Kagawa KOSEN

October, Kanritsu Musen Densin Koshujo Osaka Branch (National

1943	School of Radio Telecommunications, Osaka Branch) was established at Yata-mura, Naka-Kawachi-gun, Osaka
April, 1945	Kanritsu Musen Densin Koshujo Osaka Branch was renamed Kanritsu Osaka Musen Densin Koshujo (Osaka National School of Radio Telecommunications).
April,	Kanritsu Osaka Musen Densin Koshujo was relocated in

Takuma-cho, Mitovo-gun, Kagawa, and was renamed Takuma Denpa High School (Takuma Radio Technical High School).

Takamatsu National College of Technology(Takamatsu KOSEN)
was established. It consisted of two departments: the Department of
Mechanical Engineering and the Department of Electrical Engineer-
ing.

April. Takamatsu KOSEN was restructured into three departments: the 1966 Department of Mechanical Engineering, the Department of Electrical Engineering and the Department of Civil Engineering.

April,	Takuma Denpa High School became Takuma National College
1971	of Technology (Takuma Denpa KOSEN). It consisted of one
	department of Radio Engineering

April,	Takuma Denpa KOSEN was restructured into two departments:
1976	the Department of Radio Engineering and the Department of
	Flectronics

Takuma Denpa KOSEN was restructured into three departments: April. 1980 the Department of Engineering, the Department of Electronics and the Department of Information Engineering.

Takuma Denpa KOSEN was restructured into four departments: April the Department of Radio Engineering, the Department of Electronics, the Department of Information Engineering and the 1985 Department of Control Engineering.

The Department of Radio Engineering was renamed the Department of Telecommunication Technology.

April, Takamatsu KOSEN was restructured into four departments: the 1990 Department of Mechanical Engineering, the Department of Electrical Engineering, the Department of Electro-Mechanical Systems Engineering and the Department of Civil Engineering.

April Advanced Engineering Course was established. 1999

Takamatsu KOSEN consisted of four departments: the Department April. 2001 of Mechanical Engineering, the Department of Electrical and Computer Engineering, the Department of Electro-Mechanical Systems Engineering and the Department of Civil Engineering.

Takamatsu KOSEN was reorganized and was affiliated with the 2004 Institute of National Colleges of Technology.

Takuma Denpa KOSEN was reorganized and was affiliated with 2004 the Institute of National Colleges of Technology. Advanced Engineering Course was established.

In October, 2009, Takamatsu KOSEN and Takuma KOSEN were incorporated and reorganized as National Institute of Technology, Kagawa College (Kagawa KOSEN). Two divisions including seven departments were set up: Industrial and Systems Division (Takamatsu Campus) and Electronics, Information and Communications Division (Takuma Campus).

1949

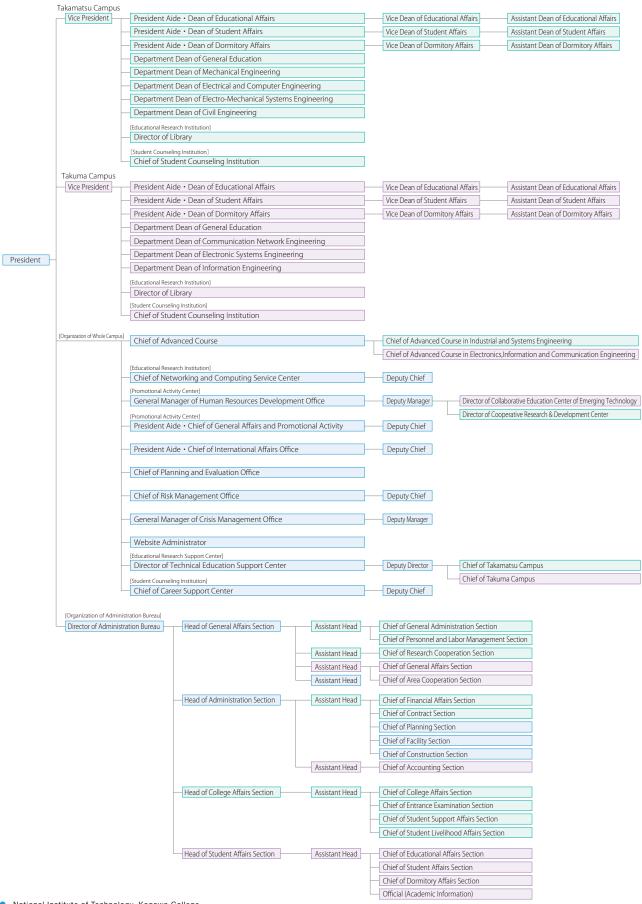
The departments are as follows: Dpt of Mechanical Engineering, Dpt of Electrical and Computer Engineering, Dpt of Electro-Mechanical Systems Engineering and Dpt of Civil Engineering (Takamatsu Campus); Dpt of Communication Network Engineering, Dpt of Electronic Systems Engineering and Dpt of Information Engineering (Takuma Campus). The Faculty of Advanced Engineering was also set up: Advanced Course in Industrial and Systems Engineering; Advanced Course in Electronics, Information and Communication Engineering. Dr. Masashi Kamon was appointed as the first president of Kagawa KOSEN.

In January, 2013, a commemoration ceremony was held to celebrate the 50th anniversary of the Takamatsu Campus and the 70th anniversary of the Takuma Campus.

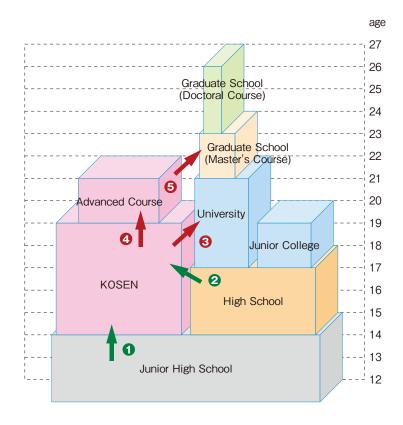
In April, 2014, Dr. Takeshi Yao was appointed as the second president of Kagawa KOSEN.

Organization

♦ Chart of Organization



School System of Japan



- 1 Junior high school graduates are eligible to enroll at a KOSEN.
- 2 High school graduates are eligible to enroll at a KOSEN as transfer students.
- **3** KOSEN graduates are eligible to enroll in a university as transfer students.
- 4 KOSEN graduates are eligible to enroll in an advanced course.
- 6 KOSEN Advanced Course graduates are eligible to enroll in a university graduate program.

■ KOSEN System

KOSEN system — five-year engineering education from 15-year old — was established in 1961, in response to a strong demand from industrial sector to foster engineers who sustain Japanese high economic growth at that time.

Characteristics of KOSEN Education Upon Admission

- We admit junior high school graduates
- We enable students to engage in career and life planning at a young age

In School

Practical and Innovative Education

- We develop an curriculum in the liberal arts and professional studies
- We have highly qualified teaching staff (more than 80% of specialized subject teachers have doctoral degree)
- We provide experimental and practical training, internship and coop education
- We provide programs accredited by JABEE
- We offer international exchange opportunities

Personality Development

- · We offer student dormitories and extracurricular activities
- We hold Robot, Programming, Design and Speech contests
- We organize annual all KOSEN Athletics Competition

Upon Graduation

- · We help students to find various career paths
- We produce engineers with extensive practical creativity

Departments

General Education

This division offers various arts and science subjects including physical education aimed at cultivating students with wide-ranging knowledge and basic understanding required for the study of engineering. Our curriculum covers that of senior high schools putting stress on mathematics and science, and also offers some courses at the college level to the senior students.

◇Fulltime Academic Staff in Department of General Education

[Takamatsu Campus]

Title	Name	Research Field
	KONO, Michihiro	Criminal Law & Procedure Constitution
	TANIGUCHI, Hiroaki	Algebraic Combinatorics
	SAKAMOTO, Tomotsugu	History of Ancient Chinese Thoughts
	TAKAHASHI, Hiroaki	Topology Mathematical Physics
Prof.	OKANO, Hiroshi	Inorganic Materials Chemistry Thin Film Engineering
1 101.	TAGUCHI, Jun	History of Educational Thought
	NAKASE, Mikio	Sports Methodology Coach Methodology
	ITO, Kikuyo	Cross-language Speech Perception and Production
	SAWADA, Isao	Statistical Mechanics Condensed Matter Theory
	HASHIMOTO,Norifumi	Synthetic Organic Chemistry Catalytic Chemistry
	YOSHIZAWA, Kousei	Theory of Sports Training
	NAGAHARA,Shinobu	Modern Literature
Associate Prof.	YODA, Jun	European History
	ICHIKAWA, Ken	English Education
	SATO, Fumitoshi	Algebraic Geometry
Senior Lecturer	TOBA, Motoko	English Education, Applied Linguistics
	TOKUNAGA, Shintaro	TESOL, East Asian History
Assistant	NODA, Kazuto	Condensed matter theory
Prof.	SHIRAISHI, Maresuke	Cosmology





Department of General Education





[Takuma Campus]

Title	Name	Research Field
	IDEBUCHI, Mikiro	Methodologies of Teaching English
	MINAMI, Takayuki	Differential Equation Hamiltonian System
Prof.	UCHIDA, Yuriko	Japanese History Career Education Women's Studies
Piùi.	ARIMA, Hirotoshi	Methodology of Coaching
	HATA, Nobuoki	British Literature
	FUJIHARA, Nobuhiro	Japanese Literature
	HASHIMOTO, Ryuta	Number Theory Continued Fraction
	UEHARA, Shigenori	Geometric Topology General Topology
Associate	MORI, Kazunori	English Teaching, CALL
Prof.	YOKOYAMA, Manabu	Methodology of Sports Training Health Education
	NAKAMURA, Tokuhiro	Atmospheric Chemistry
	KUROKI, Tsunehide	Theoretical Physics
Senior Lecturer	YAMAOKA, Kenjiro	Political Theory Refugee Studies
Assistant . Prof.	MORI, Akane	Clasial Japanese Literature
	MASUMOTO, Shuhei	Operator Algebra, Set Theory

♦Curriculum

Compulsory Subject	Credits
Japanese I-II	7
Geography	2
History I, II	4
Civics I, II	4
Fundamental Mathematics I-II	8
Differential and Integral Calculus I, II	7
Mathematical Analysis	3
Physics I, II	5
Chemistry I, I	5
Health and Physical Education I-IV	9
Art I, II	2
English IA, IB	6
English IIA, IIB	5
English IIA, IIB	4
Language Seminar	2
Science Seminar	1
Career Support	1



Department of General Education in Spring



Learning English Grammar at Multimedia LL

[Takamatsu Campus]

Elective Subject	Credits
Japanese Literature I	2
Human Science I-Ⅲ	6
Social Science I-III	6
Environmental Chemistry	2
Principles of Physical Chemistry	2
Health and Physical Education V	1
English IV, V	5
Language Seminar II	2
Overseas English Program	1

[Takuma Campus]

Elective Subject	Credits
Japanese Literature II	2
Social Science	2
Global Studies	2
Topics in Natural Science	1
Mathematics Seminar I-Ⅲ	3
Health and Physical Education V	1
English for Specific Purposes I, II	4
Chinese I, II	4
Overseas English Program	1
Teaching Support Activity	1

◇Main Experiment Facilities

Takamatsu Campus	Room	Main Equipment
	Physics Laboratory	High Vacuum Pump, Spectroscope, Induction Coil
	Chemical Laboratory	Sputtering System, PH Meter, Draft Chamber with Scrubber
	Language Laboratory	46 booths, 46 Computers, e-learning

	Room	Main Equipment
Takuma Campus	Physics Laboratory	Audio-visual Equipment, Measurement Device of Specific Charge
	Chemistry Laboratory	Ultra Pure Water Production System, Draft Chamber with Scrubber, Drying Oven
	Multimedia Learning Laboratory	45 booths, 45 computers, e-learning

Industrial and Systems Engineering Division (Takamatsu Campus)

- Department of Mechanical Engineering

Mechanical engineers play a vital role in product design, development and manufacturing of industrial products in the modern industrial world as well as new challenges in developing countries.

Our educational program is designed to develop creative mechanical engineers who will excel in the industrial world and fulfill their personal desire to leave a legacy of successful accomplishments.

◇Fulltime Academic Staff

Title	Name	Research Field
	YAMASAKI, Yojiro	Robotics Motion Control
	IWATA, Hiromu	Vibration Dynamics Solar Car
Prof.	KIHARA, Shigefumi	Applied Mechanics
	HASHIMOTO, Yoshio	Computational Dynamics
	KOJIMA,Takafumi	Thermodynamics Heat Transfer Engineering
	YOSHINAGA, Shinichi	Control Engineering
Associate Prof.	JODAI, Yoshifumi	Fluids Engineering
	ITO, Tsutomu	Materials Physics Welding Science
Senior Lecturer	TAKAHASHI, Yoichi	Precision Machining Forming Processes
Assistant Prof.	MAEDA, Yusaku	Sensor Engineering







◇Curriculum

Classification	Subject	Credits
	Applied Mathematics	2
	Engineering Physics I	2
	Introduction to Mechanical Engineering	
	Mechanics	1
	Strength of Materials I	2
	Strength of Materials I	
	Working Technology	
	Machine Element Design I	1
	Machine Element Design II	2
	Engineering Materials I	2
	Dynamics of Machinery	2
	Thermodynamics	
Compulsory	Hydraulics	2
Compulsory	Electrical Engineering	2
	Control Engineering	2
	Fundamental Programming	2
	Numerical Methods I	
	Mechanical Design & Drafting I	2
	Mechanical Design & Drafting II	2
	Computer Aided Design & Drafting I	3
		3
		3
	Fundamental of Working Exercise II	2
	Mechanical Experiment I	
	Mechanical Experiment II	2
	Graduation Research	8

Glassification		
	Mathematical Methods in Engineering Engineering Physics II	2
	Strength of Materials II	
	Theory of Elasticity	
	Engineering Materials II	-
	Heat Transfer Engineering	
	Fluids Dynamics I	
	Electronic Engineering	
	Computer Engineering	2
	Mechanism	
	Systems Engineering I	
Elective	Numerical Methods II	2
Licotive	Computational Mechanics	2
	Computer Aided Design & Drafting II	4
	Technical English I	1
	Technical English II	1
	Strength & Fracture of Materials	1
	Heat Engines	1
	Systems Engineering II	
	Fluids Dynamics II	1
	Special Lectures on Engineering I	1
	Special Lectures on Engineering II	1
	Job Training	1
	Introduction to Engineering Frontier	1





⊘Main Experiment Facilities

Room	Main Equipment
Machining Lab.	Ultra-Precision Machine, Wire-Cut EDM Systems, Hobbing Machine, Precision Lathe
Measuring Lab.	Non-Contact 3D Measuring Machine, Surface Finishing Indicator, Micro Hardness Tester
Material Strength Lab.	Universal Materials Testing Machine, Fatigue Testing Machine. Torsion Tester, Charpy Impact Tester
Metallographic Lab.	Optical Microscope, Electric Furnace, Hardness Tester, SPD Equipment
Sharing Lab.	Hydraulic Servo-Mechanical Fatigue Testing Machine
Dynamics Lab.	Vibration System, Vibration Meter, FFT Analyzer, Signal Analyzer
Wind Tunnel Lab.	Low Turbulent Wind Tunnel (40 m/s), Hot Wire Anemometer
Thermal Engineering Lab.	Heat Exchanger Testing Equipment
Internal Combustion Engine Lab.	Internal Combustion Engine Performance Testing Equipment, Engine Combustion Analysis System, Exhaust Gas Analyzer
Control Lab.	DC Servo Motor Testing System, BASIC FA Study Kits, Pocketcomputer Controlled AGV Testing System
Electronics Lab.	Oscilloscope, Digital Multi-Meter, Function Generator, DC Power-Supply Unit
Training Factory	Lathe, Machining Center, CNC Lathe, Milling Machine, Grinding Machine, Crucible Furnace, Welding Equipment, Hydraulic Press
Drafting Room, CAD Room	Drafting Desks and Machines, Sketching Goods and Models, CAD System

!- Department of Electrical and Computer Engineering

The department of electrical and computer engineering intends to educate the engineers who can contribute to the high technological society. For this purpose, the educational curriculum is designed to include the fundamental of mathematics and physics in the first stage, and applied technologies are programmed in the next stage. Furthermore, teamwork and cooperativeness, which are necessary in the social works, will be introduced in the various experiments and circuit design. Major parts of these subjects consist of the technologies of the embedded system.

○Fulltime Academic Staff

Title	Name	Research Field
	SHIKAMA, Tomokazu	Semiconductor Physics Thin Films Engineering
Prof.	SHIGETA, Kazuhiro	Information and Communication Engineering Educational Technology
	TSUJI, Masatoshi	Electronic Circuit Microwave Engineering
	URUSHIHARA, Shiro	Motion Control
Associate Prof.	TARAO, Hiroo	Electromagnetic Compatibility Bioelectromagnetics
	MURAKAMI, Yukikazu	Educational Technology
Senior Lecturer	KAKIMOTO, Takeshi	Software Development Management
Assistant	HINAMOTO, Yoichi	Digital Signal Processing
Prof.	YAMAMOTO, Masashi	Material Science





Experiment of Embeddel System

○Curriculum

Classification	Subject	Credits
	Engineering Mathematics I	2
	Engineering Mathematics II	2
	Fundamentals of Physics	2
	Electric Fundamental-Mathematics	2
	Electrical Fundamentals I	0
	Electrical Fundamentals II	2
	Electromagnetics I and Exercise	3
	Electrical Circuits I and Exercise	3
	Electrical Physics	1
	Fundamentals of Electronics	2
	Fundamentals of Measurement Engineering	2
	Fundamentals of Computer Mathematics	1
	Logic Circuits	1
Compulsory	Fundamentals of Information Processing I	2
	Fundamentals of Information Processing I	2
	Fundamentals of Information Processing II	2
	Operating Systems	
	Information and communication network	2
	Computer Hardware	2
	Energy Engineering in Environment	2
	Practice of Elementary Creation I	2
	Practice of Elementary Creation II	2
	Experiments of Electronics and Computer Science I	3
	Experiments of Electronics and Computer Science II	3
	Applied Experiments on Electronics and Computer Science	
	Graduation Research	6
	Special Practice	1
	Design of Circuit	2

Classification	Subject	Credits
	Engineering Mathematics II	2
	Physics	2
	Electromagnetics II and Exercise	
	Electrical Circuits II and Exercise	3
	Electronics Circuits I and Exercise	4
	Introduction of Semiconductor Physics	2
	Algorithms	2
	Study Guide for Technical English	2
	Communication Engineering	
	Control Science	2
	Digital Instrumentation and Control	2
Elective	Information and Coding Science	2
	Statistical Data Processing	2
	Signal Processing	2
	Electric and Electronic Materials	2
	Interface	_
	Electronics Circuit II and Exercise	2
	Multimedia Engineering	2
	Electronic Device	2
	Computer Simulation	2
	Job Training	1
	Special Lecture I	1
	Special Lecture II	1
	Introduction to Engineering Frontier	1





♦ Main Experiment Facilities

Measurement Control Lab.	SCR Inverter, Electric Machine Training System, He-Ne Laser, Optical Power
Electronics and Information Lab.	Curvetracer, Oscilloscope, Logic Analyzer, Microwave Measuring System, Print Board Fabrication System, Optical Communication/Optical Fiber Communication System
Materials Lab.	Lock-in Amplifier, Ultra High Resistance Meter, Liquid Nitrogen Cryostat, Thickness Meter, Green Laser
Power Electronics Lab.	Hopping Robot, Linear Motor Positioning System, Inverted Pendulum System, Image Processing System
Electromagnetic Compatibility Lab.	Uniform Magnetic Field Exposure System, Magnetic Field Measurement Device, Work Station
Electronics Lab.	Oscilloscope, Function Generator, DC Power supply, Q Meter, Digital Frequency Counter, Pulse Circuit Trainer
Acoustical Information Lab.	Anechoic Chamber, Acoustic Measuring System, Ultrasound Detector
Computer and Communication Engineering Lab.	Logical Circuit Experiment Apparatus, Semiconductor Element Experiment Apparatus, Arithmetic Circuit Trainer, AD/DA Converter Trainer, Logic Analyzer

1- Department of Electro-Mechanical Systems Engineering

The department has a curriculum to educate students standing on mechatronics which is a combined engineering field that consists of mechanics, electronics, control engineering and computer science. The students are expected to have the role of not only simple manufacturing but also design & development, quality management, maintenance & inspection and so on in the production process.

◇Fulltime Academic Staff

Title	Name	Research Field
	HIRAOKA, Nobuaki	Mechatronics
Prof.	SOGO, Hiroyuki	Kinematics Robotics
	TOKUNAGA, Hidekazu	Conputational Learning Theory Web Mining
	YURA, Satoshi	Control Engineering Motion Control
	SOUMA, Takeshi	Energy Engineering Energy Materials
Associate Prof.	SHIMASAKI, Shin-ichi	Electromagnetic Processing of Materials
	HENMI, Tomohiro	Control Engineering
	SHOBAKO, Shinichiro	Welding & Joining Arc Plasma
Senior Lecturer	ISHII, Kohei	Biomedical Engineering
Assistant Prof.	TSUMORI, Nobuhiro	Nanophotonics Near-field Optics









Checking Electronic Components

♦Curriculum

Classification	Subject	Credits
	Applied Mathematics	2
	Engineering Mathematics	2
	Physics I	0
	Physics I	2
	Manufacturing Processes	2
	Fundamental Mechanics	2
	Mechanics of Materials I	2
	Engineering Materials I	2
	Thermal Engineering I	1
	Fluid Engineering I	1
	Electric Circuits	0
	Electronic Circuits	2
Compulsory	Information Processing I	2
	Mechatronics I on Basis	3
	Mechatronics II on Basis	3
	Mechatronics II on Basis	3
	Mechatronics System Design	1
	System Control Engineering I	2
	Technical Japanese Expression I	1
	Technical Japanese Expression II	1
	Training and Exercise I on MONOZUKURI Basis	3
	Training and Exercise II on MONOZUKURI Basis	3
	Training and Exercise III on MONOZUKURI Basis	2
	Experiment I	5
	Experiment II	3
	Graduation Research	6

		Credits
	Mechanical Engineering Design	2
	Mechanics of Materials II	2
	Engineering Materials II	
	Thermal Engineering II	1
	Fluid Engineering II	1
	Electronics	2
	Information Processing I	2
	Information Processing II	2
	System Control Engineering II	2
	Mechanical Dynamics	2
	Robotics	2
Elective	Mechanical Instrumentation	1
	Statistical Analysis	2
	Technical English	2
	Computer Network	2
	Welding and Joining	2
	Laser Processing	2
	Electromagnetics	2
	Electronic Instrumentation	2
	Sensor Devices	2
	Planning	2
	Special Lecture I	1
	Special Lecture II	1
	Job Training	1
	Introduction to Engineering Frontier	1

♦ Main Experiment Facilities

<u> </u>		
Room	Main Equipment	
Engineer Material Lab.	Optical Microscope, Electric Furnace, Video Microscope, Vickers Brinell and Rockwell Hardness Tester, SPD Equipment	
Mechanics of Material Lab.	300kN Universal Testing Machine, Torsion Tester Charpy Impact Testing Machine, Rotating Bending Fatigue Testing Machine	
Thermal Engineering Lab.	High-frequency Induction Furnace, Electrometer, Laser Displacement Sensor, High-speed Camera, Heat Exchanger Testing Equipment	
Electronics Lab./Electronic Control Lab.	Oscilloscope. Digital Multi-Meter, Function Generator, Electronic Voltmeter, Universal Counter, DC Power-Supply Unit, PCB-CAD/CAM	
CAD Room	Video Projector, Personal Computer, 3D CAD	
Exercise Room	Video Projector, Personal Computer, 3D CAD, 3D Printer	
Control Lab.	Temperature Control Testing System, Water Level Control Testing System	
FA Training Factory	3D Modeling Machine, Vertical Milling Machine, Drilling Machine, Band Sawing Machine	
Measuring Lab.	Air Micrometer, Micro-Indicator, Tool Micrometer Microscope	
Training Factory	Engine Lathe, Drilling Machine, Universal Milling Machine Universal Band Sawing Machine, Machining Center, Welders	

1- Department of Civil Engineering

The department of civil engineering is working on fostering engineers who can contribute to the construction of infrastructure supporting safe and comfortable lives of citizens and the maintenance of the natural environment which is also deeply related to the construction of infrastructure.

◇Fulltime Academic Staff

Title	Name	Research Field
	KOTAKE, Nozomu	Geotechnical Engineering Geoenvironmental Engineering
Prof.	MUKAITANI, Mitsuhiko	Geotechnical Engineering Irrigation Pond Science
	MIYAZAKI, Kosuke	Infrastructure Planning Transportation Planning
Associate	TAGAWA, Tadashi	Sanitary Engineering Environmental Engineering
Prof.	HAYASHI, Kazuhiko	Concrete Engineering Maintenance Engineering
	YANAGAWA, Ryoichi	Coastal Disaster Management Engineering Coastal Ecosystem Engineering
Senior Lecturer	IMAOKA, Yoshiko	Urban Planning Welfare Engineering
	TAKAHASHI, Naoki	Hydraulic Engineering Ecological Engineering
Assistant Prof.	SUZUKI, Mariko	Agricultural Engineering. Geoenvironmetal Engineering
	HASEGAWA, Yuki	Concrete Engineering Agricultural Engineering





♦Curriculum

Classification	Subject	Credits
	Physics I	2
	Applied Mathematics I	2
	Introduction to Civil Engineering	2
	Basic Drawing	1
	Fundamental Mechanics I, II	4
	Structural Mechanics I	3
	Structural Materials	2
	Structural Design	3
	Basis of Disaster Prevention Engineering	2
	Regional Disaster Prevention Engineering	1
	Elements of Environmental Engineering	1
Compulsory	Environmental Engineering I	2
	Regional Environmental Engineering	1
	Foundamental Information Processing	2
	Advanced Computer Engineering	2
	Surveying I, II	2
	Urban and Regional Planning	2
	Regional Urban and Regional Planning	1
	Practices in Civil Engineering I, II, II	3
	Engineering Study with Creative Training	2
	Experiment and Practice in Civil Engineering I, II	4
	Civil Experiments and Exercises I, II, II	6
	Civil Engineering Design and Draft I, II	4
	Graduation Research	6

Classification		
	Physics II Applied Mathematics II	1 2
	Introduction to Electrical Engineering	1
	Structural Mechanics II	2
	Soil Mechanics	
	Hydromechanics	2
	Construction Method	2
	Hydrology	
	Coastal Engineering	1
	Environmental Engineering II	2
Elective	Environmental Impact Assessment	2
Licotivo	Applied Computer Engineering	
	Surveying II	2
	Structural Engineering	2
	Geotechnical Engineering	
	Information Processing Engineering	2
	Structures in Architecture	2
	Advanced Environmental Engineering	2
	Job Training	1
	Special Lecture I	1
	Special Lecture II	1
	Introduction to Engineering Frontier	1





⊘Main Experiment Facilities

Room		
Structural Engineering Lab.	Static and dynamic loading machine, Beam testing machines, Digital static strain meters, Dynamic strain meters, Universal counter, Multi-channel data recorder, Servo-type 1D&2D shaking tables, 2D soil tanks	
Materials Engineering Lab.	Universal material testing machine (Cap. of 3000kN), Strain control universal testing machine, Revolving-blade concrete mixer, Center hole oil jacks and oil pumps, testing apparatuses for various concrete, Concrete curing water bath, Data loggers, Digital displacement meters, Electronic balances(9seats)	
Hydraulic Engineering Lab.	Three dimensional channel, Movable channels, Wave making channels, Shape-created weir, Pipe line with a Venturi meter, Wave height indicators, Various recorders	
Geotechnical Engineering Lab.	Automatic consolidation testing apparatus, Universal compression testing apparatus, Cyclic triaxial compression test apparatus, Large-scaled universal direct shear apparatus, Falling head permeability test apparatus, B-type viscometer, High speed camera, Various soil testing apparatus	
Covironmental Engineering Lab	Total organic carbon analyzer, Ion chromatograph, Gas chromatograph, CHN analyzer, Autoclaves, Centrifuge, Ultra pure water system, Acid rain collect,	
Environmental Engineering Lab.	Electronic scale, Constant temperature ovens	
Equipment room	Global Navigation Satellite Systems, Geographic Information System, Remote Sensing, Total station, Digital type theodolites(4set), Automatic levels,	
Equipment room	Electro-optical distance meters(4set), Plane table, Pranimeters, Stereoscope	
Drafting room	Drafting table angle boards(45set), Truss bridge model, Various drafting instruments	

Electronics, Information and Communication Engineering Division (Takuma Campus)

- Department of Communication Network Engineering

Both modern industry and society rely heavily on telecommunication systems, which are also known as a "neural network" of society. The constituents of the systems are electric wires, optical fibers and electromagnetic waves, as well as a great deal of computers. The aim of the Department of Communication Network Engineering is to foster competent engineers in this promising field of telecommunications. The curriculum is organized so that students can qualify for various national licenses such as an On-the-Ground I-Category Special Radio Operator, or a First-Class Technical Radio Operator for On-the-Ground Services.

○Fulltime Academic Staff

Title	Name	Research Field
	FUKUNAGA, Tetsuya	Information Theory Communication Theory
	SHIOZAWA, Takahiro	Optical Electronics Microwave Photonics
Prof	SAWADA, Shiro	Theoretical Physics
Piùi.	INOUE, Tadaaki	Communications Measurement
	ISSHIKI, Hiromi	Biomedical Engineering
	YOKOUCHI, Takashi	Applied Technology of Optical Fiber
	MANABE, Katsuya	Electromagnetic Theory Microwave Theory and Techniques
	TAKAJO, Hideyuki	Educational Technology Ubiquitous Computing
	SHOHON, Toshiyuki	Coding Theory Communication Engineering
Associate Prof.	ONO, Akira	Telecommunication Electronic Circuit
	KUMEKAWA, Kazuya	Computer Networks
	SHIRAISHI, Keiichi	Computer Algebra e-Learning
	KUSAMA, Yusuke	Microwave Engineering
Senior Lecturer	KAWAKUBO, Takashi	Field Emission Surface Physics







♦Curriculum

Classification	Subject	Credits
	Applied Mathematics	2
	Probability and Statistics	2
	Applied Physics I	2
	Applied Physics II	<u></u>
	Electric Engineering	2
	Information Processing I	
	Information Processing I	
	Digital Circuits I	
	Electric Circuits I	
	Electric Circuits II	
Compulsory	Electromagnetics I	2
	Electromagnetics II	2
	Electronic Circuits I	2
	Electronic Circuits II	2
	Electric and Electronic Measurements I	2
	Electronics	2
	Seminar on Communication Engineering	4
	Creative Experiments and Practices	4
	Experiments and Practices	2
	Experiments in Communication Network Engineering	2
	Experiments in Communication Engineering I	3
	Experiments in Communication Engineering I	4
	Graduation Research	12
	Information Processing II	2
	Electric and Electronic Measurements II	2
	Wireless Communication Engineering I	2
	Wireless Communication Engineering I	2
	Antennas and Propagation I	2
	Antennas and Propagation II	2
	Communication System A	2
	Communication System B	2
	Telecommunications Law I	1
	Telecommunications Law II	1
	Computer Networks I	2
- · ·	Computer Networks II	2
Elective	Information Theory	2
	Seminar on Radio Engineering	2
	Data Communications	2
	Semiconductor Electronics	2
	Optoelectronics	2
	Mathematics for Information Science	2
	Information Security	2
	Network Programming	5
	Factory Training	1
	Special Lectures I	
	Special Lectures I Special Lectures II	
	Introduction to Engineering Frontier	

♦ Main Experiment Facilities

Room	Main Equipment	
Electromagnetic Anechoic Chamber	EMI(Electromagnetic Interference)Receiver, CVCF(Constant-voltage Constant-Frequency)Power Supply, BiLog Antenna, Artificial Mains Network, Absorbing Clamp, Turn Table	
Photonics Lab.	Sampling Oscilloscope, Spectrum Analyzer, Logic Scope	
Digital Circuit Lab.	Pulse Pattern Generator, Error Rate Detector, Optical Spectrum Analyzer, Optical Amplifier, Optical Power Meter, Wavelength Variable Optical Attenuator	
Information Network Exercise Room	Training Equipments for LAN (Local Area Network) Integration (Routers, Switching Hubs, Wireless LAN Access Points, Personal Computers)	
Applied Electromagnetic Wave Lab.	Radar, Satellite Compass, AlS (Automatic Identification System) Receiver, Radio Direction Measurement Equipment, Radio Transmitter, Radio Receiver, Microwave Fundamental Measurement Equipment	

!- Department of Electronic Systems Engineering

In light of the advancements of mechatronics and Information technologies, there is a large demand for engineers in the development and integration of computer science, robotic systems and telecommunications.

The program in our department is designed to offer students many options from various fields such as hardware, software, electronics and communication technologies. We combine theory and practical application in the same course which provides practical laboratory experience. Our goal is to cultivate ingenuity and innovation in our students and provide them with all skills necessary for a successful career in the electronics industry.

◇Fulltime Academic Staff

Title	Name	Research Field
	MISAKI, Yukinori	Robot Engineering
Prof.	NAGAOKA, Shiro	Integrated Circuits
	YAGI, Masakazu	Solid State Physics
	MIKAWA, Michio	Solid State Physics
	JOHNSTON, Robert Weston	Computer Science
Associate Prof.	TSUKIMOTO, Isao	Electronic Circuits
	TENZOU, Hideki	Energy Engineering
	MORIMUNE, Taichiro	Solid State Physics
Senior Lecturer	SHIMIZU, Tomo	Semiconductor Devices
Assistant	IWAMOTO, Naoya	Semiconductor Devices
Prof.	SUGIMOTO, Masashi	Robotics



Digital Circuit Manufacture Experiment using VHDL (in 5th Grade)





♦Curriculum

Classification	Subject	Credits
	Applied Mathematics	2
	Probability and Statistics	2
	Applied Physics I	2
	Applied Physics II	2
	Electric Engineering	2
	Electric Circuits I	2
	Electric Circuits II	2
	Electromagnetics I	2
	Electromagnetics II	2
	Electronics	2
Compulsor	Electronic Circuits I	2
Compulsory	Semiconductor Electronics	2
	Digital Circuits I	2
	Digital Circuits II	2
	Information Processing I	2
	Seminar in Electronic Systems Engineering	4
	Creative Experiments and Practices	4
	Experiments and Practices	2
	Experiments in Electronic Engineering	4
	Experiments in Electronic Engineering I	4
	Experiments in Electronic Engineering I	4
	Graduation Research	12
	Network Theory	2
	Electronic Circuits II	.
	Semiconductor Device Engineering	2
	Electronic Measurements	<u>-</u>
	Solid State Physics	<u>-</u>
	Optoelectronics	<u>-</u>
	Electrical and Electronic Materials	<u>-</u>
	Control Engineering I	<u>-</u>
	Control Engineering II	<u>-</u>
	Robot Engineering	<u>-</u>
	Sensor Electronics	
Elective	Special Lecture in Electronic Systems Engineering	2
	Information System I	2
	Communication System A	2
	Information Processing I	2
	Data Communications	2
	Image Processing Technology	<u>.</u>
	System Engineering	.
	Job Training	<u>-</u>
	Special Lectures I	i
	Special Lectures I	
	Introduction to Engineering Frontier	

○Main Experiment Facilities

V Main Experiment rucinites		
Room	Main Equipment	
Common Lab.	Liquid Crysta, Tunable Filters,Cooled CCD Camera,Multispectral Imaging System, Hyperspectral Camera	
Measurement Engineering Lab.	Equipment of Supply Current Test to Detect Lead Opens of CMOS ICs. Oscilloscope, Current Probe	
Computer Engineering Lab.	Oscilloscope, Radiation Detector, Analog Waveform Processing System	
Circuit Design Lab.	Photoelectron Yieid Spectroscopy, UV-VIS NIR Spectrophotometer, Organic Thin Film Deposition Apparatus, Spectroscopic Reflectometer,	
Circuit Design Lab.	Laser Micro-machining Apparatus, Atomic Force Microscope	
Optoelectronics Lab.	Fluorometer, Quantum efficiency measurement system, Diffraction-grating monochromator, He-Cd laser, Ar ion laser, Cryogenic refrigerator	
Electronics Lab.	Infrared Thermal Camera, 3D Printer, 3D Scanner. Tabletop Microscope, Non-Mydriatic Auto Fundus Camera, Pulse Oximeter	
Materials Engineering Lab.	Pulsed Laser Depositon System, Sputtering Apparatus, Hall Effect Measurement System, X-ray Diffraction Equipment	
Plasma Sinering Lab.	Spark Plasma Sinering System	

!- Department of Information Engineering

The department offers students an opportunity to acquire the theoretical fundamentals of computer science, and learn how to apply this practical knowledge to everyday problems. The department aims to educate the students to be able to perform tasks such as the following:

- -Information system development
- -Application development and integration, such as sound and image processing, computer networking.

○Fulltime Academic Staff

Title	Name	Research Field
	MATSUSHITA, Hiroaki	Design and Analysis of Algorithms
	FUKUMA, Kazumi	Physics
Prof.	MIYATAKE, Akiyoshi	Educational System Engineering
PIOI.	TOKUNAGA, Shuichi	Image Processing
	KAWATA, Susumu	Programming Instruction
	SAWARAME, Masashi	Information Systems
	KAWATA, Jun	Plasma Surface Interaction
	KANAZAWA, Keizo	Image Processing
Associate Prof.	KONDOH, Yuji	Computer Algebra
	OKUYAMA, Shingo	Algebraic Topology
	KAWAZOME, Hayato	Plasma Spectroscopy
Senior	SASAYAMA, Manabu	Information Retrieval Machine Translation
Lecturer	TANIGUCHI, Yasutaka	Theoretical Nuclear Physics







♦Curriculum

	Applied Mathematics	
	Probability and Statistics	2
	Applied Physics I	2
	Applied Physics I	0
	Electric Engineering	
	Electric Circuits I	2
	Electronic Circuits I	2
	Digital Circuits I	0
	Digital Circuits II	2
Compulsory	Information Engineering	
Compaidory	Computer Architecture	
	Information Processing I	2
	Software Design and Development	4
	Seminar on Information Engineering	6
	Creative Experiments and Practices	4
	Experiments and Practices	2
	Experiments in Information Engineering	2
	Experiments in Information Engineering I	4
	Experiments in Information Engineering I	3
	Graduation Research	12

	Mathematics for Information Science	2
	Numerical Analysis	2
	Communication Theory	
	Electromagnetics	0
	Semiconductor Electronics	2
	System Engineering	2
	Automaton Theory	9 1
	Data Structures and Algorithms	2
	Programming Language	2
	System Programming	0 1
	System Software	2
	Compiler	2
	Information System I	2
Elective	Information System II	2
	Introduction to Artificial Intelligence	2
	Natural Language Processing	2
	Digital Image Processing	
	Database Management System	2
	Computer Networks I	2
	Computer Networks II	2
	Information Security	
	Information Science I	1
	Information Science II	
	Factory Training	1
	Special Lectures I	1
	Special Lectures II	1
	Introduction to Engineering Frontier	1





⊘Main Experiment Facilities

Room	Main Equipment
Control Circuit Lab.	3D Input/Output Device(3D Scanner, 3D Milling machine) 3D CAD/CAM software
Engineering Science Lab.	Educational design and prototyping platform, LabVIEW, Electronic Circuit Simulator
Network Lab.	Experiment equipments for network skill acquisition(Router,L2,L3 switch)
NLP Lab.	The server for analyzing Big Data
ICT Lac.	203.2cm diagonal screen size Integrated Touch Display

Faculty of Advanced Engineering(Bachelor's Degree Program)

The Faculty of Advanced Engineering at Kagawa KOSEN aims to develop analytical, problem-solving skills as well as research ability of students so that they become practical and creative engineers who will play important roles in various industries, and contribute to the regional economy and society through collaborative projects.

To accomplish this goal, the Faculty of Advanced Engineering is comprised of the Courses in Industrial and Systems Engineering Program at the Takamatsu Campus, and the Course in Electronics, Information and Communication Engineering Program at the Takuma Campus.

■Educational Objectives

The educational objectives of the Faculty of Advanced Engineering at Kagawa KOSEN are:

- ♦ Students will acquire highly specialist knowledge in their engineering fields and develop analytical skills by attending advanced lectures and proceeding their thesis research.
- ♦ Students will acquire broad knowledge and problem-solving skills from practical experience in other related fields to play leading roles in interdisciplinary areas.
- ♦ Students will learn ethical issues and responsibilities as engineers through collaborative researches with local educational organizations and companies.
- ♦ Students will acquire global viewpoints and communication skills in Japanese and English, by participating in workshops and scientific conferences inside and outside of the college.



Advanced Course(Takamatsu Campus)



Advanced Course(Takuma Campus)

- Advanced Course in Industrial and Systems Engineering (Takamatsu Campus)

This course has four sub-courses to educate students to be practical engineers with problem-solving skills and the creativity to develop technologies.

■ Mechanical Engineering Course

This course is for future mechanical engineers with problem-solving skills and original creativity.

■ Electrical and Computer Engineering Course

This course is for future electrical engineers, electronic engineers, computer engineers and researchers.

■ Electro-Mechanical Systems Engineering Course

This course is for future mechatronics engineers with well-founded skills who contribute to the human happiness and welfare.

■ Civil Engineering Course

This course is for future civil engineers with knowledge of design, planning, disaster prevention and environmental preservation techniques.

○Curriculum

Classification		Subject	Credits
iberal Arts	Compulsory	Management Theory TOEIC Preparation	0
Libera	Elective	Jurisprudence Reading of Literary works	2
	Compulsory	Engineer Ethics Topics in Mathematics I	0
Engineering Basic	Elective	Modern Physics Intellectual Property Rights English for Technical Purpose Topics in Mathematics II Physical Chemistry Analytical Chemistry Applied Physics Introduction to Civil Engineering Overseas English Program	2 2 2 2 2 2 2
Subjects	Compulsory	Experiments and Practicals I Experiments and Practicals II Thesis Research II Thesis Research II	6
Core Eng. Sub	Elective	Seminar I Seminar II Special Lectures Internship I Internship II Internship III Internship III Internship III	2









Water Quality Analysis

0.			
Eng. Subjects of ME Course.	Elective	Internal Combustion Engines Computational Mechanics Elasticity and Plasticity Advanced Strength and Fracture of Materials Matrix Vibration Analysis Reliability Engineering	2 2 2 2 2
Eng. Subjects of EC Course	Elective	Electromagnetic Compatibility Modern Control Theory Energy Conversion Engineering Project Management Theory Solid State Electronics Integrated Circuits Semiconductor Physics Digital Technologies Information and Communication Engineering Microwave Engineering Digital Signal Processing Knowledge Computing Image Processing Engineering	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Eng. Subjects of MS Course.	Elective	Advanced Heat Transfer Advanced Dynamics Optimization Theory Advanced Computer Processing Advanced Joining Technologies Advanced Energy Engineering Advanced Control Engineering I Advanced Control Engineering II Mechatronics	2 2 2 2 2 2 2
Eng. Subjects of CV Course	Elective	Seismic Design Durability Design Prevention of Natural Disasters I Environmental Disaster Prevention Engineering II Advanced Hydromechanics Infrastructure Planning Environmental Ethics and Management Continuum Mechanics Advanced Structural Materials Computational Analysis in Civil Engineering Civil Mathematical Planning Information Technology and Systems Seminars on Civil Engineering	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

ME Course...Mechanical Engineering Course

EC Course ··· Electrical and Computer Engineering Course

MS Course···Electro-Mechanical Systems Engineering Course

CV Course...Civil Engineering Course

- Advanced Course in Electronics, Information and Communication Engineering (Takuma Campus)

This course has two sub-courses to educate students to be practical, highly sophisticated engineers with knowledge of originality in electronics, information and communication engineering.

■Electronics and Information Engineering Course

This course is an educational program of engineers who follow the standards of JABEE (Japan Accreditation Board for Engineering Education).

■ Electronics, Information and Communication Engineering Vocational Course

This is the course in which students can be intent on the achievement of technology and expertise.

○Curriculum

CI	assification	Subject	Credits
Liberal Arts	Compulsory	Communicative English I	2
Bral		Communicative English II	2
==	Elective	Advanced Japanese Literature	2
.0	Compulsory	Engineer Ethics	2
Basic		Advanced Physical Science	2
		Topics Applied Mathematics	2
98	Elective	Intellectual Property	2
Engineering		English for Engineers	2
ᇤ		Engineering Mathematics	2

CI	assification	Subject	Credits
		Thesis Research I	6
	Compulsory	Thesis Research II	4
	Compaisory	Experiments and Exercise I	4
		Experiments and Exercise II	6
		Quantum Mechanics	2
"		Introduction to Information Technology	2
cts		Digital Signal Processing	2
oje		Applied Electromagnetics	2
Sul		Graph Theory	2
<u>a</u>		Information Networks	2
eCi.		Specialized Electronic Circuits	2
Sp	Elective	Industrial Instrument Engineering	2
Common Special Subjects		System Control Engineering	2
		Algorithms and Data Structures	2
ő		Multi-Media Engineering	2
U		Image Processing	2
		Special Lectures	2
		Internship I	1
		Internship II	2
		Internship II	4
		Internship IV	6
ξi,		Communication Engineering	2
CN	Elective	Radio and Light Wave Engineering	2
Se		Optical Communications	2
		Specialized Radio Engineering	2
Sots		Applied Solid State Physics	2
Eng. Subject of ES	Elective	Integrated Electronics	2
Ø		Digital Control Engineering	2
Tcts		Object Oriented Programming	2
를 를	Elective	Applied Network Programming	2
ਲ		Database Design	2



ES...Flectronic Systems

IT...Information



Stockholm International Youth Science Seminar, SIYSS



The world congress of Imagin Cup 2015 at Microsoft Corporate headquarters. (Image provided courtesy of Microsoft Corp.)



An international conference NANO Scitech2017

International Affairs

♦ Academic Exchange Agreement with Overseas Institutions

University / Faculty	Country / Region	Since
Dongyang Mirae University (DMU)	South Korea	Aug. 2005
Danang University of Technology (DUT)	Vietnam	Jun. 2009
Cheng Shiu University (CSU)	Taiwan (R.O.C.)	Dec. 2009
College of Engineering, Seoul National University (SNU)	South Korea	Jun. 2010
Universiti Teknologi MARA (UiTM)	Malaysia	Aug. 2010
Christchurch Polytechnic Institute of Technology (CPIT)	New Zealand	Jun. 2012
University of Caen Basse-Normandie	France	Jul. 2013
Rajamangala University of Technology Thanyaburi (RMUTT)	Thailand	Aug. 2014
Thai-Nichi Institute of Technology (TNI)	Thailand	Mar. 2015
Universite Francois-Rabelais Tours (UFRT)	France	Dec. 2015

♦ Organization of International Symposiums/Seminar (2011-2017)

- "International Symposium on Geo-Environment Engineering (GEE) 2011," May 2011, May 2012, May 2013, May 2014, May 2015 and May 2016.
- "International Joint Workshop on Technology in Education and Educational Research," Mitoyo, Kagawa, Japan, Jul. 2011and Oct. 2013.
- "International Postgraduate Seminar (IPGS)." Shah Alam, Malaysia, Jun. 2013, Jun. 2014.
- "International Civil and Infrastructure Engineering Conference (InCIEC)," Shah Alam, Malaysia, Sep. 2015.
- "International Conference on Nanoscience, Nanotechnology and Nanoengineering (IC-NET)," Shah Alam, Malaysia,
- "International Seminar on NanoScience and Nanotechnology (Nano-Scitech 2016)," Shah Alam, Malaysia, Feb. 2016 and Feb. 2017.
- ♦ "Eco-Energy and Materials Sciences and engineering Symposium", Dec. 2016.

♦ International Exchange and Academic Activities by Faculties and Students (2011-2017)

- Exhibition by NITKC students at Korea Electronics Show with DMU, Oct. 2010, Oct, 2012, and Oct. 2014.
- ♦ International internship at local offices of Japanese firms; in Thailand (2009 and 2015), Philippines (2010, 2012), China (2011 and 2013), Indonesia (2012), Hong Kong (2013 and 2016), Singapore (2013), Taiwan (2013), U.S. (2013)
- "Engineering Class in English" by Visiting Professors from overseas; at Dept. of Civil Eng. (Oct. 2010), Dept. of Mechanical Eng. (Jan. 2011), Dept. of Electrical and Computer Eng. (Sep. 2011), and Dept. of Communication and Network Eng. (Jan. 2013), Dept. of Civil Eng. (Jun. 2013), Dept. of Civil Eng. (Oct. 2013), and all Departments (Oct.
- ♦ Global Engineer Training Program: to UiTM (Mar. 2015), to UiTM (Mar. 2016), to UFRT (Sep. to Dec. 2016), to UiTM (Mar. 2017) and to RMUTT (Mar. 2017).
- ♦ Global Engineer Training Program: from UiTM (Jul. to Oct. 2011), from CSU (Jul. to Aug. 2014) , from RMUTT (Apr. 2015), from UFRT (Apr. to Jun. 2016) and from UiTM (Mar. 2017).

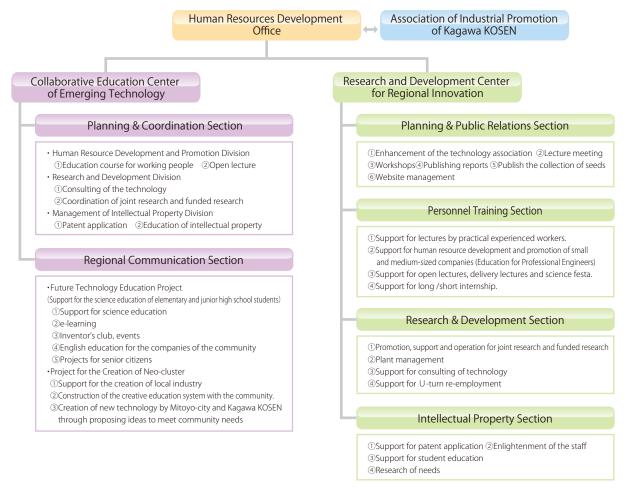
♦ International Students at NITKC

■Number of International Students Entering Mid-course/Advanced course of NITKC in Each School Year

Country School Year	Bangladesh	Brazil	Cambodia	China	Colombia	India	Indonesia	Kenya	Korea	Lao PDR	Malaysia	Mongolia	Philippines	Sri Lanka	Thailand	Uganda	Viet Nam	Pakistan	Total
2017											2	2			1				5
2016											4	1			1				6
2015									(2)	1		1						1	5
2014							2				2								4
2013											1					1			2
1985~2012	7	1	4	5	1	1	11	1	2	8	69	6	9	7	10	1	11		154
Total	7	1	4	5	1	1	13	1	4	9	78	10	9	7	12	2	11	1	176

Human Resources Development Office

◇Organization Chart of Human Resources Development Office



■ Association of Industrial Promotion of Kagawa KOSEN

Established on 28 August, 2009.

Purpose:

We utilize our knowledge, materials and human resources. We would like to develop the local industries and enhance the partnership with them, through the many operations such as exchanging technologies and information. We would like to contribute to the promotion of the education and research in Kagawa KOSEN

Description of business:

Promotion of technology development by the academic-industrial alliance. Development of local industries. Lecture meeting about technologies, lecture class, Workshop, Publish the information report, Consulting on technologies, Exchange information, Support for education of company workers, Promotion support projects of cooperative research, Internship, Recruiting fairs, Collaborative education, Promotion of education and research of Kagawa KOSEN etc.

■Shikoku KOSEN Center for Innovative Technologies

Purpose:

Anan, Kagawa, Niihama, Yuge and Kouchi KOSENs utilize the potentials of the colleges and aspects of the Shikoku-area, and spread out the activities of the academic-industrial alliance to contribute to the stimulation and promotion of the local area. Business outline:

- Department of the creation of innovation
 Matching between the needs and the technology seeds of KOSENs in Shikoku-area. Consulting the technologies. Activities of academic-industrial alliance such as joint research.
- 2. Department of the Intellectual Property
 - Management and education of Intellectual Property in coalition for KOSENs in Shikoku-area.
- 3 . Department of coalition for KOSENs in Shikoku-area.
 Other activities to achieve the purpose of the center.

Research

\Diamond Grants-in-Aid for Scientific Reserch

Studies of fluoroscopic image processing and assessment for skin-dose reduction in x-ray diagnosis

Digitalize the implicit knowledge of skilled baseball player by three demension motion analysis system and deverop the coaching method based on analytical data

Spontaneous symmetry breaking in nonperturbative string theory
Fabrication of mono-sized silicon sphere and controlling silicon crystallization by simultaneous imposition of electric and magnetic filed

An educational tool to visualize biological effects after irradiation on a human body by using a spray-type controlle

Study on higher dimensional dual hyperovals and related functions on finite fields Development of RF design engineer training program Relaxation analysis of Electrode Material for Secondary Lithium ion Batteries

Construction of education environment utilizing tablet devices by applying Ad Hoc/sensor network technology

Dosimetric study based on measurements of magnetic fields and contact currents from IH cookers

Study on Effects of Non-Solubility Impurity Atoms for Solute Drag Creep and Hot Ductility

Photoplethysmographic nail tip sensor for non-restraint and real-time monitoring system in home medical care

Development of organic position-sensitive detectors for full color image sensor

Serious 3D game for physics learning

Development of the optimal parameter tuning method based on Gröbner basis for the model predictive controller

Accuracy Enhancement of the Building Group Destruction Propability Model against Tsunami Attack Experimental Study on Biodegradable Resin Concrete for Practical Use

Quality attainment management system of concrete structures in revival road

Practice on advanced fluid mechanical experiments and its application to extensive engineering education for developing competent engineers NANO Technology Plat Form Established in the Average Science Laboratory

Development of a WEB Application to Support Autonomous Learning in English Education

Explicit formulas of Macdonald polynomials and associated algebraic structures

Exploring the way to the next standard model of particle physics by using muon precision physics

Fundamental degrees of freedom and breaking of supersymmetry viewed from higher order perturbation series and nonperturbative effect in nonperturbative string theory

Development of the reproduction system of the expert skill with the fine sensorless force control and the data storage cloud system

Development of Using Big Data for Local Transport Planning Proposal of farm work inheritance manual using eye camera

A Study on English Writing Lesson Applying Machine Translation

A study of technologies to prevent dialogue breakdown for natural conversation with communication robot

Development of slot car production teaching materials for learning a diversity of the energy conversion

Fostering multidirectional analytical ability by organic linkage in multiple fields - Focusing on communication technology

Development of teaching materials using the original car controlled with student's cellular phone Development of high brightness x-ray focusing technique using leaser plasmas

Number of Researches 33, Total Funds 35,667,271Ye

Commissioned Reseach

High accuracy of production and quality management techniques in open-field cultivation using the spectral reflectance spectrum and Machine Learning

A Collaboration Project between Mitoyo City and The National Institute of Technology, Kagawa College

 $Demonstration\ of\ flow\ fluctuation\ tracking\ type\ was tewater\ treatment\ technology\ using\ DHS\ system$

Development of high leveling support system for agricultural production technology utilizing ICT Development of a care system for elderly people in remote islands

Number of Researches 5, Total Funds 11,424,480Yen

\diamondsuit Cooperative Research with Private Sector

Study on Next Generation Imaging Technologies

Development of photoresist removal technique using hydrogen radical

Research on slope stability methods

Mechanical assistive system for wheelchairs to enhance safety in sloping road

Mechanical study of relation between soil and precast concrete

Study on Application of an Optical Fiber Grating Device Studies of qualitative optimization for x-ray images

Development of a Waste Treatment Plant for Scrap of Covered Wire Study on the disaster prevention equipment of an overhead traveling crane Development and evaluation of a system to manage a handwritten report

A study on improvement of image quality acquired with CBCT
Development and high functionality of the permeability test apparatus at in-situ named "Suika"

Development of oxide semiconductor materials

Development of a power line inspection robot

Improvement of the sewer pipes inspection system for practical use Development of a Monitoring System to Identify Location of Radiation Sources Fundamental Study of Relationship between Tsunami Disaster and Coastal Feature

Development of a lighting source for target detection by image processing

The study to succeed to traditional culture using a three-dimensional printer

Study on surface quality evaluation method of concrete structure Loose Contact Detection of In-Vehicle LED

Development of a multicopter and a robot for power line inspection

Development of a vital signal sensor

5 another researches Number of Researches 28, Total Funds 9,454,800Yen

\diamondsuit Other Competitive Funds and Grants

Innovation of Sewage Treatment Technology for Agricultural Reuse in Arid Region

Spread to the whole country field of low-cost sensor system with the information input and communication environment function and An empirical test by building a common database and information sharing system

National college cooperation universe human resource development projects towards the ultra-small satellite realization

Science Classes in Kodomo Miraikan Children's Center of Takamatsu City

Program to Promote Student Creation of Intellectual Properties

Development of an Automatic Point Rating System for Line of Magnetic Force in Handwriting and the Assessment of Educational Effect

Inheritance of sailor's knowledge and experiences to future generations -Work and daily life in ocean service-Foreign Route Sailors from Seto Inland Sea to the World –Knowledge and experiences to the next generation

Slope failure based on the localized liquefaction of the silip surface and the simple control work method using the rice terrace

Mechanical Characteristics of Concrete using Different Aggregate - Effective Utilization of All Stone - Fabrication of Aluminum of Having Antibacterial, Deodorizer and Antivirus Function by Powder Metallurgy Method

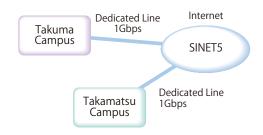
Number of Researches 15, Total Funds 21,818,874Yen

Facilities

○Networking and Computing Service Center

■ Network Infrastructure

Each campuse have a dedicated connection with 1Gbps to the Science Information NETwork (SINET).



Network Between Two Campuses and SINET5

■Computing Service

Takamatsu Campus

Automatically-recoverable computers are installed in the facilities and are used for education on computer literacy and academic research. 47 client computers for the first training room; 50 client computers for the second training room; 18 client computers for the third training room; and 54 client computers for the multimedia room



Takamatsu Campus Second Training Room

OTakuma Campus

Automatically-recoverable computers are installed in Second Seminar Room, Cyber Lab, Advanced Information Lab, and Multimedia Learning Lab, and are used for education on computer literacy and academic research. All of the students can take advantage of the internet using e-mail and WWW.



Takuma Campus Second Seminar Room

\rightarrow Human Resources Development Office

This office consists of the Collaborative Education Center of Emerging Technology and the Cooperative Research & Development Center. Each center has many laboratories and a lot of equipment. These are used for students' experiment programs, the experiments for the graduation thesis of the associate degree, the cooperative research, and the commissioned research. The equipment is as follows: RF magnetron sputtering system; Plasma CVD; Vacuum evaporation system; Electron beam lithography system; X-ray diffraction system for thin-film crystalline analysis; Scanning electron microscope; Surface profiler; General-purpose FEM analyzer; X-ray fluorescence spectrometer; X-ray diffractometer; Scanning probe microscope; Ellipsometer; Absorption spectrophotometer; Scratching tester.



Scanning Electron Microscope



General-purpose FEM Analyzer

Students

■Number of Students

○Department

	Classification				nrollment			Total
	Glassification	Capacity	1st	2nd	3rd	4th	5th	TULAI
	Department of Mechanical Engineering	40	43(2)	42(2)	45(1)	39(3)[2]	37(3)[1]	206(11)[3]
	Department of Electrical and Computer Engineering	40	42(7)	44(2)	43(7)	44(7)	35(5)	208(28)
Ħ	Department of Electro-Mechanical Systems Engineering	40	44(4)	39(3)	43(4)[1]	37	40(7)	203(18)[1]
Je	Department of Civil Engineering	40	42(9)	45(12)	41(9)[2]	45(8)[2]	41(7)	214(45)[4]
l Ë	Department of Communication Network Engineering	40	43(5)	41(11)	39(9)	39(5)[1]	37(6)[1]	199(36)[2]
ep	Department of Electronic Systems Engineering	40	42(6)	45(5)	46(7)[1]	40(3)	41(6)	214(27)[1]
	Department of Information Engineering	40	43(4)	38(5)	39(8)[1]	38(6)[1]	36(7)	194(30)[2]
	Total	280	299(37)	294(40)	296(45)[5]	282(32)[6]	267(41)[2]	1,438(195)[13]

◇Faculty of Advanced Engineering

	Classification	Admission	Enrolln	Total	
	Glassification	Capacity	1st	2nd	Total
Se	Advanced Course in Industrial and Systems Engineering	24	35(2)	26(2)	61(4)
one	Advanced Course in Electronics,Information and Communication Engineering	18	23(3)	19(1)	42(4)
ő	Total	42	58(5)	45(3)	103(8)

] Overseas Students As of May. 1, 2017

■Clubs and Associations of People Sharing Common Interests

♦ Sports Clubs

Baseball Club Tennis Club Track & Field Club Soccer Club Softball Tennis Club Table Tennis Club Judo Club Badminton Club Kendo Club Handball Club Yacht Club Karate Club Volleyball Club Trekking Club Basketball Club Shorinji-Kenpo Club Swimming Club

♦Societies

Drama Society Literature Society Calligraphy Society Painting Society Microcomputer Society Photograph Society Miniature Model Society **SPOT Society**

○Cultural Clubs

Chorus Club Photography Club Brass Band Club Sado & Kado Club English Club Radiotelegraphy Club Light Music Club Sado Club Computer Club Shogi Club Original Comics Club Painting Club Mechanical System Club S.J.R.C Club Science Club Go & Shogi Club Future Car Club Space Development Research Club

Dormitories

Seiun-ryo (Takamatsu Campus)

Takamatsu Campus has accommodations for students called Seiun-ryo, which consists of three buildings: South Dormitory, North Dormitory and West Dormitory. Male boarders stay at North and South Dormitory and female boarders use West Dormitory

- South Dormitory 4-story building 57 private rooms(9m³), 2 private rooms(13.5m³), 1 shared room with 2 beds etc(24m³)
- North Dormitory 3-story building 29 private rooms(11m²), 1 private rooms(15m²), 24 shared room with 2 beds etc(15m²) 24 private rooms(10m²), 8 shared room with 2 beds etc(15m²)
- Common rooms a-study room, a seminar room to study Japanese, a drawing room, lounges with a kitchenette, laundry room, bath room and a cafeteria

♦ Number of Dormitory Students

School Year	1st	2nd	3rd	4th	5th	Faculty of Advanced Engineering	total
No. of Dorm studs	35(4)	33(8)	36(4)(3)	33(4) (4)	20(4)(1)	0	157 (24) (8)







South Dormitor

■ Shippo-ryo • Shiun-ryo (Takuma Campus)

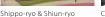
Takuma Campus has two block sets of dormitory buildings, one of which is "Shippo-ryo" and the other is "Shiun-ryo". The dormitory accommodations consist of three buildings, which are called Second, Third and Fourth Block. Presently, male students stay at Second and Third Block in Shippo-ryo, while female students use Fourth Block in Shiun-ryo.

- Shippo-ryo (Takuma Campus) Two houses 4-story building 26 shared room with 2 beds(13.5m²), 9 shared room with 2beds etc(27m²) Three houses 5-story building 46 private rooms(9ml), 69 shared room with 2 beds etc(18ml)
- Shiun-ryo (Takuma Campus) Four houses 5-story building 12 private rooms(9m²), 38 shared room with 2 beds etc(18m²)
- Common rooms Study hall, a computer room, Lounge, lounges with a kitchenette, laundry room, bath room and a cafeteria

School Year	1st	2nd	3rd	4th	5th	Faculty of Advanced Engineering	total
No. of Dorm studs	52(6)	37(10)	52(12) (2)	48(6) (2)	38(6) (1)	13	240(4)(5)
(): Number of Female Students within Total. < > Number of Overseas Students within Total As of May 1, 2017							

(): Number of Female Students within Total, < > Number of Overseas Students within Total







Cafeteria

After Graduation

■ Employment or Academic Situation

As of Aplil. 1, 2017

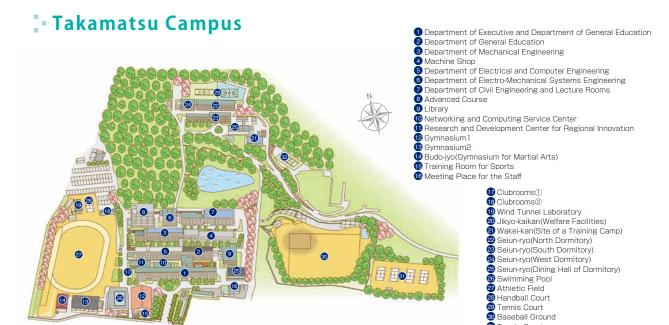
♦Takamatsu Campus

	Department	Number of Graduates	Number of the Students who Further their Education	Number of Employed		Job Offered Companies
ä	Department of Mechanical Engineering	39	18	19	2	
tme	Department of Electrical and Computer Engineering	33	23	10	0	
par	Department of Electro-Mechanical Systems Engineering	46	20	24	2	863
De	Department of Civil Engineering	34	10	22	2	
	Total	152	71	75	6	
Course	Advanced Course in Industrial and Systems Engineering	36	11	25	0	

♦Takuma Campus

<u> </u>						
Department		Number of Graduates	Number of the Students who Further their Education		Number of the Other	Job Offered Companies
ent	Department of Communication Network Engineering		20	24	0	
Departm	Department of Electronic Systems Engineering		17	26	0	513
Dep	Department of Information Engineering		16	18	2	515
	Total	123	53	68	2	
Course	Advanced Course in Electronics, Information and Communication Engineering	24	5	18	1	

Campus Map



1 Department of Executive 2 Departmental Building 1

3 Departmental Building2
4 Departmental Building3 Multimedia Building

6 Advanced Course

- Takuma Campus

- 7 Primary Lecture Halls Secondary Lecture Halls
 Library
 Department of Executive for Dormitory OShippo-ryo@(Dormitory) Shippo-ryo③(Dormitory) (B) Shiun-ryo(Dormitory) 14 East Dormitory
 15 West Dormitory 6 Boiler Room of Dormitory
 Warehouse for Dormitory 18 Bathhouse for Dormitory 19 Gymnasium 1 20 Gymnasium2 Budo-jyo(Gymnasium for Martial Arts)
 Site of a Training Camp Warehouse for Physical Education
 Building for the Swimming Pool Sukuri Center(Welfare Facilities)
 Meeting Place for the Staff 27 Shippo Memorial Hall 28 Guard's Room

Tennis Courts 3 Tennis Court

Accounting

◇Revenue and Expenditure (2016)

Revenue (a monetary unit: 1,000yen)

Grant for working Expenditure	109,481
Facilities Improvement Expenses	0
Self-Revenue	
Tuition and Entrance Examination Fee	384,226
Miscellaneous Revenue	11,129
Industry-University Cooperation Research Revenue and Donation	46,695
Other Subsidy	13,480
Total	565,011

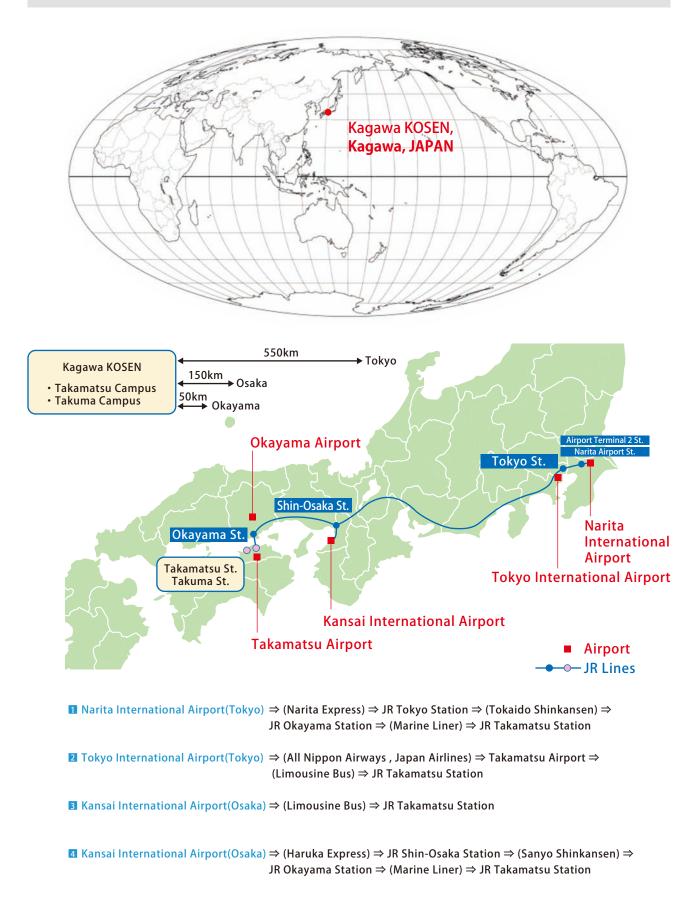
Expenditure (a monetary unit: 1,000yen)

Educatioal Research Expenses	390,980
General Administrative Expenses	124,452
Facilities Improvement Expenses	0
Industry-University Cooperation Research and Donation Project Expenses	43,361
Other Subsidy	13,480
Total	572,273

29 Garage

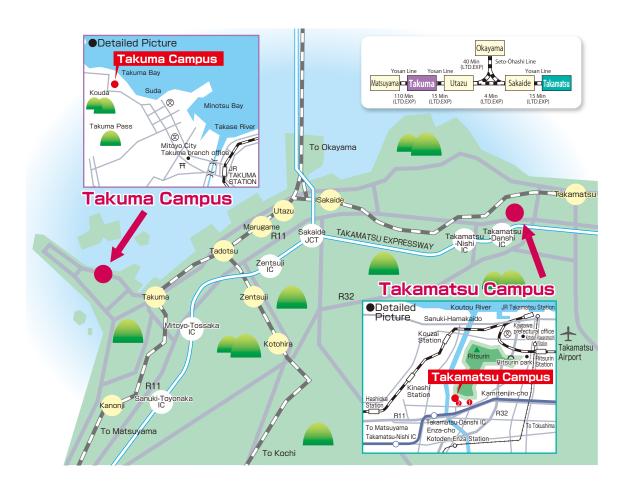
Housing for the Staff
Swimming Pool 32 Baseball Field 33 Athletic Field 34 Tennis Courts

Access from International Airports to Kagawa KOSEN



Direct access from Takamatsu Airport or JR Takamatsu Station to NITKC is only 20 minutes by car.

Access Map



Takuma Campus

■From JR Takuma Station (Yosan Line)

20 minutes by car

Mitoyo City Community Bus for Nabuto on Takuma line /for Ohama on Takuma-Mino line

→ 1 minute walk from Kagawa KOSEN mae bus stop

■From Takamatsu Expressway IC

20 minutes by car from Mitoyo-Tossaka IC 30 minutes by car from Sanuki-Toyonaka IC

■From Takamatsu Airport 60 minutes by car

551 Kohda, Takuma-cho, Mitoyo, Kagawa 769-1192 Japan +81-875-83-8506

Takamatsu Campus

■From JR Takamatsu Station

30 minutes by car

Kotoden Bus(No.5 bus stop) for Ritsurin Garden, Mimaya-Prefecture Swimming Pool → 1 minutes walk from Kagawa Kosen mae bus stop 2

25 minutes by car

Kotoden Bus(No.5 bus stop) for Yusa-Iwasaki, Yusa-Ikenishi or Ikenishi-Konanrakuyu→ 10 minutes walk from Koyama bus stop 10

■From Takamatsu Expressway IC

7 minutes by car from Takamatsu-Nishi IC 5 minutes by car from Takamatsu-Danshi IC

From Takamatsu Airport

20 minutes by car

Address -

355 Chokushi-cho, Takamatsu, Kagawa 761-8058 Japan +81-87-869-3811



National Institute of Technology, Kagawa College [Kagawa KOSEN]

355 Chokushi-cho, Takamatsu, Kagawa 761-8058 Japan TEL +81-87-869-3811

Takamatsu Campus 355 Chokushi-cho, Takamatsu, Kagawa 761-8058 Japan

TEL +81-87-869-3811

551 Kohda, Takuma-cho, Mitoyo, Kagawa 769-1192 Japan TEL +81-875-83-8506 Takuma Campus