

**Application Procedure
for
Foreign Student Admission
to**

**Department of Engineering
Graduate School of Sustainability Science
Master's Program, 2022
(October entrance)**

Tottori University

4-101 Koyama-Minami, Tottori, 680-8552 Japan

Phone: +81-857-31-5186

Application Procedure for Admission

1. Courses and Number of Enrollments

Courses	Number of Enrollments
Mechanical and Aerospace Engineering	a few
Information and Electronics	a few
Chemistry and Biotechnology	a few
Social Systems and Civil Engineering	a few

2. Qualifications for Application

Non-Japanese citizens who meet one of the following qualifications are eligible for application.

1. Have graduated from an accredited university abroad, or are expected to graduate by the end of September, 2022 and completed 16-years schooling in foreign countries.
2. Have been approved by the Japanese Minister of Education, Culture, Sports, Science and Technology of Japan.
3. Have been approved by Department of Engineering, Graduate School of Sustainability Science, Tottori University, as having academic ability equivalent to university graduates and will become 22 years old or more by September 30, 2022.^{※1}
4. Have completed or be expected to complete the program (limited to the ones that their graduates are regarded as completion of 16-years school education of the foreign country) provided by the educational institution that is founded as a part of the formal education system of the foreign country, and is also specified elsewhere by Minister of Education, Culture, Sports, Science and Technology of Japan, on or before September 30 of 2022.
5. Have received or be expected to receive a degree equivalent to bachelor's degree by completing the program of more than 3 years (including degrees obtained by completing the distance education program provided by the foreign university while residing in Japan, or by completing the program specified by Qualification 4 above at the educational institution founded on the formal education system of the foreign country) at university or other forms of school in foreign country (limited to the institutions specified by Minister of Education, Culture, Sports, Science and Technology of Japan, as having being assessed their activities including research and education by the body certified by the residing government or the relevant institutions, or as being equivalent), on or before September 30 of 2022.

^{※1} Applicants who fall in the qualification 3 above should submit their admission application (Form 1), past professional and research record (Form 2), Transcript of degree or graduation certificate issued by the university or college attended, and Transcript of scholastic record issued by the university or college attended. The submission should be from Tuesday, May 24, 2022 to Friday, May 27, 2022. Qualification review results will be mailed to the applicants on Tuesday, June 14, 2022.

Note.

1. Most lectures in the Department of Engineering, Graduate School of Sustainability Science, Tottori University are offered in Japanese. Applicants should note that it is essential to achieve a sufficient mastery of the Japanese language before their admission.
2. Before applying to the Graduate School (master's program), applicants are advised to take one or two semesters of study as Postgraduate Research Students (non-degree program)^{※2} under a desired supervisor to fill in gaps in their engineering education and to acquire a good command of Japanese language in preparation for the entrance examinations.

3. Application Procedure

3.1 Choice of Course and Desired Academic Supervisor

The applicant must choose one of the four courses and the desired academic supervisor, and write them in the appropriate columns of the application form (Form 1). The applicant must contact with the desired academic supervisor written in Form 1 before submitting the application.

3.2 Application Period

Applications will be accepted from 9:00 to 17:00 from Tuesday, July 26 to Friday, July 29, 2022 at the Student Section in the Faculty of Engineering, Tottori University. Those who send applications by mail should use registered mail and write 'Application Forms for Master's program' in red on the front of the envelope. All applications must reach Student Section in Faculty of Engineering, Tottori University, no later than 17:00 on Friday, July 29, 2022. Any applications received after this due will not be accepted.

3.3 Application Documents

Applicants should submit the following documents to the Student Section in the Faculty of Engineering, Tottori University, during the above-mentioned application period.

1. Application Form for Admission (Form 1)
2. Admission Cards with photos (in duplicate)
3. Transcript of degree or graduation certificate issued by the university or college that you have attended.
4. Transcript of scholastic record issued by the university or college that you have attended. This should be a confidential communication between the university or college that you have attended and Tottori University.
5. Certificate of proficiency in Japanese language made by a teacher of Japanese language or an equivalent, if any.
6. Certificate of Residence, copy of Residence Card, or copy of Passport.
(Foreigners residing in Japan should submit a copy of their Residence Card (both sides) or a Certificate of Residence issued by the city or town office you live in. Other foreigners should submit a copy of your passport.)
7. Examination fee of 30,000 yen.^{※3}

^{※2} See Appendix.

^{※3} Complete the payment at a nearby bank in Japan by the slip enclosed in this booklet. Then, stick the payment receipt slip (the right part of the form: 検定料振込済証明書) on the Application Payment Confirmation Slip part in Form 1.

Payment Period:

The First Period Application is from Friday, July 15 to Friday, July 29, 2022.

3.4 Note

1. Incomplete or incorrect application forms and documents will not be accepted.
2. The above mentioned items of the application are not substitutable once they have been received by the Student Section in the Faculty of Engineering, Tottori University.
3. Under any circumstances, the application forms, documents and examination fee cannot be returned to the applicant once they have been received by the Student Section in Faculty of Engineering, Tottori University.
4. Application should be written either in block capitals or typed.

4. Screening

4.1 Screening Procedure

Preliminary screening for admission will be made on the basis of the submitted documents. Applicants who pass this preliminary screening will be notified to take a subsequent written examinations in the following subjects and an oral examination.

1. Course of Mechanical and Aerospace Engineering
Thursday, August 18, 2022
 - (1) Mathematics / 9:00-11:00
 - (2) Physics for Mechanical Engineering / 12:30-14:30
 - (3) Oral Examination / 15:00-
2. Course of Information and Electronics
Thursday, August 18, 2022
 - (1) Mathematics / 9:00-11:00
 - (2) Oral Examination / 14:00-
3. Course of Chemistry and Biotechnology
Thursday, August 18, 2022
 - (1) Two from the following four subjects /9:00-12:00
 - A. Organic Chemistry, Analytical Chemistry
 - B. Inorganic Chemistry, Physical Chemistry
 - C. Microbiology, Molecular Biology
 - D. Biochemistry, Structural Biology

※ Please select two pairs of subjects on the Application Form for Admission (Form 1).

※ Changes after application are not accepted.

※ Bring a scientific calculator
 - (2) Oral Examination / 14:00-
4. Course of Social Systems and Civil Engineering
Thursday, August 18, 2022
 - (1) Mathematics / 9:00-10:30
 - (2) Social Systems and Civil Engineering / 10:45-11:55
 - (3) Oral Examination / 13:00-

Venue: Department of Engineering, Graduate School of Sustainability Science (Faculty of Engineering Building), Tottori University, 4-101 Koyama-Minami, Tottori 680-8552, Japan

Note.

1. Applicants should bring the Admission Card with them to the venue of examination. The Card should be placed on the designated desk during the written examination.
2. Applicants are requested to enter the examination room by 8:45. The information regarding examination rooms and others, will be posted on the notice board of the Department of Engineering, Graduate School of Sustainability Science (at the main entrance of the Faculty of Engineering Building) from 15:00 the day before the written examination.
3. Late-comer to the examination may be allowed to take examination only if he or she arrives the venue of examination no later than 30 minutes after the examination starting time.

4.2 Preliminary Consultation for Handicapped Applicants

Applicants with physical disabilities who need some specific assistances during the examination as well as study terms after entrance, must submit a document (written in arbitral format) including the following items and a medical certificate prepared by a physician to Student Section in Faculty of Engineering, Tottori University, by Friday, July 8, 2022, during the examination and while attending graduate school.

1. Name of applicant, address and telephone number
2. School from which you graduated
3. Course and Field of your choice
4. Type and degree of disability
5. Attention needed upon examination
6. Attention needed while attending graduate school
7. Measures and supports provided at previous schools
8. Conditions of daily life

In addition, if Tottori University sees the need, the university will have interviews with the applicants or people from their current or previous schools, or other related persons, who are able to speak on behalf of the applicants.

5. Notification of Results

The results of the screening will be put on the web page of Tottori University around 11:00 on Friday, September 2, 2022.

(<https://www.admissions.adm.tottori-u.ac.jp/>).

The notifications of acceptance will be mailed to the successful applicants, except for the student currently attending Tottori University to whom the notification will be handed directly at Student section in Faculty of Engineering. Inquiries about the results by other means such as phone and e-mail are not available.

Detailed information concerning registration after acceptance will be informed to the successful applicants in early September, 2022.

6. Admission and Tuition Fees

1. Admission Fee^{※4}: 282,000 yen (planned amount. Must be paid at the time of registration. Not refundable.)
2. Tuition Fee^{※4}: 535,800 yen for one academic year (planned amount)

Note.

1. University admission and tuition fees above are estimates only. In cases where fee adjustments are announced while students are entering university or when they are already enrolled, students will be requested to pay the adjusted fees.
2. The method for paying tuition fee will be announced later when you are guided for university entrance procedure.

^{※4} Foreign students supported by the scholarship from Japanese Government are exempt from the admission and the tuition fees.

7. Inquiries

Any inquiries related to the application to Department of Engineering, Graduate School of Sustainability Science, Tottori University, should be made by mail to Student Section in Faculty of Engineering, Tottori University, given below.

Student Section in Faculty of Engineering
Department of Engineering, Graduate School of Sustainability Science
Tottori University
4-101 Koyama-Minami, Tottori, 680-8552 Japan
Phone: +81-857-31-5186
E-mail: en-kyoumu@ml.adm.tottori-u.ac.jp

8. Correspondences in Case of Unforeseen Circumstances

When the screening cannot be implemented as scheduled due to large disaster or other unforeseen events, or when the university foresees that traffic disruption or other hazardous events have great negative effects on the applicants, correspondences might be taken such as changes of examination time and/or dates, screening methods, and date of result publication. When the specific correspondence to such event is determined, it will be posted on the official web site of Tottori University. So please be careful on Tottori University web site, especially just before the examination date.

Appendix

Application Procedure for Postgraduate Research Students to Department of Engineering Graduate School of Sustainability Science, Tottori University

Those who aim to study a specific subject at the postgraduate level may be admitted as Postgraduate Research students. The students in this category are not entitled to any degrees even upon the completion of their study program. However, Graduate School would advise them to prepare for the degree program of Graduate School depending upon their qualifications. The same qualifications are required of a prospective Postgraduate Research Student as are required of a degree candidate for the Master's program. Applicants for Postgraduate Research Students should submit the following documents to Student Section in Faculty of Engineering well in advance.*¹

1. Application Form for Admission
2. Curriculum vitae
3. Transcript of degree or graduation certificate issued by the university or college you have (had) attended.
4. Transcript of scholastic record issued by the university or college attended. This should be a confidential communication between the university or college you have (had) attended and Graduate School of Tottori University.
5. Certificate of proficiency in Japanese language made by a teacher of Japanese language or an equivalent, if any.
6. Certificate of registered matters on the original registration.
7. Letter of permission for application written by the employer, if the applicant is an employee.
8. Application fee of 9,800 yen. In the case of application by mail, payment can be made by postal money order (do not fill in the remittee's name).

Selection will be made on the basis of the documents submitted.

Time of admission for Postgraduate Research Students is normally the beginning of each semester, that is, April or October. The period of registration is up to one year, but may be extended if necessary.

Successful applicants are requested to pay the following admission and research fees before admission.

1. Admission Fee: 84,600 yen (planned amount)
2. Research Fee: 29,700 yen per month (planned amount)

Applicants who wish to know more details are advised to inquire by mail to Student Section in Faculty of Engineering given below or Chairman of Course concerned. A self-addressed envelope with 344 yen stamps should be enclosed.

Student Section in Faculty of Engineering
Department of Engineering, Graduate School of Sustainability Science,
Tottori University
4-101 Koyama-Minami, Tottori, 680-8552 Japan
Phone: +81-857-31-5186
E-mail: en-kyoumu@ml.adm.tottori-u.ac.jp

*¹ About six months before the time of admission for taking ample processing time to enter into Japan are strongly recommended.

Department of Engineering,
Graduate School of Sustainability Science,
Tottori University

Outline of Courses and Fields in Master's Program

Course of Mechanical and Aerospace Engineering

Possessing the human resources necessary for meeting a wide variety of needs in engineering fields, Course of Mechanical and Aerospace Engineering nurtures high-level engineers and researchers who are able to develop technologies from an interdisciplinary perspective, rather than from a stereotyped viewpoint. They are not restricted to just mechanical engineering, but are also proficient in the fields of aerospace, material, electronic, information, and environmental engineering. This course allows students to acquire high-levels of expertise and engage in original research; this enables them to develop so that they can aggressively assume leadership in solving problems. Specifically, students are trained to acquire the following:

- (1) A broad and fundamental knowledge of mechanical engineering, and also advanced expertise in applied mathematics, mechanics, and physics, that provide a foundation for entering advanced interdisciplinary engineering fields such as space engineering
- (2) A flexible way of thinking and insight to view problems macroscopically by considering the harmony between the natural environment and human society, and also leadership to solve problems systematically.

Applicants are expected to appreciate this policy and to be highly motivated. They are required to possess academic attainments in mathematics and physics employed in engineering as well as linguistic ability.

Mechanical and Aerospace Engineering Field

Solid mechanics, Materials science and engineering, Reliability and design engineering, Precision and production engineering, Mechanical dynamics and mechatronics, Control and robotics, Thermal energy engineering, Fluid engineering, Fluid dynamics, Condensed matter physics, Non-linear dynamics, Nanomechanics, Biomechanics, Thermodynamics

Course of Information and Electronics

The main objective of this course is to produce competent engineers and researchers. There are two fields in this course as listed below.

Information and Knowledge Engineering Field

We aim to produce IT engineers and researchers with the ability to realize advanced information-oriented technologies for the benefit of modern society. We particularly focus on producing human resources with the balanced knowledge of relevant hardware and software through instruction in, among other disciplines, advanced computing and its application to intelligent systems. The research and educational syllabi encompass the theoretical basics of information and knowledge engineering as well its advanced applications, such as design of intelligent systems and computer-aided technology.

Electrical and Electronic Engineering Field

This field covers a wide range of leading edge technologies such as highly efficient device, advanced communication technology, software and hardware, and aims to produce world class engineers. In detail, we groom our students to have

- (1) better technical knowledge of electric and electronics;
- (2) basic intellectual and ethical aptitude;
- (3) the ability to discover and solve difficult problems; and
- (4) the zeal to serve internationally.

We accept those students who are interested in electric and electronics fields.

Course of Chemistry and Biotechnology

The goal of Course of Chemistry and Biotechnology is to educate engineers and researchers who are competent in the fields of industrial chemistry and biotechnology. To this end, Course provides students with a highly specialized curriculum at the graduate level. Course is composed of two fields, Applied Chemistry and Biotechnology.

Applied Chemistry Field

We have classes that teach basic concepts in organic, inorganic, and physical chemistries, followed by advanced classes for organic and inorganic materials chemistry, organic and inorganic synthetic chemistry, catalyst chemistry, and electrochemistry. In addition, we place an emphasis on hands-on training under laboratory conditions in addition to classroom teaching to experience

and analyze various chemical processes.

Biotechnology Field

Our goal is to provide students with knowledge that would allow them to seek new ways to combine nature and human society in harmonious ways, through the discovery of novel reactive mechanisms and useful compounds at the interface of biology (the study of living organisms and living systems) and engineering (the application of scientific principles to industry). Specifically, provides classes to apply the various mechanisms in bacterial or various cellular metabolism and replication to the production of various compounds and polymers, as well as to the removal of harmful chemicals from the environment. Any student who enters this field is assigned to a laboratory, and he/she will undergo basic training to become an engineer or a researcher through performing cutting-edge research.

We welcome students who possess a demonstrable grasp of scientific principles and techniques at the university level, and who are interested in becoming an active engineer or researcher in fields related to chemical industry, nanotechnology, biotechnology, and bioscience.

Course of Social Systems and Civil Engineering

Objective of Course of Social Systems and Civil Engineering is to train engineers who not only create abundant society through wide-ranging practices of improvements to the infrastructure, creation and activation of safety local community, but also pursue soft and hard wares methodology to create comfortable and active society by the education of highly-professional knowledge/technology and researches.

Civil Engineering Field

This field cultivates skillful engineers who have knowledge of plan, design, construction and management of social infrastructures. To achieve the objective, this field seeks motivated, wide perspective and problem-solving oriented persons who are eager to learn the construction technology which supports manufacturing activities, who are interested in creating space for human living, and who consider harmony with the nature.

Social Systems Engineering Field

This field aims at training engineers who can contribute to realization of better society through planning and design of systems on urban, traffic, environment, disaster prevention, management, production, and

telecommunication. Objective of the training is to provide students with the ability for solving problems with an engineering approach comprising humanities and social science, and learning systematic consideration to solve problems in the modern society. field seeks students who have a passion to realize comfortable life and abundant society, who have idea looking things analytically and also who have strong will to overcome difficulties with elaborate systematic means.

YEAR 2022
APPLICATION FOR FOREIGN STUDENT ADMISSION
Department of Engineering,
Graduate School of Sustainability Science, Tottori University

Master's Field
(October entrance)

2022 年度鳥取大学大学院持続性社会創生科学研究科
博士前期課程工学専攻（10 月入学）
外国人留学生特別入試願書

Instruction(記入上の注意)

1. Application should be written either in ink or by a ball-point pen
(either in black or blue only).
(記入にあたっては、必ずインク又はボールペン(青又は黒)を使用してください。)
2. Application should be printed either in Japanese or in Roman block capitals.
(記入にあたっては、楷書又はローマ字(大文字)を用いてください。)
3. Numbers should be written in Arabic Figures.
(数字は算用数字を用いてください。)
4. Year should be written in the Anno Domini system.
(年号はすべて西暦としてください。)
5. Proper noun should be written in full, and not be abbreviated.
(固有名詞はすべて正式な名称とし、一切省略しないでください。)

Form 1 (様式 1)

Examination ID No. (受験番号)	*
-------------------------------------	---

* **Leave blank** (この欄には記入しないでください。)

YEAR 2022 APPLICATION FOR FOREIGN STUDENT ADMISSION

Department of Engineering,

Graduate School of Sustainability Science, Tottori University

Master's Program

(October entrance)

1. The Course of your choice; Select one course (志望コース名)

2. Elective subjects (選択科目)

Only for students who wish to take a Course of Chemistry and Biotechnology.

Please select two pairs of subjects from the following pairs of subjects A~D and circle the letters A~D.

※ Changes after application are not accepted.

A. Organic Chemistry, Physical Chemistry

B. Inorganic Chemistry, Physical Chemistry

C. Microbiology, Molecular Biology

D. Biochemistry, Structural Biology

3. Name of desired academic supervisor (志望指導教員名)

4-1. Name in full, in vernacular (姓名 ; 自国語)

(Family name)

(First name)

(Middle name)

In Roman capitals (ローマ字) :

(Family name)

(First name)

(Middle name)

4-2. Nationality (国籍) : _____

4-3. Sex (性別) : ☐ **Male** (男) ☐ **Female** (女)

4-4. Date of Birth: Year Month Day

(生年月日)

(年)

(月)

(日生)

5. Present address, telephone number, fax number, and e-mail address

(現住所及び電話, ファックス番号又は電子メールアドレス)

6. Academic background (學歷)

	Name of School (学校名)	Address of School (学校所在地)	Period of Attendance (在学期間)	(学位) Completed Degree
Elementary School (小学校)			From To	
Lower and Upper Secondary School(s) (中学校及び高等学校)			From To	
Undergraduate Level (大学)			From To	
Graduate Level (大学院)			From To	

Department of Engineering,
Graduate School of Sustainability Science
(大学院持続性社会創生科学研究科工学専攻)
Tottori University
(鳥取大学)
Master's Program, 2022
(博士前期課程)
October entrance
(10月入学)

Admission Card (Duplicate)
(写真票)

Examination ID No.
(受験番号)

Name
(氏名)

Photo

(写真欄)

4 cm × 3 cm

Application Payment
Confirmation Slip
(振込確認票)

Department of Engineering,
Graduate School of Sustainability Science
(大学院持続性社会創生科学研究科工学専攻)
Tottori University
(鳥取大学)
Master's Program, 2022
(博士前期課程)
October entrance
(10月入学)

Admission Card (Duplicate)
(受験票)

Examination ID No.
(受験番号)

Name
(氏名)

Photo

(写真欄)

4 cm × 3 cm

Note: (注意)

Please bring this card to the examination

(受験の際は、この受験票を必ず持参してください。)

* This form is only for applicants with the qualification 3
(この用紙は出願資格 3 の該当者のみに適用するものです。)

Field of Education-Research, Supervisor and Research Theme*
 ※Subject to change due to personnel changes

① Course of Mechanical and Aerospace Engineering

Field of Education-Research		Supervisor Place to Contact	Research Theme
Materials and Mechanics	Solid Mechanics	IWASA, Takashi 0857-31-5720 iwasa■tottori-u.ac.jp	• Study on mechanical characteristic of flexible space structures • Study on analysis method for membrane structures • Study on mechanical environmental test for space satellite
	Materials Science and Engineering	CHEN, Zhongchun 0857-31-5707 chen■tottori-u.ac.jp ONDA, Tetsuhiko 0857-31-6786 onda■tottori-u.ac.jp	• Fabrication and characterization of thermoelectric materials • Development of novel high-strength and high-ductility titanium alloys using additive manufacturing • Additive manufacturing of maraging steels and stainless steels • In-situ synthesis and multiple toughening of ceramic-matrix composites • In-situ synthesis of ceramic-reinforced aluminum-matrix composites • Extrusion of aluminum-carbon composites with high thermal conductivity • Development of novel antiviral materials and improvement of their durability
Design and Manufacturing	Reliability and Design Engineering	ONO, Yuichi 0857-31-5193 ono■tottori-u.ac.jp NISHI, Ryosuke 0857-31-5192 nishi■tottori-u.ac.jp	• Study on fatigue damage evaluation of metals • Study on experimental stress analysis • Study on improving strength of gear • Study on modeling traffic flows • Study on the methodology of easing traffic jams
	Manufacturing Engineering	SATO, Masahiko 0857-31-5195 sato■tottori-u.ac.jp	• High-efficiency and high-precision machining of difficult-to-cut materials • Suppression of chatter vibration and improvement of heavy cutting performance in turn milling • Measurement and evaluation of machining temperature by infrared radiation pyrometer
			• Forming of high-strength metal material • Identification of post-necking plastic deformation behavior of metal materials • Multi-scale analysis of plastic deformation induced damage expansion • Image-base inverse analysis for micro/nano damaging behavior

The symbol of ■ should be replaced by @.

Field of Education-Research		Supervisor Place to Contact	Research Theme
Robotics and Mechatronics	Mechanical Dynamics and Mechatronics	TAMURA, Atsutaka 0857-31-6793 a-tamura■tottori-u.ac.jp	• Study on injury biomechanics • Human body modeling and mechanical characterization of biological materials • Crash simulation
		HONGU, Junichi 0857-31-7506 hongu■tottori-u.ac.jp	• Study on vibration and noise reduction of machine • Development of anomaly detection technique of machine
	Control and Robotics	NAKATANI, Shintaro 0857-31-5190 snakatani■tottori-u.ac.jp	• Robots for inspection, diagnostic and healthcare • Biosignal measurements and processing • Brain-machine interface for rehabilitation

The symbol of ■ should be replaced by @.

Field of Education・Research	Supervisor Place to Contact	Research Theme
Space Propulsion Engineering	KATSURAYAMA, Hiroshi 0857-31-5205 katsurayama■tottori-u.ac.jp	• Research on energy conversion process of laser propelled rockets • Application of laser detonation waves to ultrafast wind tunnels • Development of atmospheric entry decelerator using magnetohydrodynamic force
Fluid Engineering	SAKAI, Takeharu 0857-31-5202 tsakai■tottori-u.ac.jp MATSUNO, Takashi 0857-31-5204 matsumo■tottori-u.ac.jp ODA, Tetsuya 0857-31-5206 odate■tottori-u.ac.jp	• Development of thermal protection system for space vehicles • Aerothermodynamics, Ablation, radiation, and surface thermochemistry • Simulation of High-Temperature Processes • Aerodynamic drag reduction of Aircraft and Ground Vehicles • Active flow control using plasma actuators • Research of flow field by numerical simulations • Research on liquid fuel atomization and spray combustion • Developments of spray measurement technique • Engine combustion analysis and emission reduction
Mathematical Engineering of Complex Systems	FURUKAWA, Masaru 0857-31-5731 furukawa■tottori-u.ac.jp OOSHIDA, Takeshi 0857-31-6759 ooshida■tottori-u.ac.jp	• Mathematical engineering of magnetically confined fusion plasmas • Theory and simulation studies of boundary-layer and multiple-scale phenomena in fluids and plasmas • Structure-preserving numerical simulation algorithms • Statistical physics of colloidal liquids • Elastoplastic modeling of granular pastes • Flows in oscillated shallow water systems
Electronic structure calculation/ Computational Physics and Engineering	KOTANI, Takao 0857-31-6741 tkotani■tottori-u.ac.jp HOSHI, Takeo 0857-31-5630 hoshi■tottori-u.ac.jp SAKAKIBARA, Hiroshi 0857-31-5725 sakakibara■tottori-u.ac.jp	• Methodological development of the first-principles electronic-structure calculations, especially, to include electronic correlations. • Reliable prediction of the fundamental physical properties for materials such as transition-metal compounds. • First principles study on atomic structure of materials. • In particular, surface structures and phase transition of structures. • Massively parallel data science, in particular, advanced measurement informatics • Computational material science with supercomputers and its industrial application

The symbol of ■ should be replaced by @.

Field of Education-Research	Supervisor Place to Contact	Research Theme
Nano Dynamics and Tribology/ Molecular Fluid Dynamics	MATSUOKA, Hiroshige 0857-31-5759 hiro■■■■tottori-u.ac.jp DOI, Toshiyuki 0857-31-6766 doi■■■■tottori-u.ac.jp ISHIKAWA, Takumi 0857-31-5324 tishikawa■■■■tottori-u.ac.jp	• Research on molecular interactions and surface interactions • Research on ultra-thin liquid/solid films • Ultra-high accuracy measurements of tribological phenomena • Research on molecular gas/liquid-film lubrication • Research on computational tribology • Research on dynamics of information storage systems • Research on rarefied gas flows
Bio and Fluid Mechanics	GOTO, Tomonobu 0857-31-5199 goto■■■■tottori-u.ac.jp NAKAI, Tonau 0857-31-5499 nakai■■■■tottori-u.ac.jp	• Micro-flow analysis, observation and numerical simulation • Collective and cellular level behavior of micro-organisms • Observation and numerical simulation of bacterial chemotaxis • Aeroacoustics, sound generation mechanism and noise reduction • Acoustic impedance measurement of an aperture in the presence of mean flow
Renewable Energy Engineering	HARA, Yutaka 0857-31-6758 hara■■■■tottori-u.ac.jp	• Research and development of advanced technology of wind turbine • Computational fluid dynamics of wind turbines • Research on optimal layout of small wind turbines

The symbol of ■■■■ should be replaced by @.

② Course of Information and Electronics

Field of Education-Research	Supervisor Place to Contact	Research Theme
Intelligent Control	TAKEMORI, Fumiaki 0857-31-5212 take■■■■tottori-u.ac.jp KUSHIDA, Daisuke 0857-31-5213 kushida■■■■tottori-u.ac.jp	• Control design of human power assist system • Intelligent control for mobile robot • Quantification of sensation based on biological signal • Motion evaluation system based on image processing • Decision modeling and extraction of empirical rules
Computer Science and Technology	KAWAMURA, Takao 0857-31-5217 kawamura■■■■tottori-u.ac.jp TAKAHASHI, Kenichi 0857-31-5811 takahashi■■■■tottori-u.ac.jp	• Distributed systems • Social information systems • Agent system • Network and information security
	MURATA, Masaki 0857-31-5548 murata■■■■tottori-u.ac.jp	• Natural language processing • Information retrieval, information extraction • Machine learning
Knowledge Engineering	YOSHIMURA, Kazuyuki 0857-31-5223 kazuyuki■■■■tottori-u.ac.jp SHIMIZU, Tadaaki 0857-31-5224 tadaaki■■■■tottori-u.ac.jp	• Nonlinear science • Information processing using nonlinear dynamics • Digital speech signal processing • Signal processing using neural networks
	KIMURA, Shuhei 0857-31-5227 kimura■■■■tottori-u.ac.jp TOKUHISA, Masato 0857-31-5805 tokuhisa■■■■tottori-u.ac.jp	• Evolutionary computation • Bioinformatics • Semantic and emotion analysis in natural language processing • Information technology applications in tourism

The symbol of ■■■■ should be replaced by @.

Field of Education-Research	Supervisor Place to Contact	Research Theme
Knowledge Engineering	IWAI, Yoshio 0857-31-5624 iwai■tottori-u.ac.jp NISHIYAMA, Masashi 0857-31-6083 nishiyama■tottori-u.ac.jp	• Computational interaction • Pattern recognition • Human media processing • Augmented reality
Information and Control Engineering	NAKAGAWA, Tadao 0857-31-5745 nakagawa■tottori-u.ac.jp	• Wireless communications and optical wireless communications for wearable devices • Physical layer signal processing for wireless communications • Radio frequency circuit design
	SASAOKA, Naoto 0857-31-5234 sasaoka■tottori-u.ac.jp	• Speech enhancement • Digital wireless communication system • Active noise control
	KONDO, Katsuya 0857-31-5699 kondo■tottori-u.ac.jp	• Computer vision • Biomechanics analysis and medical engineering • Development of smart measurement control system
	MISHIBA, Kazu 0857-31-5756 mishiba■tottori-u.ac.jp	• Image processing • Computational photography
Electrical and Electronic Systems Engineering	NAKANISHI, Isao 0857-31-5132 nakanishi■tottori-u.ac.jp	• Application of digital signal processing • Biometrics person authentication • Speech signal processing
	OHKI, Makoto 0857-31-5688 ohki■tottori-u.ac.jp	• Evolutionary computational algorithms for multi-objective optimization • Multi-objective optimization of symbolic and numeric combinatorial optimization • Multi-objective optimization problems of structural data

The symbol of ■ should be replaced by @.

Field of Education-Research	Supervisor Place to Contact	Research Theme
Electronic Materials and Device Engineering	ICHINO, Kunio 0857-31-5240 ichino■tottori-u.ac.jp	• Study on wide bandgap semiconductors for optical/power devices • Study on high-efficiency solar cells • Study on high-efficiency ultraviolet/visible light-emitting devices
	ABE, Tomoki 0857-31-5233 abe■tottori-u.ac.jp	• Study on crystal growth of wide bandgap semiconductors • Development of blue-ultraviolet optical detectors (avalanche photodiodes) • Development of blue-ultraviolet optical modulators • Development of high efficient ultraviolet light emitting devices
	OHMI, Koutoku 0857-31-6700 ohmi■tottori-u.ac.jp	• Research on electroluminescent displays • Development of wavelength conversion phosphor film for plant growth • Development of wavelength conversion phosphor film for solar panel • Research on phosphors for white LED applications
	NISHIMURA, Ryo 0857-31-5237 ryo■tottori-u.ac.jp	• Application of renewable energy technology, such as desalination of brackish water, for arid-land development • Application of electrostatics and high voltage technology • Photovoltaic power generation
	LEE, Sang-Seok 0857-31-5961 sslee■tottori-u.ac.jp	• MEMS devices for bio/chemical/medical applications • Sensors for IoT and IoT systems • Design and application of metamaterials • RFMEMS and RF devices
Micro/Nano Electronic Devices	MATSUNAGA, Tadao 0857-31-5104 matsunaga■tottori-u.ac.jp	• Development of minimally invasive medical devices utilizing microfabrication techniques (MEMS) • Development of ultra-thin fiber-optic MEMS sensor • Development of micro sensors for robotic surgery • Development of tactile display using micro actuators • Study on non-planar photofabrication techniques

The symbol of ■ should be replaced by @.

③ Course of Chemistry and Biotechnology

Field of Education-Research	Supervisor Place to Contact	Research Theme
Green Catalysis Chemistry	KATADA, Naonobu 0857-31-5684 katada■tottori-u.ac.jp TSUJII, Etsushi 0857-31-5257 e-tsuji■tottori-u.ac.jp SUGANUMA, Satoshi 0857-31-5256 suganuma■tottori-u.ac.jp	• Principles and application of zeolites and solid acid catalysis • Conversion of heavy oil components, methane, biomass and plastic waste into useful materials • Synthesis of structured functional materials • Creation of photocatalysts for use of natural energy
Main Group Element Chemistry	NANJO, Masato 0857-31-5516 nanjo■tottori-u.ac.jp	• Synthesis of ionic liquids consisting of heavy group 14-elements and application to electrochemical devices • Design and synthesis of functional organosilicon and organogermanium compounds, and development of electronic materials
Applied Electrochemistry	SAKAGUCHI, Hiroki 0857-31-5265 sakaguch■tottori-u.ac.jp USUI, Hiroyuki 0857-31-5634 usui■tottori-u.ac.jp DOMI, Yasuhiro 0857-31-5249 domi■tottori-u.ac.jp	• Synthesis of lithium, sodium, or potassium storage intermetallic compounds and their properties as anode materials in rechargeable batteries • Development of all solid-state secondary batteries • Development of energy storage materials based on photovoltaics • Reaction behavior analysis of electrode in rechargeable batteries
Molecular Self-assembly	MATSUURA, Kazunori 0857-31-5262 ma2ra-k■tottori-u.ac.jp INABA, Hiroshi 0857-31-5331 hinaba■tottori-u.ac.jp	• Creation and application of artificial virus structures • Construction of nanostructures by self-organization of biomolecules • Creation of light-responsive biomolecular systems • Creation of functional materials applying inner space of microtubules
Organic Material Chemistry	IFUKU, Shinsuke 0857-31-5592 sifuku■tottori-u.ac.jp IZAWA, Hironori 0857-31-5693 h-izawa■tottori-u.ac.jp	• Efficient utilization of untapped resources • Development of bionanofiber materials • Preparation of functional materials from biomacromolecules • Preparation of microstructured surfaces with biomacromolecules • Development of novel drug delivery systems with biomacromolecules
Synthetic Organic Chemistry	NOKAMI, Toshiki 0857-31-5179 tnokami■tottori-u.ac.jp	• Development of automated synthesis for oligosaccharides • Total synthesis of natural and unnatural oligosaccharides • Development of molecular transformation using electrolysis • Development of organic redox active materials for energy storage • Creation and application of functional ionic liquids

The symbol of ■ should be replaced by @.

Field of Education-Research	Supervisor Place to Contact	Research Theme
Inorganic Materials Chemistry	MASUI, Toshiyuki 0857-31-5264 masui@tottori-u.ac.jp	• Synthesis and application of environment-friendly color materials • Design of new phosphors based on rare earth compounds • Development of inorganic sunscreens • Preparation of heterogeneous catalysts containing rare earth elements • Utilization of biopolymers • Analysis of bio-related compounds
Biomimetic Chemistry and Related Disciplines	MORIMOTO, Minoru 0857-31-5990 m-morimoto@tottori-u.ac.jp	• Discovery and application of novel functions of microorganisms and marine algae • Application and development of the functions of microorganisms and marine algae to the practical production of useful substances and the solutions of environmental problems • Fundamental studies: enzymology, molecular genetics, and protein engineering of enzymes involved in the metabolisms of physiologically active substances and new generation carbon sources in microorganisms and marine algae • Directed evolution approaches to enhance enzyme stability using error-prone thermophiles • Development of new medical materials using unutilized marine resources
Applied Technology of Biological Resources	OHSHIRO, Takashi 0857-31-5269 ohshiro@tottori-u.ac.jp SUZUKI, Hirokazu 0857-31-5907 hirokazusuzuki@tottori-u.ac.jp YAGI Hisashi 0857-31-5948 yagi@tottori-u.ac.jp	• Isolation and production of bioactive compounds from basidiomycetes • Determining the mechanism of action of bioactive compounds from basidiomycetes • Production of lignocellulose-degrading enzymes, ethanol and xylitol by basidiomycetes • Pathway engineering for the production of functional isoprenoids • Functional characterization of isoprenoid biosynthesis genes in higher plants and microalgae • Production of useful materials by microalgae
Biocatalyst Engineering	OKAMOTO, Kenji 0857-31-5276 okamoto@tottori-u.ac.jp HARADA, Hisashi 0857-31-5946 harada@tottori-u.ac.jp	• Structure and function of enzyme and protein • Protein folding • Protein stability and conformational change • Molecular chaperone and protein fibrillogenesis (aggregation)
Protein Engineering	MIZOBATA, Tomohiro 0857-31-5691 mizobata@tottori-u.ac.jp	• Organic synthesis of functional biomacromolecules • Design and characterization of supramolecular biomaterials • Treatment of intractable gene mutation diseases with nucleic acid molecules
Biorganic Chemistry	SAKURAI, Toshihiko 0857-31-5633 sakurai@tottori-u.ac.jp	
Biophysical Chemistry	NAGANO, Shingo 0857-31-5273 snagano@tottori-u.ac.jp HINO, Tomoya 0857-31-5744 t_hino@tottori-u.ac.jp SAITO, Yusuke 0857-31-5274 yusato@tottori-u.ac.jp	• Structural biology of natural products biosynthesis • Molecular basis of nitrogen metabolism by anammox bacteria • Structural biology of thermal sensation • Structural biology of membrane proteins • Structural biology of ubiquitin signaling

The symbol of ■ should be replaced by @.

④ Course of Management of Social Systems and Civil Engineering

Field of Education-Research	Supervisor Place to Contact	Research Theme
Structural and Concrete Engineering	TANIGUCHI, Tomoyo 0857-31-5287 t_tomoyo@tottori-u.ac.jp NOGUCHI, Tatsuya 0857-31-6097 noguchit@tottori-u.ac.jp	• Structural design of infra-, mechanical and offshore structures • Earthquake-resistant performance of infra-, mechanical and building structures • Maintenance of infra-mechanical and offshore structures • Earthquake response evaluation of subsurface and building structures • Hazard assessment of natural disasters by GIS and satellite technology
	KURODA, Tamotsu 0857-31-5523 tkuroda@tottori-u.ac.jp	• Application of industrial waste products to concrete • Durability assessment of concrete and concrete structures • Repair and strengthening for concrete and concrete structures • Prediction of deterioration and maintenance for concrete structures
Geotechnical and Rock Engineering	NISHIMURA, Tsuyoshi 0857-31-6093 tnishi@tottori-u.ac.jp NAKAMURA, Koichi 0857-31-5986 nak_x@tottori-u.ac.jp	• Mechanics and numerical modeling of discontinuous rock mass • Tunnel support/reinforcement mechanics based on the NATM concept • Rock slope stability and landslide hazard protection • Constitutive properties of saturated and unsaturated soils • Slope disaster mitigation and monitoring • Elastic property of rock
	ONO, Yūsuke 0857-31-5286 ysk@tottori-u.ac.jp KOHNO, Masanori 0857-31-5755 kohnom@tottori-u.ac.jp	• Earthquake response analysis of earth structures • Numerical simulation of geohazards • Hazard risk assessment for slope disaster • Evaluation of properties of clay mineral-bearing geomaterials • Properties of rock mass including macro-fracture filled with clay minerals
Hydraulic and Coastal Engineering	MIWA, Hiroshi 0857-31-5295 miwa-h@tottori-u.ac.jp	• Sediment transport and bed deformation in non-uniform sediment beds • Bed deformation and channel evolution due to sediment supply to riverbed • Effects of river structure on sediment dynamics
	KUROIWA, Masamitsu 0857-31-5299 kuroiwa@tottori-u.ac.jp KAJIKAWA, Yuki 0857-31-5696 kajikawa@tottori-u.ac.jp	• Numerical model of waves and nearshore currents • Coastal sediments and Prediction of coastal geomorphological change • Maintenance of river-mouth, port and harbor • Coastal disaster and monitoring • Numerical analysis of topography change due to river flow or tsunami

The symbol of ■ should be replaced by @.

Field of Education Research	Supervisor Place to Contact	Research Theme
Geospherical Environmental and Architectural Engineering	KAGAWA, Takao 0857-31-5641 kagawa@tottori-u.ac.jp SHIOZAKI, Ichiro 0857-31-5642 shiozaki@tottori-u.ac.jp	• Strong ground motion estimation • Effects of fault rupture process and surface geology on earthquake ground motion • Seismological and EM (electromagnetic) study on structure and dynamics of crust and upper mantle • EM applications on seismology and volcanology
	ASAI, Hideko 0857-31-5746 asai@tottori-u.ac.jp	• Architectural planning • Architectural environment
Management Systems	ITO, Kodo 0857-31-5304 itokodo@tottori-u.ac.jp KOYANAGI, Junji 0857-31-5307 junji@tottori-u.ac.jp	• Hardware reliability and maintenance theory • Analyses and Control of Server System • Optimal maintenance of social infrastructure • Optimal training plan • Optimal education plan of employees
Regional Systems Planning	FUKUYAMA, Kei 0857-31-5312 fukuyama@tottori-u.ac.jp	• Institutional design and analyses of regional socio-economic systems • Public policy evaluation • Infrastructure planning and management, and urban planning
	KUWANO, Masashi 0857-31-5313 kuwano@tottori-u.ac.jp MINAMINO, Yuka 0857-31-5320 minamino@tottori-u.ac.jp	• Activity – travel behavior analysis • Big data based planning theory • Infrastructure planning and management, transportation engineering, and urban planning • Service quality control and evaluation • Decision making models
Disaster Prevention Planning	TANIMOTO, Keishi 0857-31-5310 tanimoto@tottori-u.ac.jp	• Methodologies for sustainable society planning • Planning theory of local transport system • Design and analysis of daily support services
	OTA, Takao 0857-31-5309 ohata@tottori-u.ac.jp EMOTO, Hisao	• Soft measures for disaster prevention based on evacuation simulation • Performance evaluation of port and coastal structures under damage progression • Maintenance management model for infrastructure • Bridge management support system by XR and AI • Road pavement management system by AI and motion sensor
Environmental Planning	TAKABE, Yugo 0857-31-5337 takabe.yugo@tottori-u.ac.jp	• Application of microorganisms for establishing recycling-based society- • Water quality control and management • Current issues in global environmental protection

The symbol of ■ should be replaced by @.

44

