

**APPLICATION GUIDELINES**  
**Doctoral Program, Graduate School of Engineering, Tottori University**  
**Special Green Sustainable Chemistry Program in Collaboration**  
**with Southwest Asia for 2024**  
**- October Admission -**

The Department of Engineering of the Graduate School of Sustainability Science, Tottori University (Special Green Sustainable Chemistry Program in Collaboration with Southwest Asia) recruit students who wish to study Engineering according to the following guidelines.

**1. Number of Enrollments**

Department	Number of Enrollments
Department of Engineering	a few

**2. Qualifications for Application**

Applicants must be foreign students and must be proficient English. Applicants must contact with a professor from their preferred department before submitting an application.

Applicants must fulfill at least one of the following categories:

- (1) Persons who hold a master's degree or expect to obtain a master's degree by September 30, 2024.
- (2) Persons who have received a degree equivalent to a master's degree or expect to receive a degree equivalent to a master's degree by September 30, 2024.
- (3) Persons who have received a degree equivalent to a master's degree or expect to receive a degree equivalent to a master's degree by September 30, 2024, after completing correspondence courses offered by foreign schools in Japan.
- (4) Persons who have completed a course of study in Japan at an educational institution that has been designated by MEXT as having a foreign graduate school curriculum, and who have been conferred a degree equivalent to a master's degree, or who expect to be conferred a degree equivalent to a master's degree by September 30, 2024.
- (5) Persons who have completed a course of study at a United Nations University and have been conferred a degree equivalent to a master's degree or expect to be conferred a degree equivalent to a master's degree by September 30, 2024.
- (6) Those designated by MEXT.

**3. Application Procedure**

**3.1 Choice of Desired Academic Supervisor**

1. The applicant must choose a desired supervisor. Please contact the desired supervisor in advance before applying. Applications are accepted only with the permission of the desired supervisor.
2. In addition, applicants must contact the Academic Affairs Division, Faculty of Engineering (email address: en-kyoumu@ml.adm.tottori-u.ac.jp) by June 19, 2024, to know how to transfer the Examination Fee.

**3.2 Application Period**

Applications must be submitted from June 14 to June 19, 2024. Any applications received after this date will not be accepted.

### 3.3 Application Documents

Applicants should send the following documents to the Student Section in the Faculty of Engineering, by registered mail.

1. Application Form for Admission (Form 1)
2. Admission Cards with photos (in duplicate)
3. Letter of Recommendation (Form 2)
4. Summary of Master's Thesis (Form 3)
5. List of Research Achievements (Form 4)
6. Research Plan (Form 5)
7. Master's Degree Certificate Obtained or Expected
8. Certified Academic Record  
This must be an official transcript of all graduate schools attended; some other similar documents if these cannot be issued. The envelope must be by sealed the sending office
9. Examination fee of 30,000 yen.  
Please transfer the Examination Fee between June 19, 2024. Please note that we never refund the Examination Fee you paid under any circumstance except in the following cases.
  - (1) In the case of paying the Examination Fee but not submitting documents for the application
  - (2) In the case of paying the Examination Fee but not accepting documents for the application
  - (3) In the case of paying the Examination Fee twiceIf applicable (1) ~ (3), please be sure to contact the Academic Affairs Division, Faculty of Engineering (email address: en-kyoumu@ml.adm.tottori-u.ac.jp). Applicants are informed by email how to get a refund on the Examination Fee.
10. Certificate of Residence, etc.  
Foreigners residing in Japan should submit a copy of their Residence Card (both sides) or a Certificate of Residence that is issued by the city or town offices they live in. Other foreigners should submit a copy of their passport.

### 3.4 Note

1. Only complete and correct application forms and documents will be accepted.
2. The application documents are non-substitutable once received by the Student Section in the Faculty of Engineering.
3. The application documents received will not be returned.

## 4. Screening

### 4.1 Screening Procedure

Applicants will be evaluated based on document screening and oral examination.

1. Document Screening  
Based on the academic transcript, basic knowledge will be evaluated.
2. Oral examination  
The interview will be on From Thursday, July 4 to Wednesday, July 10 2024. Applicants not based in Japan may be interviewed online but must consult in advance (i.e., before applying) with the professor who will become their adviser.

## 5. Applicants With Disabilities

The University provides consultation for applicants with disabilities who need special assistance during the entrance examination or enrollment after admission. Please submit a written statement with the following information and a medical certificate to the Student Section in the Faculty of Engineering by Friday, June 19, 2024.

If the University deems it necessary, it will interview the applicants or other related

persons who can speak on their behalf. In addition, those who need assistance after the deadline due to an accident or other reason should contact the prospective supervisor immediately.

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

## 6. Announcement of Screening Results

The screening results will be posted on the Tottori University website on Friday, July 26, 2024, at approximately 11:00.

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

## 7. Admission Process

Instructions for admission process will be individually notified to accepted applicants.

1. Processing Documents etc.

Dossier, photograph mount for student ID etc.

2. Entrance Fee 282,000 Japanese Yen (Tentative)
3. Tuition Fees 535,800 Japanese Yen / year [First Semester: 267,900 Yen, Second Semester: 267,900 Yen] (Tentative)

- Tuition Fees must be paid in November (First Semester) and May (Second Semester)

- Payment instructions will be provided to accepted applicants

- (NOTES) a. Once submitted, the entrance fee will not be refunded under any conditions.  
b. Students who wish to get an entrance/tuition fees waiver (or collection postponement) should not submit the entrance/ tuition fees upon admission process.  
c. Above stated entrance/tuition fees amounts are tentative and may change at any time. Students will be asked to pay the revised amount while taking courses at Tottori University.

4. Personal Accident Insurance for Students Pursuing Education and Research

1) Gakkensai : This is an accident insurance which covers injuries occurred as a result of a sudden accident while insured students are participating in regular or extracurricular activities, being on campus, or commuting to school. Insurance premiums (3 years): 2,600 yen Department in charge: Health Science Center (E-mail: [hokekan-jimu@ml.adm.tottori-u.ac.jp](mailto:hokekan-jimu@ml.adm.tottori-u.ac.jp))

2) Insurance for International Students (Type E) : This insurance covers (1) Personal compensation responsibility : in case of causing injury to another person or damaging the property of others, (2) Rescuer expenses, etc. : compensate for the payment of transportation and accommodation expenses incase family members come to Japan to support the insured if he/she is hospitalized due to injury or illness for more than 3 days. (3) Movable property for daily use : in case of incurs a damage because his household goods are subject to fire or robbery in Japan. (4) Tenant Liability : in case of causing damage to a rented room due to an accident involving fire or water leakage in Japan. (Unlike "Gakkensai", there is no restriction on time and place)

Insurance amount (3 years): 6,470 yen

Department in charge: International Affairs Division

(Tel:+81-857-31-5056,E-mail:[kokukogaku@ml.adm.tottori.ac.jp](mailto:kokukogaku@ml.adm.tottori.ac.jp))

- 5.Place of Admission Process 4-101 Koyama-cho Minami,

Tottori Academic Affairs Section of Faculty of Engineering, Tottori University

## **8. Inquiries**

Please contact the prospective supervisor for application, examination, or admission inquiries.

## Field of Education-Research, Supervisor and Research Theme\*

※Subject to change due to personnel changes

Course	Field of Education-Research		Supervisor Place to Contact	Research Theme
Mechanical Engineering	Materials and Mechanics	Solid Mechanics	◎ MATSUNO, Takashi 0857-31-5188 matsu■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Forming of high-strength metal material</li> <li>• Identification of post-necking plastic deformation behavior of metal materials</li> <li>• Multi-scale analysis of plastic deformation induced damage expansion</li> <li>• Image-base inverse analysis for micro/nano damaging behavior</li> </ul>
		Materials Science and Engineering	◎ CHEN, Zhongchun 0857-31-5707 chen■tottori-u.ac.jp ONDA, Tetsuhiko 0857-31-6786 onda■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Fabrication and characterization of thermoelectric materials</li> <li>• Development of novel high-strength and high-ductility titanium alloys using additive manufacturing</li> <li>• Additive manufacturing of maraging steels and stainless steels</li> <li>• In-situ synthesis and multiple toughening of ceramic-matrix composites</li> <li>• In-situ synthesis of ceramic-reinforced aluminum-matrix composites</li> <li>• Extrusion of aluminum-carbon composites with high thermal conductivity</li> <li>• Development of novel antiviral materials and improvement of their durability</li> </ul>
	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	<ul style="list-style-type: none"> <li>• Study on fatigue damage evaluation of metals</li> <li>• Study on experimental stress analysis</li> <li>• Study on improving strength of gear</li> <li>• Study on modeling traffic flows</li> <li>• Study on the methodology of easing traffic jams</li> </ul>
		Manufacturing Engineering	◎ SATO, Masahiko 0857-31-5195 sato■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• High precision machining of difficult-to-cut materials</li> <li>• Measurement and evaluation of machining temperature</li> <li>• Evaluation of processed metal material surface</li> </ul>
	Robotics and Mechatronics	Mechanical Dynamics and Mechatronics	◎ TAMURA, Atsutaka 0857-31-6793 a-tamura■tottori-u.ac.jp HONGU, Junichi 0857-31-7506 hongu■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on injury biomechanics</li> <li>• Human body modeling and mechanical characterization of biological materials</li> <li>• Crash simulation</li> <li>• Study on vibration and noise reduction of machine</li> <li>• Development of anomaly detection technique of machine</li> </ul>
		Control and Robotics	◎ TSUJITA, Katsuyoshi 0857-31-5198 ktsujita■tottori-u.ac.jp NAKATANI, Shintaro 0857-31-5190 snakatani■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research on the high functionality of legged mobile robots</li> <li>• Functional design and motion control of spacecraft</li> <li>• Research on the development of human motion assistive systems</li> <li>• Robots for inspection, diagnostic and healthcare</li> <li>• Biosignal measurements and processing</li> <li>• Brain-machine interface for rehabilitation</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research		Supervisor Place to Contact	Research Theme
Mechanical Engineering	Thermo-Fluid Dynamics	Space Propulsion Engineering	◎ KATSURAYAMA, Hiroshi 0857-31-5205 katsurayama■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research on energy conversion process of laser propelled rockets</li> <li>• Application of laser detonation waves to ultrafast wind tunnels</li> <li>• Development of atmospheric entry decelerator using magnetohydrodynamic force</li> </ul>
		Fluid Engineering	◎ SAKAI, Takeharu 0857-31-5202 tsakai■tottori-u.ac.jp MATSUNO, Takashi 0857-31-5204 matsuno■tottori-u.ac.jp ODA, Tetsuya 0857-31-5206 odate■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Development of thermal protection system for space vehicles</li> <li>• Aerothermodynamics, Ablation, radiation, and surface thermochemistry</li> <li>• Simulation of High-Temperature Processes</li> <li>• Active flow control using plasma actuators</li> <li>• Research of flow field by numerical simulations</li> <li>• Research on liquid fuel atomization and spray combustion</li> <li>• Developments of spray measurement technique</li> <li>• Engine combustion analysis and emission reduction</li> </ul>
Applied Mathematics and Physics	Physical Mechanics	Mathematical Engineering of Complex Systems	◎ FURUKAWA, Masaru 0857-31-5731 furukawa■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Theory and simulation of magnetohydrodynamics for magnetically confined fusion plasmas</li> <li>• Equilibrium and stability analysis of plasmas based on Hamiltonian dynamics theory</li> <li>• Structure-preserving numerical simulation algorithms</li> </ul>
		Mathematical Material Science	◎ NADA, Hiroki 0857-31-5629 hnada■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Metadynamics study on crystallization mechanisms</li> <li>• Machine learning study on amorphous structures and material shapes</li> <li>• Mechanism of crystallization control by functional molecules</li> </ul>
		Electronic structure calculation/ Computational Physics and Engineering	◎ KOTANI, Takao 0857-31-6741 tkotani■tottori-u.ac.jp SAKAKIBARA, Hiroshi 0857-31-5725 sakakibara■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Methodological development of the first-principles electronic-structure calculations, especially, to include electronic correlations.</li> <li>• Reliable prediction of the fundamental physical properties for materials such as transition-metal compounds.</li> <li>• First principles study on atomic structure of materials.</li> <li>• In particular, surface structures and phase transition of structures.</li> <li>• Massively parallel data science, in particular, advanced measurement informatics</li> <li>• Computational material science with supercomputers and its industrial application</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Applied Mathematics and Physics	Physical Engineering	◎ MATSUOKA, Hiroshige 0857-31-5759 hiro■tottori-u.ac.jp DOI, Toshiyuki 0857-31-6766 doi■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research on molecular gas/liquid-film lubrication</li> <li>• Research on computational tribology</li> <li>• Research on dynamics of information storage systems</li> <li>• Research on molecular interactions and surface interactions</li> <li>• Ultra-high accuracy measurements of tribological phenomena</li> <li>• Research on rarefied gas flows</li> </ul>
		◎ GOTO, Tomonobu 0857-31-5199 goto■tottori-u.ac.jp NAKAI, Tonau 0857-31-5499 nakai■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Micro-flow analysis, observation and numerical simulation</li> <li>• Collective and cellular level behavior of micro-organisms</li> <li>• Observation and numerical simulation of bacterial chemotaxis</li> <li>• Aeroacoustics, sound generation mechanism and noise reduction</li> <li>• Acoustic impedance measurement of an aperture in the presence of mean flow</li> </ul>
		◎ HARA, Yutaka 0857-31-6758 hara■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research and development of advanced technology of wind turbine</li> <li>• Computational fluid dynamics of wind turbines</li> <li>• Research on optimal layout of small wind turbines</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Information and Knowledge Engineering	Intelligent Control	◎ KUSHIDA, Daisuke 0857-31-5213 kushida■tottori-u.ac.jp TAKEMORI, Fumiaki 0857-31-5212 take■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Quantification of sensation based on biological signal</li> <li>• Motion evaluation system based on image processing</li> <li>• Decision modeling and extraction of empirical rules</li> <li>• Control design of human power assist system</li> <li>• Intelligent control for mobile robot</li> </ul>
		◎ YOSHIKAWA, Nobukazu 0857-31-6789 nyoshi■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Optical sensing and measurement</li> <li>• Digital holography</li> <li>• 3D display</li> <li>• Imaging through scattering media</li> </ul>
	Computer Science and Technology	◎ KAWAMURA, Takao 0857-31-5217 kawamura■tottori-u.ac.jp ◎ TAKAHASHI, Kenichi 0857-31-5811 takahashi■tottori-u.ac.jp HIGASHINO, Masayuki 0857-31-5810 higashino■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Distributed systems</li> <li>• Social information systems</li> <li>• Agent system</li> <li>• Network and information security</li> </ul>
		◎ MURATA, Masaki 0857-31-5548 murata■tottori-u.ac.jp MURAKAMI, Jinichi 0857-31-6788 murakami■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Natural language processing</li> <li>• Information retrieval, information extraction</li> <li>• Machine translation</li> <li>• Machine learning</li> </ul>
	Knowledge Engineering	◎ YOSHIMURA, Kazuyuki 0857-31-5223 kazuyuki■tottori-u.ac.jp SHIMIZU, Tadaaki 0857-31-5224 tadaaki■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Nonlinear science</li> <li>• Information processing using nonlinear dynamics</li> <li>• Digital speech signal processing</li> <li>• Signal processing using neural networks</li> </ul>
		◎ KIMURA, Shuhei 0857-31-5227 kimura■tottori-u.ac.jp TOKUHISA, Masato 0857-31-5805 tokuhisa■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Evolutionary computation</li> <li>• Bioinformatics</li> <li>• Semantic and emotion analysis in natural language processing</li> <li>• Information technology applications in tourism</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.



Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Information and Knowledge Engineering	Knowledge Engineering	◎ IWAI, Yoshio 0857-31-5624 iwai■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Computational interaction</li> <li>• Pattern recognition</li> <li>• Human media processing</li> <li>• Augmented reality</li> </ul>
		◎ NISHIYAMA, Masashi 0857-31-6083 nishiyama■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Image recognition</li> <li>• Video analysis</li> <li>• Human interface</li> </ul>
Electrical and Electronic Engineering	Information and Control Engineering	◎ NAKAGAWA, Tadao 0857-31-5745 nakagawa■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Wireless communications and optical wireless communications for wearable devices</li> <li>• High-precision signal processing for biomedical sensors</li> <li>• Radio frequency circuit design</li> </ul>
		◎ SASAOKA, Naoto 0857-31-5234 sasaoka■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Speech enhancement</li> <li>• Digital wireless communication system</li> <li>• Active noise control</li> </ul>
		◎ KONDO, Katsuya 0857-31-5699 kondo■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Computer vision</li> <li>• Bioimage analysis and medical engineering</li> <li>• Development of smart measurement control system</li> </ul>
	Electrical and Electronic Systems Engineering	◎ NAKANISHI, Isao 0857-31-5132 nakanishi■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Application of digital signal processing</li> <li>• Biometrics person authentication</li> <li>• Speech signal processing</li> </ul>
		◎ OHKI, Makoto 0857-31-5688 mohki■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Evolutionary computational algorithms for multi-objective optimization</li> <li>• Multi-objective optimization of symbolic and numeric combinatorial optimization</li> <li>• Multi-objective optimization problems of structural data</li> </ul>
		◎ SAITO, Kentaro 0857-31-5697 saitouken■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Wireless communication systems</li> <li>• IoT systems</li> <li>• Application of drones to wireless communication systems</li> </ul>
		MISHIBA, Kazu 0857-31-5756 mishiba■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Image processing</li> <li>• Computational photography</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Electrical and Electronic Engineering	Electronic Materials and Device Engineering	◎ ICHINO, Kunio 0857-31-5240 ichino■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on wide bandgap semiconductors for optical/power devices</li> <li>• Study on high-efficiency solar cells</li> <li>• Study on high-efficiency ultraviolet/visible light-emitting devices</li> </ul>
		ABE, Tomoki 0857-31-5233 abe■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Study on crystal growth of wide bandgap semiconductors</li> <li>• Development of blue-ultraviolet optical detectors (avalanche photodiodes)</li> <li>• Development of blue-ultraviolet optical modulators</li> <li>• Development of high efficient ultraviolet light emitting devices</li> </ul>
		◎ OHMI, Koutoku 0857-31-6700 ohmi■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Research on electroluminescent displays</li> <li>• Development of wavelength conversion phosphor film for plant growth</li> <li>• Development of wavelength conversion phosphor film for solar panel</li> <li>• Research on phosphors for white LED applications</li> </ul>
		◎ NISHIMURA, Ryo 0857-31-5237 ryo■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Application of renewable energy technology, such as desalination of brackish water, for arid-land development</li> <li>• Application of electrostatics and high voltage technology</li> <li>• Photovoltaic power generation</li> </ul>
		◎ LEE, Sang-Seok 0857-31-5961 sslee■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• MEMS devices for bio/chemical/medical applications</li> <li>• Sensors for IoT and IoT systems</li> <li>• Design and application of metamaterials</li> <li>• RFMEMS and RF devices</li> </ul>
		◎ MATSUNAGA, Tadao 0857-31-5104 matsunaga■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Development of minimally invasive medical devices utilizing microfabrication techniques (MEMS)</li> <li>• Development of ultra-thin fiber-optic MEMS sensor</li> <li>• Development of micro sensors for robotic surgery</li> <li>• Development of tactile display using micro actuators</li> <li>• Study on non-planar photofabrication techniques</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Applied Chemistry	Green Catalysis Chemistry	◎ KATADA, Naonobu 0857-31-5684 katada■tottori-u.ac.jp TSUJI, Etsushi 0857-31-5257 e-tsuji■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Principles and application of zeolites and solid acid catalysis</li> <li>Conversion of heavy oil components, methane, biomass and plastic waste into useful materials</li> <li>Synthesis of functional nanostructured materials</li> <li>Development of electrocatalysts and co-catalysts for water splitting and CO<sub>2</sub> reduction</li> </ul>
	Main Group Element Chemistry	◎ NANJO, Masato 0857-31-5516 nanjo■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Synthesis of ionic liquids consisting of heavy group 14-elements and application to electrochemical devices</li> <li>Design and synthesis of functional organosilicon and organogermanium compounds, and development of electronic materials</li> </ul>
	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	<ul style="list-style-type: none"> <li>Synthesis of lithium, sodium, or potassium storage intermetallic compounds and their properties as anode materials in rechargeable batteries</li> <li>Development of all solid-state secondary batteries</li> <li>Development of energy storage materials based on photovoltaics</li> <li>Reaction behavior analysis of electrode in rechargeable batteries</li> </ul>
	Molecular Self-assembly	◎ MATSUURA, Kazunori 0857-31-5262 ma2ra-k■tottori-u.ac.jp INABA, Hiroshi 0857-31-5331 hinaba■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Creation and application of artificial virus structures</li> <li>Construction of nanostructures by self-organization of biomolecules</li> <li>Creation of light-responsive biomolecular systems</li> <li>Creation of functional materials applying inner space of microtubules</li> </ul>
	Synthetic Organic Chemistry	◎ NOKAMI, Toshiki 0857-31-5179 tnokami■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>Molecular Glycoscience</li> <li>Organic Electrochemistry</li> <li>Functional Ionic Liquids</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Applied Chemistry	Inorganic Materials Chemistry	◎ MASUI, Toshiyuki 0857-31-5264 masui■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Synthesis and application of environment-friendly color materials</li> <li>• Design of new phosphors based on rare earth compounds</li> <li>• Development of inorganic sunscreens</li> <li>• Preparation of heterogeneous catalysts containing rare earth elements</li> </ul>
	Biomimetic Chemistry and Related Disciplines	MORIMOTO, Minoru 0857-31-5990 m-morimoto■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Utilization of biopolymers</li> <li>• Analysis of bio-related compounds</li> </ul>
Biotechnology	Biofunction Development Engineering	◎ 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	<ul style="list-style-type: none"> <li>• Discovery and application of novel functions of microorganisms and marine algae</li> <li>• Application and development of the functions of microorganisms and marine algae to the practical production of useful substances and the solutions of environmental problems</li> <li>• 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</li> <li>• Directed evolution approaches to enhance enzyme stability using error-prone thermophiles</li> <li>• Development of new medical materials using unutilized marine resources</li> </ul>
	Biocatalyst Engineering	◎ OKAMOTO, Kenji 0857-31-5276 okamoto■tottori-u.ac.jp HARADA, Hisashi 0857-31-5946 harada■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Isolation and production of bioactive compounds from basidiomycetes</li> <li>• Determining the mechanism of action of bioactive compounds from basidiomycetes</li> <li>• Production of lignocellulose-degrading enzymes, ethanol and xylitol by basidiomycetes</li> <li>• Pathway engineering for the production of functional isoprenoids</li> <li>• Functional characterization of isoprenoid biosynthesis genes in higher plants and microalgae</li> <li>• Production of useful materials by microalgae</li> </ul>
	Protein Engineering	◎ MIZOBATA, Tomohiro 0857-31-5691 mizobata■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Structure and function of enzyme and protein</li> <li>• Protein folding</li> <li>• Protein stability and conformational change</li> <li>• Molecular chaperone and protein fibrillogenesis (aggregation)</li> </ul>
	Bioorganic Chemistry	◎ HANASHIMA, Shinya 0857-31-5636 hanashima■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Flexible bioorganic molecules: Interactions and biological functions</li> <li>• Organic molecules targeting lipid bilayers: Mechanistic insights and development</li> <li>• Organic synthesis of biomolecules</li> </ul>
	Structural Biology	◎ NAGANO, Shingo 0857-31-5273 snagano■tottori-u.ac.jp HINO, Tomoya 0857-31-5744 t_hino■tottori-u.ac.jp SATO, Yusuke 0857-31-5274 yusato■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Structural biology of natural products biosynthesis</li> <li>• Molecular basis of nitrogen metabolism by anammox bacteria</li> <li>• Structural biology of thermal sensation</li> <li>• Structural biology of membrane proteins</li> <li>• Structural biology of ubiquitin signaling</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Civil Engineering	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	<ul style="list-style-type: none"> <li>• Structural design of infra-, mechanical and offshore structures</li> <li>• Earthquake-resistant performance of infra-, mechanical and building structures</li> <li>• Maintenance of infra-, mechanical and offshore structures</li> <li>• Earthquake response evaluation of subsurface and building structures</li> <li>• Hazard assessment of natural disasters by GIS and satellite technology</li> </ul>
		◎ KURODA, Tamotsu 0857-31-5523 tkuroda■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Application of industrial waste products to concrete</li> <li>• Durability assessment of concrete and concrete structures</li> <li>• Repair and strengthening for concrete and concrete structures</li> <li>• Prediction of deterioration and maintenance for concrete structures</li> </ul>
	Geotechnical and Rock Engineering	NAKAMURA, Koichi 0857-31-5986 nak_x■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Constitutive properties of saturated and unsaturated soils</li> <li>• Slope disaster mitigation and monitoring</li> </ul>
		◎ ONO, Yusuke 0857-31-5286 ysk■tottori-u.ac.jp KOHNO, Masanori 0857-31-5755 kohnom■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Earthquake response analysis of earth structures</li> <li>• Numerical simulation of geohazards</li> <li>• Hazard risk assessment for slope disaster</li> <li>• Evaluation of properties of clay mineral-bearing geomaterials</li> <li>• Properties of rock mass including macro-fracture filled with clay minerals</li> </ul>
	Hydraulic and Coastal Engineering	◎ MIWA, Hiroshi 0857-31-5295 miwa-h■tottori-u.ac.jp WADA Takashi 0857-31-5284 wada-t■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Sediment transport and bed deformation in non-uniform sediment beds</li> <li>• Bed deformation and channel evolution due to sediment supply to riverbed</li> <li>• Effects of river structure on sediment dynamics</li> <li>• Debris flow mechanics</li> <li>• Sediment-transport process in a river system from mountainous area to estuary</li> </ul>
		◎ KUROIWA, Masamitsu 0857-31-5299 kuroiwa■tottori-u.ac.jp ◎ KAJIKAWA, Yuki 0857-31-5696 kajikawa■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Numerical model of waves and nearshore currents</li> <li>• Coastal sediments and Prediction of coastal geomorphological change</li> <li>• Maintenance of river-mouth, port and harbor</li> <li>• Coastal disaster and monitoring</li> <li>• Numerical analysis of topography change due to river flow or tsunami</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form.

The symbol of ■ should be replaced by @.

Course	Field of Education-Research	Supervisor Place to Contact	Research Theme
Civil Engineering	Geo-spherical Environmental and Architectural Engineering	◎ KAGAWA, Takao 0857-31-5641 kagawa■tottori-u.ac.jp SHIOZAKI, Ichiro 0857-31-5642 shiozaki■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Strong ground motion estimation</li> <li>• Effects of fault rupture process and surface geology on earthquake ground motion</li> <li>• Seismological and EM (electromagnetic) study on structure and dynamics of crust and upper mantle</li> <li>• EM applications on seismology and volcanology</li> </ul>
		◎ ASAI, Hideko 0857-31-5746 asai■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Architectural planning</li> <li>• Architectural environment</li> </ul>
Social Management Engineering	Regional Systems Planning	◎ FUKUYAMA, Kei 0857-31-5312 fukuyama■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Institutional design and analyses of regional socio-economic systems</li> <li>• Public policy evaluation</li> <li>• Infrastructure planning and management, and urban planning</li> </ul>
		◎ KUWANO, Masashi 0857-31-5313 kuwano■tottori-u.ac.jp MINAMINO, Yuka 0857-31-5320 minamino■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Activity – travel behavior analysis</li> <li>• Big data based planning theory</li> <li>• Infrastructure planning and management, transportation engineering, and urban planning</li> <li>• Service quality control and evaluation</li> <li>• Decision making models</li> </ul>
		◎ TANIMOTO, Keishi 0857-31-5310 tanimoto■tottori-u.ac.jp CHOSOKABE, Madoka 0857-31-5760 mchoso■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Methodologies for sustainable society planning</li> <li>• Planning theory of local transport system</li> <li>• Design and analysis of daily support services</li> <li>• Design of participatory planning process</li> <li>• Analysis and evaluation of regional management organization</li> </ul>
	Disaster Prevention Planning	◎ OTA, Takao 0857-31-5309 ohta■tottori-u.ac.jp EMOTO, Hisao 0857-31-5316 emoto■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Soft measures for disaster prevention based on evacuation simulation</li> <li>• Performance evaluation of port and coastal structures under damage progression</li> <li>• Maintenance management model for infrastructure</li> <li>• Bridge management support system by XR and AI</li> <li>• Road pavement management system by AI and motion sensor</li> </ul>
Social Management Engineering	Environmental Planning	◎ MIYAMOTO, Yoshikazu 0857-31-5318 miyamoto■tottori-u.ac.jp TAKABE, Yugo 0857-31-5337 takabe.yugo■tottori-u.ac.jp	<ul style="list-style-type: none"> <li>• Social design on watershed or rural environmental management</li> <li>• Design for the preservation of environments</li> <li>• Disaster risk management for adaptation to climate change</li> <li>• Application of microorganisms for establishing recycling-based society-</li> <li>• Water quality control and management</li> <li>• Current issues in global environmental protection</li> </ul>

The symbol of ◎ shows guidance teachers to be selected in filling the entrance application form. The symbol of ■ should be replaced by @.