How to Obtain the Application Forms and Guidelines

[To pick up in person]

The booklet is available at the counter in front of the Admissions Section, Student Support Office, Koganei Campus (1st floor of the Administration Building). Pick one up at your own discretion. (8:30 a.m. to 5:15 p.m. except weekends and holidays)

[To request by mail]

If you wish to receive the booklet by mail, please send a self addressed envelope (A4 size) with stamps (320 yen for regular delivery or 620 yen for express delivery) attached to the address below. Please write "Request for Application Guidelines for the Doctor's Program of the Graduate School of Engineering" in red next to the address.

Please note that it may take some time before the application is sent. When requesting by mail, please allow sufficient time before the application period.

Contact Address :
2-24-16 Naka-cho, Koganei-shi, Tokyo 184-858
Admissions Section, Student Support Office, Koganei Campus,
Tokyo University of Agriculture and Technology(TUAT)
TEL: +81-(0)42-388-7014
E-mail :tnyushi@cc.tuat.ac.jp

Tokyo University of Agriculture and Technology Graduate School of Engineering

Doctoral Course (Doctor)

Application Forms and Guide

For October 2026 / April 2027 Enrollment

Tokyo University of Agriculture and Technology
Graduate School of Engineering

Tokyo University of Agriculture and Technology Graduate School of Engineering
Doctoral Course Application Forms and Guide for October 2026 / April 2027 Enrollment

(1) The Graduate School of Engineering consists of a Master's Course and a Doctoral Course. The following application guide and forms are intended for the Doctoral Course.
(2) Applicants who wish to enroll Joint Doctoral Program for Sustainability Research refer to another application guide and forms.
(3) The University offers the International Specialized Program (English course) in each department. Please refer to page10, 4. International Specialized Program.

1. Application Quota

Department	Number of applicants to be accepted			
	October 2026 Enrollment	April 2027 Enrollment		
		1st Recruitment	2nd Recruitment	3rd Recruitment
Biotechnology and Life Science	Several	14	Several	Several
Biomedical Engineering	Several	5	Several	Several
Applied Chemistry	Several	10	Several	Several
Applied Physics and Chemical Engineering	Several	6	Several	Several
Mechanical Systems Engineering	Several	14	Several	Several
Electrical Engineering and Computer Science	Several	10	Several	Several
Total	Several	59	Several	Several

2. Admission Requirements

Applicants must meet any of the following items:

(1) Applicants must either have a master's degree or an equivalent degree in a specialized field, or expect to acquire the degree before entering the Doctoral Course.
(2) Applicants must either have acquired a master's degree or an equivalent degree in a specialized field overseas, or expect to acquire the degree before entering the Doctoral Course.
(3) Applicants must have studied in Japan the required subjects for distance learning set by a foreign school and expect to acquire a master's degree or an equivalent degree in a specialized field before entering the Doctoral Course.
(4) Applicants must have finished an academic course set by the Minister of Education, Culture, Sports, Science and Technology at an educational institute in Japan that provides courses offered by a foreign graduate school that functions under the educational system of a foreign country, and must have acquired a master's degree or an equivalent degree in a specialized field.
(5) Applicants must hold or expect to obtain a Master degree or equivalent before entering the Doctoral Course through course completion at the United Nations University (hereinafter referred to as UNU) as prescribe in Article 1 Paragraph 2 of the Act on Special Measures Incidental to Enforcement of the Agreement between the United Nations and Japan regarding the Headquarters of the United Nations University (Act No.72 of 1976),which was established under the December 11, 1972 resolution of the General Assembly of the United Nations.
(6) Those who have completed an education course at a foreign school (at educational institutions that have been designated as qualifying for admission), (4) or those who have attended the United Nations University and passed an examination that is equivalent to the Examination of Doctoral Thesis Study Basic Ability, or those who are expected to pass the examination and are recognized as having academic ability that is considered equal to or greater than that of an applicant who holds a master's degree shall be deemed qualified.

(Examination of Doctoral Thesis Study Basic Ability)

i) Examination to evaluate the applicant's advanced professional knowledge and ability in the major subject and basic knowledge in fields that are related to the major subject, which the candidate has learned or intends to develop in the first course.
ii) Examination to evaluate the applicant's ability to autonomously conduct research related to the doctoral

thesis and to that which will be learned in the first course.

(7) Applicants are specified by the Minister of Education, Culture, Sports, Science and Technology.
An applicant who is specified by the Minister of Education, Culture, Sports, Science and Technology shall be someone who "has graduated from university or has obtained 16 years of education overseas, has conducted over 2 years of research work at a university or research institute, and whose research has led to the acquisition of a postgraduate's degree or an equivalent degree in a specialized field.

(8) Applicants must have been recognized for having academic ability equivalent to a postgraduate's degree or a specialized field through individual admission screening, and must be 24 years of age at the time of entering the Doctoral Course.
*Preliminary screening will be conducted for applicants applying as either (7) or (8) of admission qualification. (See *The Approval of Admission Qualifications (7) & (8)*.)

3. Selection Schedule

	October 2026 Enrollment	April 2027 Enrollment		
		1st Recruitment	2nd Recruitment	3rd Recruitment
※Application deadline of admission qualification approval	June 8, 2026 -June 11, 2026	June 8, 2026 -June 11, 2026	November 9, 2026 -November 11, 2026	January 28, 2027 - January 29, 2027
※Approval examination	June 24,2026	June 24,2026	November 20, 2026	February 5, 2027
※Announcement of approval result	June 30, 2026	June 30, 2026	November 25, 2026	February 12, 2027
Application deadline	July 7, 2026 -July 10, 2026	July 7, 2026 -July 10, 2026	November 30, 2026 -December 4, 2026	February 26, 2027 -March 2, 2027
Examination	August 20, 2026	August 20, 2026	December 10, 2026	March 9, 2027
Announcement of successful applicants	September 4, 2026, 1:30 p.m.	September 4, 2026, 1:30 p.m	January 18, 2027 1:30 p.m.	March 19, 2027 1:30 p.m.
Admission procedure	September 11, 2026	March 16, 2027	March 16, 2027	March 25, 2027

※Admission Requirements (7) (8) chisel target

4. Application Deadline

See *3. Selection Schedule*.
Posted applications must be received by the last day of the deadline.

5. Application Procedure

See *6. Selection Procedures* before applying and submit the required documents either in person at the Admissions Office or by post before the deadline.

Contact information for application submission and inquiries:

Admissions Section, Koganei Student Support Office,
Tokyo University of Agriculture and Technology
2-24-16 Naka-cho, Koganei-shi, Tokyo 184-8588
TEL: +81-42-388-7014
E-mail: tnyushi(at)cc.tuat.ac.jp
Office hour: 9:00am-12:00pm, 1pm-5pm

6. Selection Procedures

The selection of successful applicants will be conducted comprehensively through academic achievement test and screening of documents.

(1) List of documents to be submitted

Documents for application		Important notes
A	Admission Voucher (use provided form)	Before filling in the section *Proposed Research Title*, ensure to follow guidance of your preferred supervisor and have him/her approval seal in the section *Preferred Supervisor.* If you choice a supervisor with the * 1 mark (P10-), consult with a supervisor in advance.
B	Photograph Voucher / Examination Voucher (use provided form)	An ID picture, showing you without any headwear, and taken within 3 months prior to application (4cm x 3cm) must be adhered where designated.

C	Certificate of (expected) completion of course	You must submit a certificate of (expected) postgraduate's degree or master's degree issued by the graduate school you attended (are attending). This applies even if you have graduated or expect to graduate from our Graduate School of Engineering. Applicants with qualification (6) are required to submit documents relating to the examination confirmed that corresponds to the basic skills examination doctoral dissertation. However, submission of this certificate is not required from applicants meeting admission qualification (7) or (8).
D	Certificate of graduate school academic achievements	Issued by the graduate school you attended. This applies even if you are belonging to our Graduate School of Engineering. However, submission of this certificate is not required from applicants meeting admission qualification (7) or (8).
E	Outline of Master's Thesis (use provided form)	An outline of your master thesis within 2,000 Japanese characters (500 English words) should be submitted if you have completed a master course. In addition, provide separated prints or copies of any published articles related to your postgraduate's thesis, if available. However, this is not required if you are still enrolled in your TUAT master course or meeting admission qualification (7) or (8).
F	Research Proposal (use provided form)	The proposal for the Doctoral research should be within 500 English words and ensure you obtain the confirmation of your preferred supervisor.
G	Statement of Purpose (use provided form)	Clearly state your master thesis title, or the general outline of the research you are currently conducting (wish to conduct), as well as why you wish to apply for the course. (Not applicable for graduates, research and current students of our university, and applicants meeting requirement (7) or (8).
H	Return envelope	Applicable only if you submit the application by post. Use Japanese Envelope Chou #3 and adhere 460 yen worth of stamps. Also ensure to provide your name, return address and postal code so we can send you your examination voucher and other documents. If you do not receive the examination voucher, contact our Admission Center in advance.
I	Original Copy of Certificate of Residence (for non-Japanese applicants only)	Non-Japanese applicants must submit a Certificate of Residence (detailing nationality, residential status, permitted period of stay and its expiration date). In addition, government-sponsored foreign student of the MEXT (Ministry of Education, Culture, Sports, Science and Technology) must also submit a certificate of guarantee of acceptance as Japanese government scholarship student which is issued by the university enrolled.
J	Entrance examination fee (paid using provided payment slip designated by our Graduate School)	30,000 yen. Obtain the designated payment slip for the entrance examination fee at the counter of the Koganei Student Support Office, make your payment at the post office or Japan Post Bank, receive the *Certificate of Transfer Payment Receipt* with the stamp of the branch and date, and attach it on the designated place of *Payment Confirmation Slip of Entrance Examination Fee*. In addition, ensure to keep the *Transfer Payment Invoice and Receipt Slip* safe, as it acts as the receipt of your payment. *As payment of the entrance examination fee will be confirmed with the stamp of branch and date of payment shown on the *Certificate of Transfer Payment Receipt*, make your payment at a post office or JAPAN POST BANK only. (Payments are not accepted via ATM transaction.) If you are applying from outside of Japan, you are advised to consult with your preferred supervisor first. However, the entrance examination fee payment is not required for those who will continue on to the Doctoral Course after completing the Master's Course of our university, or those who are supposed to get extension of Japanese government scholarship grant.
K	Name & Address voucher (use provided form)	Fill in all necessary information. Should any information, such as your address, change after submitting your application, make sure to contact the Admissions Section, Koganei Student Support Office immediately.

(2) Academic Achievement Test

You will be tested upon your knowledge of the specialized field related to the outline of the postgraduate's thesis and research proposal you submitted, as well as your language skills.

7. Date and Place of Examination

(1) Date: See *3. Selection Schedule*

(2) Place: Tokyo University of Agriculture and Technology, Koganei Campus

Further details concerning the place of examination will be given to you later.

8. Announcement of Successful Applicants

Date: See *3. Selection Schedule*

The list of successful applicants will be shown on the TUAT website for 3 days.

The *Notice of Acceptance* will be mailed to successful candidates on the same day.

9. Admission Procedure

(1) Date: See *3. Selection Schedule*
Further details will be given to you later.

(2) Required fees upon admission and others

1) Admission fee — 282,000 yen
Not applicable to those who continue on to the Doctoral Course after completing the Master's Course of our university, and government-sponsored foreign student.

2) Tuition fee — 642,960 yen (321,480 yen each for the first and the second semester)
Not applicable to government-sponsored foreign student.
Note: Payment of tuition fees is required after entrance.
The fees set above are current and may be subject to change before the date of admission procedure. In addition, should the tuition fee change during enrollment, the new fee can be applicable upon amendment.
When you entrance, you need to prepare expenses, for example, accident insurance designated.

3) Other required documents — Entrance Agreement (use provided form)
Working applicants who wish to enter the course while employed must submit the Entrance Agreement provided by such persons as the head of the department.

4) When you entrance, you need to prepare expenses, for example,
accident insurance designated.

10. Duration of Study for working applicants

While the standard duration of study for Doctoral Course is three years, to promote a favorable academic environment for working adults, a special provision to extend the study period beyond three years may be granted so long as the extended period does not exceed twice the period of the regular duration of study.

11. Important Notes

(1) Ensure to contact and obtain confirmation from your preferred supervisor before you apply.
(2) No signature (approval sign) of the potential supervisor in the application form, it cannot be filed.
(3) Ensure to bring along your Examination Voucher when you come for your academic achievement test.
(4) No part of any documents may be altered once application is submitted.
(5) Should you violate any part of this Application Forms and Guide and instructions given by the university, you may be denied of the examination.
(6) Confirmation concerning the entrance examination should be made at the *Contact information for application submission and inquiries*, as given on page 2.
(7) The examination fee is non-refundable, regardless of any reason.
(8) Applicants will be informed immediately if any changes concerning the examination occur.
(9) Once admitted, upon the submission by the applicants and depending on the systems of the exemption of admission/tuition fee and scholarship, your certificate of achievement which you submitted upon application and the result of your entrance examination may be used for consideration. Please rest assured that your private information, obtained upon your application, will be adequately treated according to our Privacy Policy (available on the university website).
(10) Only for delay of Chuo-line is considerate principally.
(11) In case a disaster occur the before day of examination or the examination day, you check follow address.
https://www.tuat.ac.jp/NEWS/
(12) Applicants who need special care due to disability (Prescribed in Article 22-3 of School Education Act) consult with an expected research supervisor and Admissions Section, Koganei Student Support Office as soon as possible before you apply for.
(13) In accordance with the "Foreign Exchange and Foreign Trade Act", Tokyo University of Agriculture and Technology (TUAT) has established "Tokyo University of Agriculture and Technology Regulations for Security Export Control" and has been conducting strict screening of prospective students to be admitted into TUAT. In case a prospective student or the contents of his/her studies/research is subject to regulation as defined by the above-mentioned Act or Regulations, TUAT must apply to the Ministry of Economy, Trade and Industry (METI) of Japan for its permission to allow his/her enrollment in TUAT, and s/he may not be able to begin his/her studies or research immediately at TUAT for the time being. Furthermore, in

case METI denies a TUAT's application in order to maintain international peace and security, the prospective student may not be able to pursue his/her studies or research at TUAT as a result.

The Approval of Admission Qualifications (7) & (8)

Admission qualification approval will be conducted as follows to decide whether you are qualified for application for the Doctoral Course:

1. Submission of Application Documents

Submission date: See *3. Selection Schedule*

Submission time: 9:00 am – 12 pm, 1 pm – 5 pm

Submission place: Admissions Section, Koganei Student Support Office, Tokyo University of Agriculture and Technology (1F, Administration Building (CUBE), Koganei Campus)

2. Documents for Submission

(1) Admission Qualification Approval Application Form (use provided form)
(2) Certificate of graduation from the last academic institution attended (issued by the school)
(3) Certificate of achievements from the last academic institution attended (issued by the school).
(4) A list of research achievements (use provided form) and separated prints of any articles published, etc.
(5) Certificate of employment (enrollment) [free format (not applicable to applicants who have no employment history out of them who meet admission qualifications (7) or (8)]
(6) Statement of Purpose (use provided form)

3. Approval Examination (Application Qualification Screening)

See *3. Selection Schedule*. Details will be given upon application procedures.

4. Approval Result

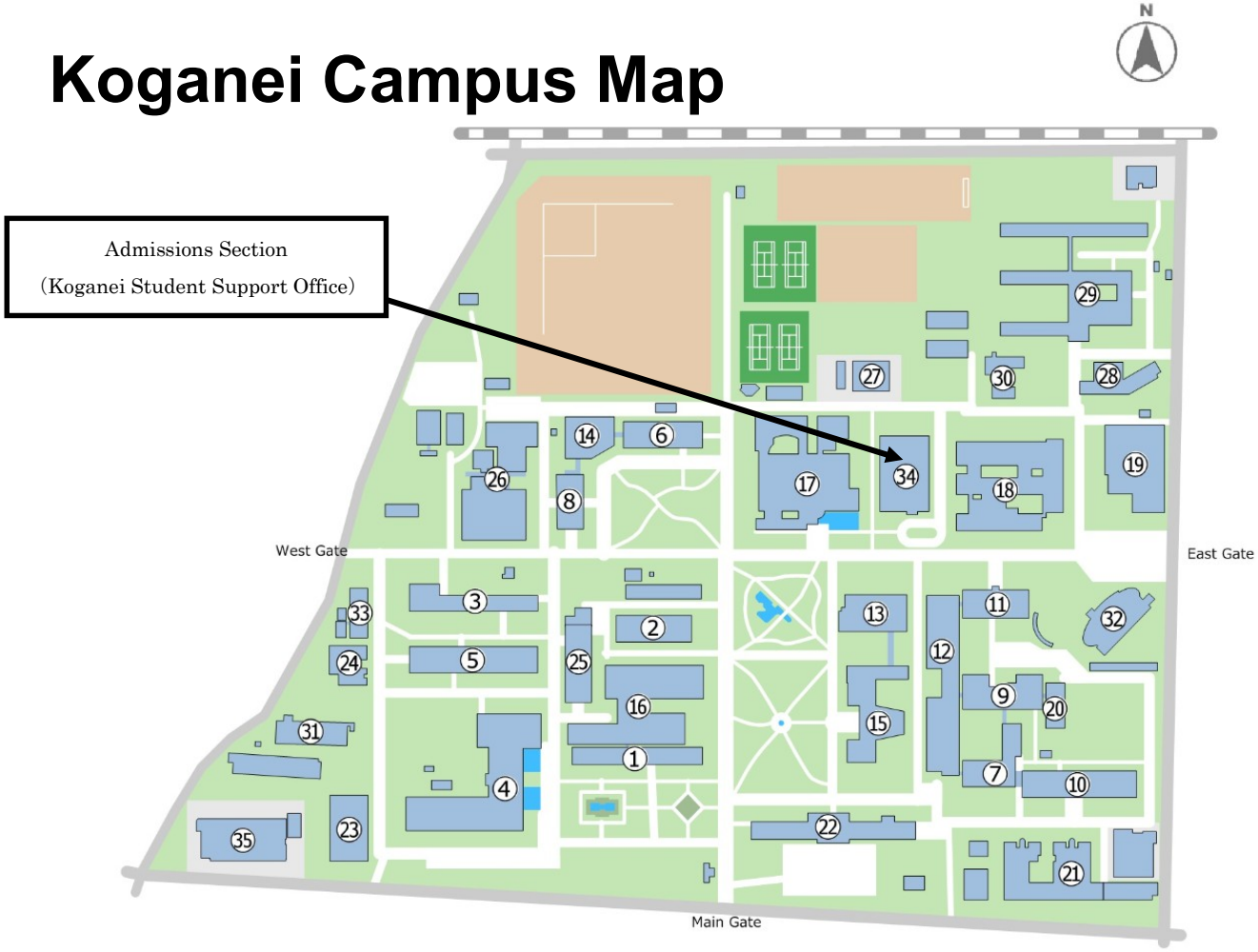
See *3. Selection Schedule* about the date of announcement of approval result. You will be informed by post.

5. Application Procedures

Applicants who have been approved to go ahead with the application should proceed to apply as required for general application. (Refer to p.2- p.3)

Admissions Section
Koganei Student Support Office
Tokyo University of Agriculture and Technology
TEL: +81-42-388-7014
E-mail: tnyushi(at)cc.tuat.ac.jp

Koganei Campus Map



①Building 1
②Building 2
③Building 3
④Building 4
⑤Building 5
（Instrumentation Analysis Center）
⑥Building 6
⑦Building 7
⑧ Building 8 （ Information Media Center）
⑨Building 9
⑩Building 10
⑪Building 11
⑫Building 12
⑬Building 13
（Organization for the Advancement of Education and Global Learning）
⑭Building 14
⑮Lecture Hall Building for the Faculty of Engineering
⑯New Building 1
⑰Koganei Library
⑱Graduate School of Bio-Applications and Systems Engineering (BASE)
⑲Faculty of Engineering Multipurpose Hall, Co-op Store and Cafeteria
⑳CAD/CAM Laboratory
㉑University Research Administration Center – URAC
㉒Nature and Science Museum
㉓ Research Center for Science and Technology
㉔Center for Environment and Safety
㉕Center for Design and Manufacturing
㉖Gymnasium
㉗Faculty of Engineering RI Laboratory Building
㉘Koganei International House
㉙Dormitory “Keyaki”
㉚Dormitory “Sakura”
㉛Staff Housing
㉜ The 140th Year Commemorative Building (Ellipse)
㉝Research Center for Next Generation Capacitor
㉞Administration Building(CUBE): Administration Office and Health Service Center
㉟Animal Emergency Medical Center

Directions :
8 minutes walk from JR Higashi-Koganei Station (40 minutes from Tokyo Station, 22 minutes from Shinjuku Station by JR Chuo Line rapid train).

Guide to the Doctoral Course

Graduate School of Engineering, Tokyo University of Agriculture and Technology

1. Purpose of learning

The Graduate School of Engineering (Doctoral Course) accepts students from Japan and overseas who are interested in the natural environment and scientific technology and making efforts to improve themselves. They seek to broaden their vision and acquire thorough knowledge, and supported by a strong sense of ethics and personal autonomy, they want to become engineers and researchers who play an active role in international society. Recently, we have seen remarkable developments in science and technology, and ICT has become more sophisticated and advanced. We have also seen developments in border areas as well as in specialized comprehensive fields related to various specialized fields. These advances have been astounding, and in the Graduate School of Engineering we are engaged in a wide range of research and education from basic science and engineering to applied advanced technology designed to meet these kinds of current demands. Our goal is to foster researchers and specialists who have a wealth of imagination and creativity and can carry out wide-ranging, advanced research and development.

2. Admission policy

Aiming to develop individual students, the Graduate School of Engineering is looking for applicants who meet the following requirements:

1. Applicants who have a high level of ethics, sufficient basic academic knowledge of their field of study, and a broad view of their area of specialization.
2. Applicants who are on a quest to find truth in nature, have a manufacturing mindset, and are interested in science and technology. They should also be able to think independently in pursuing their research and cooperate and collaborate with others while being dedicated to solving research problems and contributing to society.
3. Applicants who are willing to take on the challenges facing humankind and can consider and judge from multiple perspectives and set their own research themes.
4. Applicants who have a high level of communication ability in Japanese or English.

Department of Biotechnology and Life Science

Our aims are twofold: (i) to train students to acquire an international mindset, communication skills, and the ability to make presentations at domestic and international conferences and write technical papers and (ii) to develop human resources who, as experts in cutting-edge biotechnology, can act immediately in response to the needs of modern society while being active at the core of society as researchers, specialists, and professionals with the ability to discover new needs and seeds of new technologies. In consideration of these aims, we therefore seek people who satisfy the following admissions policy:

1. The applicant must have (i) advanced specialized knowledge and academic ability in chemistry, life sciences, and engineering to engage in cutting-edge research in the field of biotechnology and life science and (ii) acquired a bird's-eye viewpoint and high ethical standards essential for researchers who lead the field.
2. The applicant must have (i) an inquisitive mind for cutting-edge research in the field of biotechnology and (ii) a strong desire to contribute to society through interdisciplinary and international cooperation and collaboration.
3. The student must be willing to (i) set research questions proactively and logically through cutting-edge expertise, advanced analytical skills, and insight in the field of biotechnology and (ii) boldly face challenges concerning technological innovation, planning of unexplored technologies, and original advanced research on various issues facing humankind.
4. The student must possess the advanced language and communication skills necessary to disseminate research results internationally

Department of Biomedical Engineering

While aiming to give students specialized knowledge related to the leading technology at the core of modern medicine, through collaboration with specialists from different fields, we aim to foster students who can acquire practical abilities based on biomedical innovation processes and develop as leaders in international society. As researchers, specialists, and professionals, these leaders can serve as bridges between various industrial fields and sow the seeds for developing the medical devices and health practices of the future. In consideration of these aims, we therefore seek people who satisfy the following admissions policy:

1. Applicants who have a high sense of ethics, basic academic knowledge and ability, and a broad vision to learn from biomedical engineering.
2. Applicants who are on a quest to find truth in nature, have a manufacturing mindset, and are interested in biomedical fields. They also think independently while pursuing their research, can cooperate and collaborate with various researchers, engineers, and specialists who cross borders between discipline, and are dedicated to solving research problems and contributing to society.
3. Applicants who are able to (i) consider and judge various problems facing humanity related to health, medicine, and sanitation from multiple perspectives, (ii) set their own research agenda, and (iii) be willing to boldly take on challenges connected to the development of new fields of research, medicine, and healthcare technology.
4. Applicants who are highly skilled in communicating in Japanese or English.

Department of Applied Chemistry

The purpose of this program is to develop talented people who can (i) lead the development of highly specialized science and technology internationally as chemists and materials scientists related to the fields of nature, life, the environment, and energy and (ii) contribute to the formation of a safe and secure sustainable society. Accordingly, we seek talented persons who satisfy the following admissions policy.

1. Applicants must have (i) systematic and abundant basic academic ability in the fields of chemistry and physics and related fields and (ii) the ethical standards necessary for researchers and engineers.
2. Applicants must be highly motivated and proactive in regard to (i) creating new value regarding chemical substances from the atomic and molecular perspective and (ii) contributing to society both domestically and globally as world-class experts in their field.
3. Applicants must be willing to set their own research agenda in the field of chemistry and materials science related to nature, life, the environment, energy, etc., from an academic and industrial perspective. Moreover, they must be prepared to boldly pursue unexplored theories, pioneer new research fields, and advance science and technology by synthesizing a wealth of knowledge and engaging in independent research.
4. Applicants must have excellent communication skills in Japanese or English and be able to publicize their research results to the world.

Department of Applied Physics and Chemical Engineering

The objective of the doctoral program is to foster engineers and scientists who can solve problems related to energy, the environment, new materials and quantum technology through (i) an integrated understanding of chemical engineering and physical engineering and (ii) advanced professional leadership skills that will allow them to play a leading role in the solution process. As a result, by playing a social and international role, they will contribute to the creation of a sustainable society. We therefore seek people who satisfy the following requirements:

1. Applicants must have the following skills: (i) sufficient basic academic skills in chemistry, physics, mathematics, English, etc. for studying chemical engineering and physical engineering, (ii) master's level research skills, and (iii) a broad perspective and a strong sense of ethics.
2. Applicants must have the following: (i) an interest and track record in research in the fields of chemical and physical engineering related to energy, the global environment, medicine and

food, materials, quantum technology, or the process and measurement technologies that form the basis for solving problems in those fields and (ii) a desire to make social and international contributions through world-leading research activities in one or more of those fields.
3. Applicants must be able to (i) consider and judge various problems facing humanity from multiple perspectives by integrating and utilizing chemical engineering and physical engineering, (ii) set their own research agenda, and (iii) be willing to boldly take on challenges as an independent researcher aiming to solve those problems.
4. Applicants must have a high level of communication skills, in Japanese or English languages, and the ability to discuss research both orally and in writing.

Department of Mechanical Systems Engineering

Based on a high level of fundamental analytical ability in mathematics and physics and a broad and deep expertise in mechanical-systems engineering, the department's aim is twofold: (i) design and create unique and world-leading advanced mechanical systems to create a science-and-technology-driven society on a global scale that can develop sustainably in harmony with the environment and (ii) train advanced engineers and researchers who can work internationally with a deep understanding and insight into world society and culture through their rich communication skills. To meet those aims, the Department seeks talented people who satisfy the following admissions policy:

1. Applicants must have (i) a high level of academic ability for applying oneself to cutting-edge research concerning mechanical-systems engineering and (ii) a strong desire to contribute to humanity and society through international activities in their field of specialization.
2. Applicants must have (i) the ability to identify and solve problems with their advanced analytical skills, specialized knowledge, and insight in mathematics, physics, and mechanical-systems engineering and (ii) the ability to think flexibly to deal with research issues in new research fields and interdisciplinary areas.
3. Applicants must have acquired intellectual curiosity and insight in each specialized field of mechanical-systems engineering so as to be able to discover development goals on their own, personify the routine of experimentation and analysis, and develop considerations and discussions.
4. Applicants must have the language skills necessary for internationally disseminating their research results and the adaptability to handle the diversification of science and technology.

Department of Electrical Engineering and Computer Science

The purpose of this program is to train talented people with (i) the ability to discover issues suitable for independent researchers who will learn leading academic knowledge about electrical engineering and computer science that supports the foundation of modern society by fostering flexibility for meeting social needs, (ii) the ability practical to execute research and technological development, and (iii) an international mindset and ability to disseminate information. In consideration of these aims, we therefore seek people who satisfy the following admissions policy:

1. Applicants must have a broad perspective, sufficient basic academic skills to study electrical engineering and computer science, and a high level of ethics.
2. Applicants must be interested in research in the fields of electrical engineering and computer science and have a strong desire to contribute socially and internationally through activities in these fields.
3. Applicants must be able to (i) consider and judge various issues facing humanity from multiple perspectives on the basis of basic knowledge of electrical engineering and computer science, (ii) be able to set their own research agenda, and (iii) be willing to boldly take on challenges.
4. Applicants must have advanced communication skills in Japanese or English languages.

3. Major Education and Research Features

1. In order to respond to the scholastic research fields within the academic arena, research work is conducted under a strong guidance system according to the overall academic specialization based on the general academic system. Meanwhile, supervision of Master's or Doctoral theses is conducted under a

multiple-supervision system, in order to respond to interdisciplinary research work.

2. In order to eliminate any hindrance that may be created by specialized academic research that will become high level but extremely narrowed, students will be asked to conduct research of sources for a research theme different to their own Master's or Doctoral theses. This is to ensure students acquire a broad range of knowledge and attain a flexible ability to think.
3. Classes are conducted with focus on the field related to the actual research work undertaken by the teaching staff.
4. The Graduate School of Engineering proactively accepts not only working people who already have acquired a master's degree, but also people who have worked for more than 2 years after graduating from an undergraduate degree.

4. International Specialized Program

International Specialized Program (English course) has been established in each department. In this program, all lectures are conducted in English. Professors listed in this guide except Collaborative Study Fields of Graduate School of Engineering will be affiliated with the International Specialized Program.

Application Quota of International Specialized Program (English course) is included in 1.Application Quota. Admission requirement, selection schedule, application procedure, result of successful applicants, admission procedure and Notes are same to general selection.

5. Main Research Subjects, Department and Academic Advisors

Refer to section A on p.3 for staffs marked ※1

Department : Biotechnology and Life Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Cell engineering	Mikako SAITO mikako(at)cc.tuat.ac.jp	Disease model cells of diabetes. Regenerative cell engineering. ES cells. Single-cell gene engineering. Femtoinjection. Food safety control and regulatory science.
Applied Microbial Engineering	Tetsushi MORI moritets(at)go.tuat.ac.jp	Exploitation and elucidation of the characteristics, role and molecular traits of novel/uncultivable environmental microorganisms using molecular biology based approaches.
Biomolecular and structural informatics	Yutaka KURODA ykuroda(at)cc.tuat.ac.jp *Retires in March 2027	We carry out biophysical and bioinformatics studies of protein structure, function, and aggregation at a molecular level using recombinant DNA technologies, NMR, and computational simulation for understanding and controlling the immunogenicity and cytotoxicity of misfolded and aggregated therapeutic proteins.
Biomaterials Engineering	Yasumoto NAKAZAWA yasumoto(at)cc.tuat.ac.jp	i) Structural analysis of silk fibroins. ii) Development of the medical implantation devices such as artificial cardiac valves and cardiovascular patches based on the silk fibroin.
	Keiichi NOGUCHI※1 knoguchi(at)cc.tuat.ac.jp (Collaborative faculty)	Structure analysis of bio-related molecules using X-ray diffraction, nuclear magnetic resonance, mass spectroscopy and electron microscopy methods.
Molecular biology and pathophysiology	Yoshihiro OHTA ohta(at)cc.tuat.ac.jp *Retires in March 2028	Development of novel techniques for organelle imaging and their application to mitochondrial study. Cell death, Ca2+ signaling and generation of reactive oxygen species are mainly focused.

Department : Biotechnology and Life Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Masaki INADA inada(at)cc.tuat.ac.jp (Collaborative faculty)	Molecular pathological investigation using gene targeted mice and disease models on mice.
	Michiko HIRATA※1 hirata(at)cc.tuat.ac.jp	Molecular pathology is investigating that based on gene editing techniques in molecular biochemistry. Focusing fields are development of drug screening models and diagnostic-imaging methods on life related diseases and skeletal disease including osteoporosis, periodontal disease and its related cancers.
Nanobiotechnology	Kazunori IKEBUKURO ikebu(at)cc.tuat.ac.jp	Nucleic acid engineering of aptamers for the application to diagnosis and novel bottom-up nanotechnology.
Molecular Immunoengineering	Ryutaro ASANO ryutaroa(at)cc.tuat.ac.jp	Artificial protein design based mainly on antibody molecules and their detailed functional analyses for development of next-generation biologicals and biosensors.
Biobusiness	Wakako TSUGAWA tsugawa(at)cc.tuat.ac.jp *Retires in March 2029	Development of novel biodevices for the in vitro diagnostics and environmental monitoring systems based on proteins or enzymes.
Molecular Biochemistry	Ryuji KAWANO rjkawano(at)cc.tuat.ac.jp	The goal of my research is to establish a system that uses biological nanopores for single-molecule detection. Channel membrane proteins have nanochannels around 1 nm in size. These biological nanopores are capable of detecting and electrically recognize even single molecules with a high signal-to-noise ratio. However, the channel size is limited by the inherent protein structure. I plan to develop artificial nanochannels such as synthetic nanopores or polypeptides combined with biomaterials (proteins and lipid bilayers) on the basis of MEMS technology for novel nanopore sensing.
Marine Biotechnology	Tsuyoshi TANAKA tsuyo(at)cc.tuat.ac.jp (Collaborative faculty)	Production of biofuels, chemicals and pharmaceuticals on the basis of biological functions of various microorganisms. Development of Bio-sensing system based on lab-on-a-chip technologies.
Biomolecular engineering	Atsushi ARAKAKI arakakia(at)cc.tuat.ac.jp	Molecular analysis of biomineralization mechanism. Biomimetic synthesis of organic/inorganic hybrid nanomaterials using biological molecules.
	Tomoko YOSHINO y-tomoko(at)cc.tuat.ac.jp	Development of novel bio-nanomaterials through genetic engineering by microorganisms for biosensing and biomedical applications.
Bioelectronics	Takahiro ICHIKAWA t-ichi(at)cc.tuat.ac.jp	Lipid molecules form bilayer structures that play an important role as a field for various functional biomolecules. In our laboratory, we aim for the construction of novel fields by controlling self-organization behavior of amphiphilic molecules.
Synthetic organic chemistry Bioorganic	Kazuo NAGASAWA knaga(at)cc.tuat.ac.jp	Total synthesis of biologically active natural products. Development of organocatalyst.

Department : Biotechnology and Life Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
chemistry/chemical biology	Kaori SAKURAI sakuraik(at)cc.tuat.ac.jp	Our research group explores the field of chemical biology by integrating organic synthetic chemistry and nanoscience, focusing on motifs derived from peptides, glycans, and natural products that exhibit novel anti-cancer activities. Using chemical probes for target protein identification, we aim to modulate protein functions and elucidate the molecular mechanisms underlying anti-tumor effects.
	Masayuki TERA tera(at)go.tuat.ac.jp	Design and synthesis of functional molecules controlling nucleic acids, proteins, and cellular surfaces.
Medicinal enzyme engineering	Christopher VAVRICKA ※1 chris(at)go.tuat.ac.jp	Computationally-driven enzyme engineering can now enable the sustainable biosynthesis of virtually any desired chemical product. Therefore, we are developing computational approaches for the discovery and engineering of specialized enzyme functions that can extend metabolic pathways to produce valuable medicinal compounds.
Biolinguistics	Yuji HATAKEYAMA※1 hatayu(at)cc.tuat.ac.jp	Syntactic structure, semantic structure, and information structure.

Department : Biomedical Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Biomedical nanodevices	Kenzo MAEHASHI maehashi(at)cc.tuat.ac.jp	Development of biomedical electronic nanodevices for early diagnosis and for realization of safe and secure society. Nanocarbons are expected for fabrication of devices owing to their unique structures and superior electrical properties. In this department, biological sensors and quantum devices are developed.
3D image technology	Yasuhiro TAKAKI ytakaki(at)cc.tuat.ac.jp *Retires in March 2028	Holographic displays and light field displays which naturally satisfy human depth perception without any contradiction are developed to realize next-generation head-mounted displays and glasses-free 3D displays used for VR/AR technology and metaverse. Moreover, hologram contract lenses which can be placed into eyes are also developed to enable the augmentation of human vision.
Medical ultrasound	Kohji MASUDA masuda_k(at)cc.tuat.ac.jp	Our research topic is "Ultrasound," which is knowledge of physics and electrical engineering and has a potential to apply to both diagnosis and treatment without harming the human body. In collaboration with medical researchers, we are conducting research themes in various fields such as verification experiments of biological effects caused by ultrasound and information extraction using image processing and machine learning. We are working towards realization of therapeutic technology by combining these achievements.
Biomedical sensing	Kenji IKUSHIMA ikushima(at)cc.tuat.ac.jp	Innovative sensing technologies related to ultrasound and terahertz waves by utilizing our unique measurement schemes and advanced quantum technologies. We aim to visualize information that is inaccessible by conventional technologies and apply it to various fields such as medical diagnosis, cell evaluation, and inspection of food and industrial materials.
Biophysics	Yoshihiro MURAYAMA ymura(at)cc.tuat.ac.jp	Biophysics and Soft matter physics. Experimental study on biological function, especially, mechanical properties and rheology of biopolymers and mechanics of microorganism.
Lightwave sensing technology	Yosuke TANAKA tyosuke(at)cc.tuat.ac.jp	Our research deals with multi-function and high-speed optical signal processing, optical sensing systems along with related devices and data processing techniques, which are applied to monitoring artificial structures and biological objects.

Department : Biomedical Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Superconducting Materials	Akiyasu YAMAMOTO akiyasu(at)cc.tuat.ac.jp	Experimental research on superconductivity, superconducting materials, and superconducting application. Especially development of novel strong magnets using new high temperature superconductors for medical and green applications.
Biomaterials	Yuki AKAGI※1 y-akagi(at)go.tuat.ac.jp	We are developing smart-materials based on chemistry, biology, and material engineering, to meet unmet medical needs. Furthermore, we aim to realize highly efficient/accurate diagnosis and treatment, by combining them with physical energy such as laser or heat.
Biomechanical engineering	Daisuke YOSHINO dyoshino(at)go.tuat.ac.jp	Research for mechanobiology of human health and disease. Development of biomedical devices and medical techniques for vascular diseases.

Department : Applied Chemistry

Speciality&Major Research Fields	Academic Advisor	Research Subject
Opto-electronic Materials	Yoshinao KUMAGAI 4470kuma(at)cc.tuat.ac.jp	Growth of compound semiconductor crystals from vapor phase based on the thermodynamic analysis and construction of growth system.
Energy Chemistry & Electrochemistry	Etsuro IWAMA iwama(at)cc.tuat.ac.jp	Material design and characterization of nanostructured materials for electrochemical energy storage. Modification of the material/electrolyte interfaces in electrodes for high power and energy-efficient applications.
Molecular Synthesis	Taichi KANO kano(at)go.tuat.ac.jp	Development of efficient synthetic methods for bioisosteres and their application to synthesis of biologically active compounds. Design of organocatalysts as artificial enzymes and their application to environmentally benign reactions.
Molecular Design	Akio SAITO akio-sai(at)cc.tuat.ac.jp	Development of novel and efficient procedures for the synthesis of heterocyclic compounds.
Molecular Catalysis	Masafumi HIRANO hrc(at)cc.tuat.ac.jp	Activation of inactive bond in organic molecules by transition-metal complexes and the application toward molecular transformation with high atom efficiency.
	Keiji MORI k_mori(at)cc.tuat.ac.jp	Concise construction of fused-cyclic skeleton by sequential C–H bond functionalization and development of π-π interactions based novel chiral ligand.
Inorganic Solid State Chemistry	Kazuyuki MAEDA k-maeda(at)cc.tuat.ac.jp *Retires in March 2028	Development of novel nanospace materials such as zeolite-related materials and coordination polymers, especially inorganic-organic hybrid nanosheets and related nanospace materials.
	Masashi MORITA※1 m-morita(at)go.tuat.ac.jp	Development of functional nanospace materials that contribute to the realization of a sustainable energy society. Design of novel materials and functionalization methods for inorganic layered materials and nanoporous metal complexes toward their application to energy and environmental fields.
Capacitor Technology (Sponsored Laboratories)	Kenji TAMAMITSU※1 tamamitu(at)cc.tuat.ac.jp	Development of energy storage devices and their functional nanomaterials. Electrochemical energy storage by electric double layer capacitors. Lithium-ion capacitors and hybrid supercapacitors.
Organic and Polymeric Materials for Electronics and Optoelectronics	Takeshi SHIMOMURA simo(at)cc.tuat.ac.jp	*Functional Polymers for Flexible Molecular Electronics *Development of Conducting Polymer Nanofibers *Polymer Energy Devices Using Low-Dimensionality and Flexibility *Development of Soft Devices with Self-Assembling Properties

Department : Applied Chemistry

Speciality&Major Research Fields	Academic Advisor	Research Subject
Fundamental Organic Chemistry for Molecular and Polymeric Materials	Akiko OKAMOTO※1 aokamoto(at)cc.tuat.ac.jp	*Design and Analysis of Spatial Organization of Aromatic-Rings-Accumulated Organic Molecular Compounds: Single Molecular Spatial Organization in Crystal, Crystalline Molecular Packing, and Molecular Structure in Solution *Synthetic Study of Aromatic Condensation Polymers having Repeating Units of Non-coplanarly Accumulated Aromatic Rings
Polymeric Biomaterials	Yoshihiko MURAKAMI muray(at)cc.tuat.ac.jp	*Biomaterials *Surgical Tissue-Adhesive Materials *Gels for Endovascular *Drug-Release Matrix *Polymers Agent *Polymeric Film for Bioanalysis
	Takahiro MURAOKA muraoka(at)go.tuat.ac.jp	*Bio-inspired synthetic organic chemistry and supramolecular chemistry for 1) protein manipulation and stabilization, 2) membrane functionalization, and 3) cellular activity control.
Physical Chemistry of Organic and Polymeric Materials	Toshiyuki WATANABE toshi(at)cc.tuat.ac.jp *Retires in March 2028	*Development of photoresponsive polymers *Development of reversible thermoresponsive recording of fluorescent image *Synthesis of diamond from carbon dioxide *Development of photoresponsive drug delivery systems
	Marine Louis fy2947(at)go.tuat.ac.jp	The power of light on/from organic materials is the focus of our laboratory. From molecules to materials whose properties can be modified by light interactions or exhibiting themselves unique luminescent effects.
Organic and Polymeric Materials Chemistry	Koji NAKANO k_nakano(at)cc.tuat.ac.jp	*Development of organic functional materials based on organic synthetic chemistry *Design and synthesis of new π-conjugated molecules, and their application to organic electronic/optoelectronic materials *Development of highly-active and selective polymerization catalyst
	Yoko TATEWAKI※1 ytatewa(at)cc.tuat.ac.jp	*Development of organic functional materials for electronics devices *Synthesis of conducting and magnetic materials *Preparation of self-assembly nanomaterials *Conducting and magnetic properties of organic devices
Sustainable Polymer Materials	Shinji KANEHASHI※1 kanehasi(at)cc.tuat.ac.jp	Development of novel functional materials for sustainable society such as unutilized biomass-based products, gas separation, purification, and barrier materials for mitigation of climate change (i.e., global warming), clean energy production (e.g., hydrogen, biogas, natural gas), and food waste problem.
Material Systems Mathematics	Hiroshi GODA※1 goda(at)cc.tuat.ac.jp	*Knots, links and 3-dimensional manifolds

Department : Applied Chemistry

Speciality&Major Research Fields	Academic Advisor	Research Subject
Material Technology for Organic and Polymeric Substances	Hiromu SAITO hsaitou(at)cc.tuat.ac.jp *Retires in March 2027	*Polymer Blends *Mechanical and Optical Properties of Polymers *Morphology Design of Polymers by Supercritical Fluids *Crystallization of Polymers

Department : Applied Physics and Chemical Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Interfacial Chemical Engineering	Hiroshi TAKIYAMA htakiyam(at)cc.tuat.ac.jp *Retires in March 2029	Research and development of industrial crystallization technology for producing crystalline particles such as pharmaceuticals, foods, battery materials and functional materials.
Transport Phenomena Engineering	Yuichiro NAGATSU nagatsu(at)cc.tuat.ac.jp	Fundamental study of chemo-hydrodynamics (liquid flow with chemistry) and applied study of chemo-hydrodynamics for environmental and energy fields.
Drying Kinetics and Solid Film Formation	Susumu INASAWA inasawa(at)cc.tuat.ac.jp	Focusing on drying process, a frequently-used process in industrial productions, we study how structures form in drying of complex solusions of as slluries and emulsions. Understanding of important factors that predominantly determine the rates of spontaneous transport phenomena is also the target.
Environmental Bio-Engineering	Akihiko TERADA akte(at)cc.tuat.ac.jp	Development of bioreactor systems and materials for water/wastewater treatment by controlling complex microbial community in natural environments and control/prevention of biofilms for environmental/medical applications.
	Shohei RIYA sriya(at)cc.tuat.ac.jp	Development of recycling system for agricultural waste or sewage sludge. Waste treatment using anaerobic digestion, and residue processing into soil amendment. Study on nutrient or greenhouse gas dynamics in the soil amended with waste-derived material.
Quantum Sensing and Metrology	Atsushi HATAKEYAMA hatakeya(at)cc.tuat.ac.jp	Experimental studies in atomic, molecular and optical physics on the basis of laser spectroscopy, laser spin polarization, and laser cooling. The physics of atom-surface interactions and its applications to precision measurement and quantum manipulation.
Solid-state Quantum Materials	Yuya HARAGUCHI※1 chiyuya3(at)go.tuat.ac.jp	Research focused on creating new crystalline inorganic materials, including metastable phases, clarifying quantum functionalities such as quantum magnetism and superconductivity driven by local distortions and strong electron correlations, and ultimately pursuing their potential applications in quantum information and energy conversion.
Light and Quantum Materials Engineering	Hiromasa SHIMIZU h-shmz(at)cc.tuat.ac.jp	Research on integration of dissimilar materials including semiconductors, magnetic materials, macromolecules, biomaterials, highly efficient optical modulations, and highly sensitive sensors, for application to interdisciplinary activities.
	Satria Zulkarnaen BISRI satria-bisri(at)go.tuat.ac.jp	Development of optoelectronic and energy devices based on solution-processable quantum nanomaterials (e.g. colloidal quantum dots, 2D nanomaterials, carbon nanotubes, etc.) and iontronics (ion-controlled electronics), including photodetectors, transistors, solar cells, supercapacitors and light-emitting devices. Research on the emerging physical phenomena originated from precise assembly control of nanomaterials. Discovery of environmentally friendly and sustainable colloidal quantum dot compounds.

Department : Applied Physics and Chemical Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Chemical and Energy Engineering	Chihiro FUSHIMI cfushimi(at)cc.tuat.ac.jp	Research and Development of reactors for pyrolysis, gasification or hydrothermal liquefaction. Development of thermal/biomass power plants that integrates with other renewable energy. Process development of biochemical production. Development of fluidized bed reactors for thermochemical reactions.
Chemical Reaction Engineering	Makoto SAKURAI sakuraim(at)cc.tuat.ac.jp	Research on the creation and design of the following new reaction field and reaction process. Development of high functional structured catalyst for application to the micro chemical process. Application of fine bubble process to the environmental field. Development of unsteady operation for high efficiency chemical process. Design of new high efficiency energy conversion process by thermochemical cycles.
Separation Engineering	Hideaki TOKUYAMA htoku(at)cc.tuat.ac.jp	Development of functional polymers and gels and process for metal separation, organic compound separation, drug delivery system, etc. Preparation of micro- or nanoparticles and porous materials.
	Hidenori OHASHI fr1057(at)go.tuat.ac.jp	Functional membrane development and systematic device design in energy and life-science fields based on the molecular transport understanding. (from lithium ion battery, protein refolding, to chemical grafting)
Process Systems Engineering	Sanghong KIM sanghong(at)go.tuat.ac.jp	Development and applying process data analysis, process modeling, and process control technologies. The purpose is to realize anomaly detection, yield improvement, control performance improvement, etc. for a wide range of processes such as chemistry, semiconductors, and pharmaceuticals.
Organic Electronics	Toshihiko KAJI※1 kaji-t(at)cc.tuat.ac.jp	Organic electronics and optics. Experimental research on organic electronic devices, such as solar cells, and on nanostructure/crystallinity control of organic thin films.
Quantum Functional Engineering	Minori ABE minoria(at)go.tuat.ac.jp	Development of theories and software for heavy-atom molecules based on relativistic quantum mechanics, and their application to various scientific fields. Research on generating functional molecules using machine learning.
Quantum Electronics	Godai MIYAJI gmiyaji(at)cc.tuat.ac.jp	Experimental studies on understanding nonlinear light-matter interaction processes with intense femtosecond laser pulses and developing their application to material nano-processing techniques
Quantum Beams	Hiroki MINODA hminoda(at)cc.tuat.ac.jp	Development of transmission electron microscopy and its applications to biological specimens and functional materials in their actual environment.

Department : Mechanical Systems Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Fluid Mechanics	Masaharu KAMEDA kame(at)cc.tuat.ac.jp	Bubble dynamics, high-speed aerodynamics, and fluid measurements. Current research topics are (1) pressure-sensitive paint for unsteady aerodynamics, (2) fragmentation of vesicular magma in volcanic eruption, (3) supersonic air-inlets, and (4) mass transport by bubbling.
	Yoshiyuki TAGAWA tagawayo(at)cc.tuat.ac.jp	Main research field of Yoshiyuki Tagawa's lab is in multiphase flow / micro-fluidics. Current research topics are on supersonic microjets impacting on soft matters. Here we investigate the fundamental mechanism of generation of the microjets and their applications for medical devices / industrial processes. Also the dynamics of droplets are investigated.
Materials Engineering for Machinery	Toshio OGASAWARA ogasat(at)cc.tuat.ac.jp *Retires in March 2028	Experimental and analytical studies of advanced composite materials and composite structures for aerospace systems, automobiles, and robots. Development of novel composite materials such as carbon nanotube composites, ceramics/intermetallic composites, high temperature polymer matrix composites, ablator.
	Sota OSHIMA oshima(at)go.tuat.ac.jp	Research on the strength of advanced composite materials and adhesive structures. The research work includes experimental evaluation, development of novel structural concepts, modeling, and simulation techniques aimed at aerospace applications.
Strength of Materials	Akinori YAMANAKA a-yamana(at)cc.tuat.ac.jp	Multi-scale simulation of microstructure evolution and elastoplastic deformation behavior in metallic materials (especially in steel) using phase-field method and crystal plasticity finite element analysis based on homogenization method and its experimental validation.
	Satoshi TAKADA※1 takada(at)go.tuat.ac.jp	Physics of granular materials and its application to powder technology. Analysis of response to external forces based on particle simulations and continuum modeling.
Production Systems Engineering	Keiichi NAKAMOTO nakamoto(at)cc.tuat.ac.jp	The research work is focused on the area of machine tool and machining technology to realize “Intelligent Shape Creation with True CAM (Computer Aided Manufacturing)”. Our target is to develop effective manufacturing software regarding process planning and tool path generation in multi-axis control machining. In addition, we are working on various researches to machine the mold of optical elements with high efficiency and high precision.
Analysis of Mechanical Components	Yasuhisa ANDO y-ando(at)cc.tuat.ac.jp *Retires in March 2028	Studies on micro/nano tribology and application of new functions to surfaces using micro fabrication technologies. Studies on applications and development of MEMS (microelectromechanical systems), such as 3D-microstages.

Department : Mechanical Systems Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Micro/Nano Systems Engineering	Niko KIMURA※1 nkimura(at)go.tuat.ac.jp	Producing biocompatible nanoparticles with designed physical characteristics with controlled microfluidics. The produced nanoparticles can visualize live-cell functions based on the designed physical characteristics beyond biological classifications, and we can apply the nanoparticles to spatiotemporally controlled delivery of nanomaterials. That expects to provide significant biological insights for understanding complicated cellular behavior and design of novel therapies.
Control Systems Engineering	Takayoshi KAMADA※1 kama(at)cc.tuat.ac.jp	Active vibration control, smart structure, health monitoring, earthquake resistance technology, base isolation and vibration control of building, vehicle control, elevator technology.
	Fumito UWANO uwano(at)go.tuat.ac.jp	The research focuses on reinforcement learning-based cooperative control for multi-robot systems and on robot systems that adapt to uncertain real-world environments. Particular emphasis is placed not only on the control of individual robots but also on the optimization of the behavior of the overall system, including both the robots and their external environment. Specific applications include path planning and navigation for unmanned surface vehicles and drones, as well as robot control in space environments.
Biomechanics	Yuta KURASHINA kurashina(at)go.tuat.ac.jp	Our group is devising research on soft robotics using mechanical dynamics and soft matter. This includes research on hydrogel micro/nano devices and ultrasonic non-contact actuations for applications in drug delivery systems (development of drug release mechanisms), regenerative medicine (cellular tissue formation), and drug discovery modalities (design of drug carriers suitable for organs).
Thermal and Fluid Systems	Akira MURATA murata(at)cc.tuat.ac.jp *Retires in March 2029	Heat and fluid flow related to gas turbines, Numerical simulation of turbulent heat transfer, Flow visualization, and Heat transport device utilizing phase change.
Thermal-Fluid Control Engineering	Kaoru IWAMOTO iwamotok(at)cc.tuat.ac.jp	Efficient thermal-fluid control techniques for energy saving and environment impact mitigation will be developed. Efficient turbulence control techniques for drag reduction of airplanes, those for material engineering (efficient production of high-quality materials), those for bioengineering (effect of fluid pulsation) and those for chemical engineering (efficient production of hydrogen).
Thermal and Fluid Systems	Takuma HORI※1 hori(at)go.tuat.ac.jp	Research on heat transfer: Heat and mass transfer in energy harvesting or storage devices, Thermal conduction in nanomaterials, Structure optimization, Coarse grained and multiscale simulations, Thermo-fluid dynamics in interfaces.
Thermal and Fluid Systems	Yuki UEDA uedayuki(at)cc.tuat.ac.jp	Engine and refrigerator powered by acoustic wave. We have investigated energy conversion, heat transfer, and mass transfer caused by thermoacoustic effects.

Department : Mechanical Systems Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Simulation Engineering	Pongsathorn RAKSINCHAROENSAK pong(at)cc.tuat.ac.jp	Research interests include the development of active vehicle control technologies with integrated sensing of human driver, vehicle motion and road surroundings for safety and security of motorized society, e.g. the safety devices for personal mobility, vehicle dynamics and control, and human-centered driver assistance systems.
	Takao MAEDA※1	Our research interests are space exploration robotics and mechatronics, especially surface exploration robotics. Locomotion, autonomous algorithm, and integration of them are the main research topics. We also propose a new plan for future explorations. We develop new technologies required for future space exploration missions using simulation and experiment.
Robotics	Ryo ARIIZUMI※1	Research is designs of dynamic systems represented robot. Based on mechanics, control engineering, and machine learning, propose methods to design “Smart” movement while using both physical nature and computer properly.
Manufacturing Engineering	Hiroyuki SASAHARA sasahara(at)cc.tuat.ac.jp	Additive manufacturing. Physical simulation to predict the machining process. Development of a new machining/processing method which can give a functional additional value to the generated surface. New machining technology for energy saving and clean processing.
	Shuntaro YAMATO※1 yamato(at)go.tuat.ac.jp	Modelling (simulation) and precision measurement of machine-tool and process dynamics. Digital-twin-based machine/process condition monitoring and control for realizing advanced future manufacturing systems.
Algebraic Mechanical Engineering	Katsuyuki NAOI※1 naoik(at)cc.tuat.ac.jp	Representation theory of infinite-dimensional Lie algebras and their q-analog
Geometric Mechanical Engineering	Nobutaka NAKAZONO ※1 nakazono(at)go.tuat.ac.jp	Study of discrete integrable systems. (Keyword: Painlevé equation, soliton equation, Toda lattice)
Aerospace Engineering	Hiroyuki NISHIDA hnishida(at)cc.tuat.ac.jp	Research on magnetohydrodynamics, aerodynamics and flight dynamics of advanced space propulsions and reusable space vehicles. For example, research on control of high-energy plasma flow for advanced propulsion, development of flow control device and application of the flow control device to reusable space vehicle. Numerical simulation and experiment are conducted to address these objectives.
Human Movement Science Ⅱ	Hideyuki TANAKA tanahide(at)cc.tuat.ac.jp (collaborative faculty) *Retires in March 2029	Basic research on perception and motor control mechanisms underlying human motor behaviors. Applied research based on the principle and theories of human behavior systems.

Department : Mechanical Systems Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Human Movement Science I	Hikaru YOKOYAMA h-yokoyama(at)go.tuat.ac.jp	Neuromuscular control of human movement, motor control, brain-machine interface, and rehabilitation engineering.

Department of Electrical Engineering and Computer Science		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Electronic System Engineering	Ya ZHANG zhangya(at)go.tuat.ac.jp	Fundamental and applied research on semiconductor quantum nanostructures and nanoelectromechanical systems. Development of the next-generation electronics, such as single electron transistors, quantum information processing devices, high-sensitivity terahertz sensors, etc.
Energy Systems Safety Engineering	Mingcong DENG deng(at)cc.tuat.ac.jp	Nonlinear fault detection and nonlinear fault tolerant control system design using AI techniques, nonlinear control of smart material actuators and micro-hands.
Intelligent Systems	Jun-ichi SHIRAKASHI shrakash(at)cc.tuat.ac.jp	Novel nanofabrication techniques, single-electron transistors and atomic junctions. New computing architecture, Ising spin model, Ising spin computing and artificial synaptic devices. Quantum computing, noisy intermediate-scale quantum (NISQ), quantum annealing and quantum-classical hybrid algorithms.
Electronic Device Engineering	Wakana KUBO w-kubo(at)cc.tuat.ac.jp	Development of solar cells, optical devices, and functional materials based on light management technology realized by plasmonic metamaterials.
Integrated Functional Electronics	Tomo UENO tomoueno(at)cc.tuat.ac.jp *Retires in March 2029	Development of Integrated Circuit based on novel device and process technology. Low temperature insulating film fabrication, OLED fabrication, electrical measurement, physical & chemical analysis.
	Keiko TAKASE※1 takase(at)go.tuat.ac.jp	Research and development for next-generation quantum science and technology using semiconductor and quantum material, aiming at unveiling of underlying physics and constructing scientific principles. Key words are quantum nanostructures, quantum devices, quantum transport, spintronics, and topological physics. We aim at constructing fundamental technology of next-generation quantum smart devices and contributing to low-energy society.
Multimedia Communication Engineering	Kenta UMEBAYASHI ume_k(at)cc.tuat.ac.jp	Wireless communication network, Signal processing and resource control for efficient and reliable wireless communication, Advanced signal processing for multiple antennas based communications, Cognitive radio techniques, Physical layer security, Nano-devise and Terahertz wireless communications.
	Takehito SUZUKI takehito(at)go.tuat.ac.jp	Terahertz antennas, Extreme materials in the terahertz waveband, Terahertz metamaterials, Extreme-sensitivity terahertz polarization measurements, ultrahigh-speed wireless communication in the terahertz waveband, Terahertz application systems.
Medical Information System Engineering	Akinobu SHIMIZU simiz(at)cc.tuat.ac.jp	Multidimensional Signal Processing. Medical Image Processing and Pattern Recognition based on Artificial Intelligence, Optimization Theory, and Mathematical Statistics. Computer-aided Diagnosis in Medical Imaging.

Department of Electrical Engineering and Computer Science		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Bioacoustics	Ken TAKIYAMA※1 ken-taki(at)cc.tuat.ac.jp	Main themes are 1. Elucidation of neural mechanisms that relate to motor control and learning and 2. Proposal of efficient training to improve motor skill. Main techniques are neural network model and human behavioral experiments. We plan to utilize electroencephalograms and machine learning techniques.
Signal Informatics	Toshihisa TANAKA tanakat(at)cc.tuat.ac.jp	Biosignal informatics (brain-machine interfaces, neuroscience, cognitive science, biomedical information processing for medicine, and AI techniques based on signal processing, machine learning, and mathematical engineering). In addition, imaging audio/acoustics, communications, and biological applications.
	Kohei YATABE yatabe(at)go.tuat.ac.jp	Acoustic signal processing and its application to measurement, analysis and synthesis of sound.
Algorithmics	Keiichi KANEKO k1kaneko(at)cc.tuat.ac.jp *Retires in March 2028	Algorithms for interconnection networks, parallel/distributed processing, dependable computing.
	Ryuhei MIYASHIRO r-miya(at)cc.tuat.ac.jp	Mathematical programming, discrete optimization, algorithm, modeling.
Systems Software	Mitaro NAMIKI namiki(at)cc.tuat.ac.jp *Retires in March 2027	Systems software (operating systems, compiler, protocol stack, window system), embedded systems, high performance computer systems, distributed processing, network architecture, low power computer systems, information systems.
	Hiroshi YAMADA hiroshiy(at)cc.tuat.ac.jp	Operating systems, system virtualization, parallel and distributed systems, system software for dependable computing and cloud computing.
Artificial Intelligence	Katsuhide FUJITA katfuji(at)cc.tuat.ac.jp	Artificial intelligence related to autonomous agents, multi-agent systems, data mining, complex networks, knowledge management.
Information Security	Shun WATANABE※1 shunwata(at)cc.tuat.ac.jp	Information theory, Communication Engineering Cryptography, Information security.
	Wolfer GEOFFREY※1 wolfer(at)go.tuat.ac.jp	Mathematical and statistical foundations of learning and inference in artificial intelligence, aiming at a theoretical understanding of their underlying principles.
Computer Architecture	Hiroe IWASAKI hiroe(at)go.tuat.ac.jp	Research and development of video processing architecture to realize AI processing and video encoding processing toward to location free for achieving the SDGs.
	Hironori NAKAJO nakajo(at)cc.tuat.ac.jp *Retires in March 2027	Processor micro-architecture, parallel processing, VLSI design, high performance computing, embedded computer.

Department of Electrical Engineering and Computer Science		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Information Theory	Ryo HAYAKAWA※1 hayakawa(at)go.tuat.ac.jp	Research on the mathematics and applications of signal processing to restore and process signals and data. Signal processing based on continuous optimization, data-driven signal processing, and applications in image processing and communications engineering.
Biologically-inspired computing	Toshiyuki KONDO t_kondo(at)cc.tuat.ac.jp	Neurocomputing, evolutionary computation, cognitive robotics, cognitive interface design, brain-computer interface.
Intelligent Media Computing	Ikuko SHIMIZU ikuko(at)cc.tuat.ac.jp	Computer vision, shape and appearance modeling, image recognition.
Computer networks	Nariyoshi YAMAI nyamai(at)cc.tuat.ac.jp *Retires in March 2027	Research for administration, deployment, management, operation, and evaluation of large-scale distributed systems including the Internet, such as Internet architecture, network security, and so on.
	Yu NAKAYAMA※1 yu-nakayama(at)go.tuat.ac.jp	Mobile, IoT, and spatial information technologies for next generation information networks, applications, and schemes for utilizing them.
Natural Language Information Science	Ryoko UNO※1 ryokouno(at)cc.tuat.ac.jp	Grammatical analysis and constructive approach to explore the cognitive basis of grammar
Mathematical Informatics	Nobuo HARA※1 nhara(at)cc.tuat.ac.jp *Retires in March 2027	Algebraic geometry and commutative algebra in positive characteristic. In particular, study of algebraic varieties and their singularities via the Frobenius morphism.
	Mikio MURATA※1 mmurata(at)cc.tuat.ac.jp	Discretization and ultradiscretization of differential equations, Cellular automaton, Integrable systems and Painleve equations.

Collaborative Study Fields of Graduate School of Engineering

The following academic study fields aim to activate collaborative study with external research institutes that are celebrated for their excellent research achievements.
Note: Those who wish to study in any of the collaborative fields should obtain prior guidance from Chair of each department..

Department : Biotechnology and Life Science

Speciality&Major Research Fields	Academic Advisor	Research Subject
Nanotechnology-Based Cell Engineering (Cooperation Program with National Institute of Advanced Industrial Science and Technology (AIST))	Chikashi NAKAMURA chikashi-nakamura(at)aist.go.jp Hyonchol KIM※1 kim-hc(at)aist.go.jp Kazumi HIRANO※1 Kazumi-hirano(at)aist.go.jp Ayana YAMAGISHI※1 a-yamagishi(at)aist.go.jp	We develop a new biotechnology, “nanotechnology-based cell engineering”, by using nano / micro-device, nano-probe technologies, and brain organoid technologies to reveal functions of cancer cells, immune cells, neural cells and iPS cells. The findings are applied for practical applications, in next-era cell therapies and diagnostics, e. g. genome editing therapy, liquid biopsy and neurofunctional assessment method.
Marine Biology and Environmental Sciences (Cooperation Program with Japan Agency for Marine-Earth Science and Technology (JAMSTEC))	Satoshi WAKAI	Education and research will be conducted on the dynamics of anthropogenic contaminants in the deep sea and other marine environments and their effects on the environment and organisms, as well as the molecular ecology of marine organisms.

Department : Applied Physics and Chemical Engineering

Speciality&Major Research Fields	Academic Advisor	Research Subject
Non-equilibrium Process Engineering (Cooperation Program with Mitsubishi Chemical Corporation)	Hideto HIDAKA※1 Makoto TAKAYANAGI※1	Most of industrial processing of chemical products are in continuous operation. On the other hand, non-equilibrium process operation is emerged recently. We study the theory and practical methods for unsteady and non-equilibrium processing systems.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Transport Systems Engineering (Cooperation Program with Railway Technical Research Institute)	Hajime TAKAMI※1 Kazuyuki HANDA※1 Yuki AKIYAMA※1	Education and research are carried out, focusing on advanced analysis and design methods to develop higher-speed train systems for future generation: car body design applicable to higher-speed, technologies for lighter car body design and safety improvement. Social needs and problems for future transport systems are analysed and evaluated.
Aero Space Engineering (Cooperation Program with National Institute of Japan Aerospace Exploration Agency)	Takashi AOYAMA※1 Yoshiyasu HIRANO※1 Yoji OKITA※1 Atsushi HASHIMOTO※1 Zyunichi AKATSUKA※1	Aircraft propulsion engineering, high-speed aerodynamics, structure / materials, aerodynamics / aeroacoustics and rotorcraft concerned with the developments of airplane and spacecraft are studied. In the aircraft propulsion engineering, simulation technology of engine system for airplane, heat resistance and cooling technology of high temperature turbine are studied. In the high-speed aerodynamics, flow control at ultrasonic and hypersonic speed on engine intake and hypersonic boundary layer are studied. In the aerodynamics/aeroacoustics and rotorcraft, unsteady CFD on aircraft, non-linear sound propagation / transmission on rockets, and high-speed rotorcraft are studied. In the structure and materials, damage mechanisms of composite structures, and optimization of airframe structures are studied.
Traffic Safety Engineering (Cooperation Program with National Traffic Safety and Environment Laboratory, National Agency for Automobile and Land Transport Technology)	Michiaki SEKINE※1	The research and education for the development of advanced welfare society is promoted by applying the fundamental studies on symbiotic science and technology. Especially, the research and the education are studied at cooperated laboratories where the social environment foundations of safety in road traffic and social environment are guaranteed, verified and examined.
Human-Robot Cooperation Engineering (Cooperation Program with National Institute of Advanced Industrial Science and Technology(AIST))	Ko AYUSAWA※1 Natsuki YAMANOBE※1	Research on cooperation between humans and robots by modeling of human behavior, motion retargeting for robots, and motion generation based on machine learning to realize collaboration and communication with robots.

Automobile prevention safe engineering (Cooperation Program with Japan Automobile Research Institute)	Hisashi IMANAGA※1 Shinichi TAKAYAMA※1	Causation analysis of traffic accidents is a fundamental part of active safety research. Particularly, understanding of driver behavior during pre-crash period is important for developing preventive safety measures or Advanced Driver Assistance Systems (ADAS). Critical events captured by driving data recorder ("DORA-RECO") will be analyzed for the purpose. Instrumented vehicle experiments which reproduce typical pre-crash scenarios will be conducted for developing preventive safety measures.
Department : Electrical Engineering and Computer Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Advanced Electronic Information System Technology (Cooperation Program with Central Research Laboratory of Hitachi, Ltd)	Masahiko ANDO LI Yongun※1	Optoelectronic Devices, Nanophotonics, Bioinformatics.
Information-Communication Engineering (Cooperation Program with National Institute of Information and Communications Technology)	Hiroyuki TSUJI※1 Soichi WATANABE※1 Iwao HOSAKO※1 Kentaro FURUSAWA※1	Education and research for fundamental technologies related with wireless communication HF devices, communication systems, communication environment and electromagnetic wave measurement technologies which support the development of the next-generation information-communication application fields and their key technologies.
Biomedical Electronics (Cooperation Program with RIKEN)	Hideo YOKOTA※1 Shin YOSHIZAWA※1 Masanobu MURAYAMA※1	Electronics in biomedical engineering related to measurement, signal processing, interfacing, imaging, simulation, and mechatronics.
Fundamentals of advanced intelligence (Cooperation Program with RIKEN)	Mihoko OTAKE※1 Qibin ZHAO※1 Hiromi ARAI※1	Education and research for fundamental and applied artificial intelligence related to discrete optimization, search and parallel computing, tenor learning, approximate Bayesian inference, cognitive behavioral assistive technology.

Urban Space Informatics (Cooperation Program with National Institute of Advanced Industrial Science and Technology(AIST))	Akio SASHIMA Fumiya AKASAKA※1 Kanako NAKAJIMA※1	Analysis of Sensory Data, Machine Learning, Mathematical Analysis of Social Simulation, Service Design and Social Implementation. Education and research are carried out for "Urban Space Informatics," the aim of which is to realize utility and safety in urban space and humans living there. The approach is 1) to analyze and understand sensory data of urban space and humans by machine learning with target model, and 2) to explore possible worlds by social simulations with real sensory data.
Intelligent Data Engineering (Cooperation Program with Central Research Laboratory of Hitachi, Ltd)	Toshio MORIYA※1	Research Subject: Artificial intelligence technologies that process and leverage Big-data collected in Internet-of-Things (IoT) environments.

For { October 2026 / April 2027 } Enrollment

（Circle an applicable item）

Tokyo University of Agriculture and Technology Graduate School of Engineering
(Doctoral Course)

志 願 票

Admission Voucher

Preferred Department		Preferred Major Research Field		Examinee's No.	* DC —
Preferred Supervisor	(Signature)		Proposed Research Title		
Applicant's Name		M / F	Place of Work or University Currently Enrolled		
Date of Birth	(day) (month) (year)		Domicile (or Nationality)	(Foreign students to provide nationality)	
Current Address	(Post Code —) (C/O)				
	TEL: ( ) — Home/Pager ( ) E-Mail:				
Contact Address	(Post Code —) (C/O)				
	TEL: ( ) — Home/Pager ( )				

Resume		Month / Year	Remarks
	Academic Record (Please provide details from high school or special college)		
	Work Experience (If you have any academic record as a researcher, etc. in a university, etc., please state it here.)		
	Remarks (Awards and penalties, or the period of school leave, etc.)		

Type of Funding (Foreign Students Only)	Privately Funded / Funded by the Japanese Government / Funded by Foreign Government	Application Qualification	*

Note 1: DO NOT fill in section marked *.

Note 2: USE black or blue pen only.

Note 3: No Preferred Supervisor's Signature, Can't apply.

Tokyo University of Agriculture and Technology
Graduate School of Engineering
(Doctoral Course)

{ For October 2026 Enrollment
For April 2027 Enrollment }

（Circle an applicable item）

写 真 票

Photograph Voucher

Affix Photo Here. Photo must be of top part of body, facing forward, without headwear, and taken within the last 3 months. (4cm x 3cm)		
Examinee's No.	* DC —	
Preferred Department		
Name		
Date of Birth	(dd) (mm) (yy)	M / F

Record of Attendance*	Attended / Absent

Note 1: DO NOT fill in section marked *.

Note 2: USE black or blue pen only.

DO NOT SEPARATE.

Tokyo University of Agriculture and Technology
Graduate School of Engineering
(Doctoral Course)

受 験 票

Examination Voucher

{ For October 2026 Enrollment
For April 2027 Enrollment }

（Circle an applicable item）

Examinee's No.	* DC —	
Preferred Department		
Name		
Date of Birth	(dd) (mm) (yy)	M / F

(Remarks)
1. This voucher must be placed on the desk during the academic achievement test in full view of the test supervisor.
2. Keep this voucher safe, as it will be required on the day of announcement of successful applicants.
3. DO NOT fill in section marked *.

修士論文の概要

Outline of Master's Thesis

Examinee's No.	* DC —	Preferred Department		Name	
Master's Thesis Title					
Outline of Master's Thesis					

Note: Applicants having completed a master's degree should provide a concise and specific outline of the thesis under 2,000 Japanese characters (500 words in English).
In addition, diagrams, charts, equations may also be added if necessary. Furthermore, if using a word processor software, either print directly onto this form or print on an A4 size sheet in the same layout as this form.
DO NOT fill in section marked *.
USE black or blue pen only.

研　究　計　画　書

Research Proposal

Examinee's No.	* DC —	Preferred Department		Name	
(Proposed) Research Topic					
Outline of (Proposed) Research Topic:					

Note: Use the format shown to provide a concise and specific outline, and no more than 2,000 characters (500 words in English). In addition, if using a word processor software, either print directly onto this form or print on an A4 size sheet in the same layout as this form. If you are not student, also provide details of how you propose to conduct your research.
DO NOT fill in section marked *.

志　望　理　由　書

Statement of Purpose

Preferred Department		Name		Examinee's No.	* DC —

DO NOT fill in sections marked *. The statement should be about 1,000 characters and may be made with a word processor software using the same format.

Attached Form (1)

Examination No.	* DC —

Result of qualification to apply	* Passed / Failed

Name of person in charge of the approval* * (Signature)

資格認定申請書

Tokyo University of Agriculture and Technology Graduate School of Engineering
Application Form for Approval of Qualification to Apply for the Doctoral Course

Preferred Department		Preferred Major Research Field		**Affix Photo Here.** Photo must be of top part of body, facing forward, without headwear, and taken within the last 3 months. (4cm x 3cm)
Name				
Date of Birth (Age)	(dd) (mm) (yy) [years of age]		M / F.	
Current Occupation				
Current Address	TEL ( ) -			

Academic Record	
(dd) (mm) (yy)	Details

Work Experience (Provide details that show the content of work involved, such as in research and development work)	
(dd) (mm) (yy)	Details

Academic (Conference) and Social Activities	
(dd) (mm) (yy)	Details

Note: If using a word processor software, either print directly onto this form or print on an A4 size sheet in the same layout as this form.
DO NOT fill in section marked *.

研究業績一覧

List of Research Achievements

Name

Preferred Department		Examinee's No.	* DC —
Title of academic paper, research presentation, report or patent.	Date of publication or presentation.	Name of publisher, journal, or conference.	Remarks (co-author(s) or co-presenter(s))

Note: Mention your achievements chronologically, and attach separated prints or copies for treatises.
If using a word processor software, either print directly onto this form or print on an A4 size sheet in the same layout as this form.
DO NOT fill in section marked*.

入学検定料納付確認票

Confirmation Voucher of Entrance Examination Fee Payment

Preferred Department	
Examinee's No.	* DC —

(The Preferred Department must be filled in by the applicant.)

Affix the Certificate of Transfer Payment Receipt [for Submission to the University] here.

(Note)

1. Invalid without dated stamp of the post office or Japan Post Bank.
2. Applicant's name and address must be filled in where designated on the Certificate of Transfer Payment Receipt.
3. Keep the *Payment Billing and Receipt Slip* safe and DO NOT affix it here.
4. The paid entrance examination fee is not refundable under any circumstances.

Name & Address Voucher

- Fill in your preferred department, post code, address and name in the designated fields in each of the 3 sections.
- Ensure your name and address are accurately provided. Notify the Admissions Section immediately if any changes take place after the submission of your application.
- DO NOT fill in the section marked *.