Tokyo University of Agriculture and Technology Graduate School of Engineering

Master Course (Master)

Application Forms and Guide

For October 2021 / April 2022 Enrollment

Tokyo University of Agriculture and Technology

Graduate School of Engineering

IMPORTANT

The application guidelines may be changed unavoidably due to COVID-19 pandemic. Any changes will be announced on the TUAT website.
Please keep checking the following URL.

https://www.tuat.ac.jp/admission/nyushi_daigakuin/info/

Tokyo University of Agriculture and Technology Graduate School of Engineering
Master Course Application Forms and Guide for October 2021 / April 2022 Enrollment

(1) The following application guide and forms are intended for the Master's course. Applicants who wish to go Department of Industrial Technology and Innovation refer to another application guide and forms.

(2) International Specialized Program (English course) established from April 2019 enrollment.
Please refer to page13, 5. International Specialized Program

1. Application Quota

Department		Number of applicants to be accepted	
		October 2021 Enrollment	April 2022 Enrollment
Biotechnology and Life Science			58
Applied Chemistry	Substance Applied Chemistry	Several	78
	Organic and Polymer Materials Chemistry	Several	
	Chemical Engineering	Several	
Mechanical Systems Engineering			70
Applied Physics			26
Electrical and Electronic Engineering		Several	66
Computer and Information Sciences		Several	42
Total		Several	340

2. Admission Qualifications

Standard Selection

Applicants must meet one of the following qualifications:

(1) Have graduated from a university; or are expected to graduate from a university by the end of September 2021 or March 2022.

(2) Were conferred a bachelor's degree in accordance with Section 7, Article 104 of the School Education Act; or are expected to be conferred such a degree by September 2021 or March 2022.

(3) Have completed 16 years of school education overseas; or are expected to complete such a program by September 2021 or March 2022.

(4) Have completed 16 years of overseas school education by taking a correspondence course offered in Japan by an overseas school; or are expected to complete such a program by September 2021 or March 2022.

(5) Have completed a curriculum in an educational institution in Japan with curricula of an overseas university (only if completion of such curricula corresponds to completion of 16 years of school education in the pertinent country), which is regarded as an institution in line with the pertinent country's education system and is designated by the Minister of Education, Culture, Sports, Science and Technology, Japan; or are expected to complete such a curriculum by September 2021 or March 2022.

(6) Those who have received the degree corresponding to Bachelor from an overseas university or other school by completing three-year curriculum, including completion of a correspondence course offered by an overseas educational institute in Japan, or completion of a curriculum of an educational institute which is recognized as the institute having the curriculum of university in the overseas country and recognized according to the previous qualification. The university or the school should be accredited by the government or accreditation organization, or should be designated as an equivalent to the accredited university or school, regarding the comprehensive aspects of the education and research; or are expected to receive the degree by the end of September 2021 or March 2022.

(7) Have completed a specialist course at a special technical school stipulated by the Minister of Education, Culture, Sports, Science and Technology, Japan after the date designated by the Minister; or are expected to complete such a course by September 2021 or March 2022.

(8) Are designated by the Minister of Education, Culture, Sports, Science and Technology, Japan

(9) Are recognized on the basis of individual admission qualification screening that they have scholastic abilities

equivalent to or higher than those of university graduates, and will be 22 years old or older on the first day of the month when they enroll.

Special selection for third-year undergraduates
(10) Are recognized by the Graduate School of Engineering as having acquired designated credits with excellent records, and meet any of the following criteria:
a. Have enrolled for three years or more in a university as of March 31, 2022.
b. Have completed 15 years of education in an overseas school.
(Those expected to graduate in March 2022 for April 2022 Admissions are excluded.)

Special selection for adults
(11) Have working experience for over 1 year at research institution or education institution or company; or, have working experience for over 1 year and meet one of the (1)～(8) Qualifications.

Note:
*Individual admission qualification screening will be conducted for applicants applying as (9) of admission qualification. (See page7)
*Preliminary screening will be conducted for applicants applying as (10) of admission qualification. (See page8)
*Applicants who meet all of the following criteria can be exempted from the written academic achievement test:
a. (1) or (2) of admission qualification, (1) or (2) of (11) of admission qualification
b. Are expected to graduate from a university by the end of March 2022.
c. The Graduate School of Engineering is your preference.

Applicants who want an exemption from the written academic achievement test should tell your potential education supervisor at TUAT before you apply.

3. Application Deadline

June 1, 2021 to July 20, 2021 (Except Saturdays, Sundays, and Holidays)
Hours: 9:00–12:00, 13:00–17:00
Note:
※Applicants who want an exemption from the written academic achievement test must apply from June 1, 2021 to June 7, 2021
※Applicants who want International Specialized Program must apply from June 1, 2021 to June 18, 2021
※You cannot apply for both Standard Selection and International Specialized Program at the same time.
※Postal mail applications must arrive within the application deadline.

4. Application Procedure

In case you submit your application by post due to unavoidable conditions, write “Enclosing application documents for the Graduate School of Engineering (Master Course)” on the front of the envelope in red. You also need to enclose a self-addressed N3 envelope with a 374yen stamp on the envelope (write your address with postal code and your name) to receive an admission voucher for examination.

(1) Application documents

Documents	Notes
Application Form; Photograph Voucher (Designated form)	1) An ID picture, without headwear, and taken within 3 months prior to application (4cm x 3cm) must be attached in the designated place. 2) Fill in the name of your expected research supervisor of the department to which you are (or may be) accepted.
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*, 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 the payment shown on the *Certificate of Transfer Payment Receipt*, make your payment only at a post office or Japan Post Bank. (Payments are not accepted via ATM transaction.) If you are applying from outside of Japan, you are advised to consult with your potential supervisor first. However, sponsored foreign student should contact with Admissions Section as soon as extension of scholarship is confirmed.
Payment Confirmation Slip of Entrance Examination Fee	Attach the Receipt of the *Certificate of Transfer Payment*
Certificate of (expected) graduation	A certificate of (expected) graduation issued by their universities (departments) Applicants with Application Qualification (10) or who are expected to graduate Tokyo University of Agriculture and Technology are not required for submission.
Original test score sheet for the English tests	1) Submit the original and copy of score sheet for one of the English tests below: ・Official Score Certificate of TOEIC ・International Program Score Report of TOEIC-IP (implemented at TUAT) ・ Score Report of TOEFL iBT ・ Score Report of TOEFL PBT ・ Score Report of TOEFL ITP (implemented at TUAT) 2) The test date on the score sheet should be no older than April 1, 2019. 3) The test score is used as a part of the judgement of acceptance. 4) If you submit your application by hand, we check the original score sheet right then and return it to you. If you submit your application by postal mail, we send the score sheet back to you with the admission voucher. 5) Replacement of score sheet is not accepted. 6) Check the conversion of the TOEFL PBT, TOEFL iBT scores into the TOEIC score at 4(2). Note1: Applicants who has a bachelor's degree; or are expected to have a bachelor's degree at the university of the country or region that official language is English are not required for submission. Note2: For TOEFL iBT score (issued after August 1, 2019), the “Test Date Scores” in the Paper Score Report is subject to evaluation (“My Best Score” is not subject to evaluation).
Academic transcript	Academic transcript issued by their universities (departments) Applicants who are expected to graduate Tokyo University of Agriculture and Technology are not required for submission.
Certificate of the degree conferment	Applicants who meet Application Qualification (2) are

	required for submission.
Statement of Purpose (Designated form)	Clearly state the general outline of the research you are currently conducting (desire to conduct), as well as why you wish to apply for the course. Note: write the score at the bottom of a designated form
Business report or performance report	Applicants with Application Qualification (11) are required for submission
Name & Address voucher (Designated form)	Fill in all the necessary information. If any information, such as address changes after submission, make sure to contact the Admissions Section, Koganei Student Support Office immediately.
Certificate of employment	Applicants with Application Qualification (11) are required for submission.
Original Copy of Certificate of Residence	Non-Japanese applicants must submit a Certificate of Residence (stating such as your nationality, residential status, permitted period of stay and its expiration date).
Result of the Examination for Japanese University Admission for International Students (Foreign applicants are (expected) graduate from foreign universities. However applicants for International Specialized Program (English course) are not required for submission.	1) The only subject you should take is Japanese 2) Submit the original and a copy of Academic Transcript. 3) The examination date on the result should be no older than 1 June, 2020. However, if you take the examination in June, 2021 and you cannot submit a result by the application deadline; you need to submit the copy of the application for the Examination for Japanese University Admission for International Students. 4) If you submit your application by hand, we check the original sheet of the result right then and return it to you. If you submit your application by postal mail, we send back the original sheet of the result back to you with the admission voucher.

(2) The conversion of the TOEFL PBT, TOEFL iBT scores into the TOEIC score

TOEFL PBT	TOEFL iBT	TOEIC LR・IP
673-677	120	990
670	119	990
667	118	990
660-663	117	990
657	116	990
650-653	114-115	990
647	113	990
640-643	111-112	990
637	110	980
630-633	109	965
623-627	106-108	950
617-620	105	925
613	103-104	910
607-610	101-102	900
600-603	100	880
597	98-99	865
590-593	96-97	850
587	94-95	836
580-583	92-93	820
577	90-91	805

TOEFL PBT	TOEFL iBT	TOEIC LR・IP
570-573	88-89	800
567	86-87	780
563	84-85	770
557-560	83	750
553	81-82	740
550	79-80	730
547	77-78	720
540-543	76	700
537	74-75	690
533	72-73	680
527-530	71	665
523	69-70	650
520	68	645
517	66-67	635
513	65	625
507-510	64	610
503	62-63	600
500	61	590
497	59-60	580
493	58	565

TOEFL PBT	TOEFL iBT	TOEIC LR・IP
487-490	57	550
483	56	540
480	54-55	530
477	53	520
470-473	52	500
467	51	490
463	49-50	480
460	48	470
457	47	460
450-453	45-46	445
447	44	435
443	43	420
437-440	41-42	410
433	40	400
430	39	385
423-427	38	370
420	36-37	350
417	35	345
410-413	34	330
407	33	315

TOEFL PBT	TOEFL iBT	TOEIC LR・IP
400-403	32	300
397	30-31	290
390-393	29	270
387	28	260
380-383	26-27	250
377	25	230
370-373	24	215
363-367	23	200
357-360	22	180
353	21	160
347-350	19-20	150
340-343	18	130
333-337	17	110
330	16	100
323-327	15	80
317-320	14	60
313	13	50
310	0-12	35

(3)

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　Office hour: 8:30am-12:00pm, 1pm-5:15pm

5. Selection Procedures

The selection will be conducted comprehensively through academic achievement test (a written academic achievement test and an oral examination), an academic transcript, and score sheet for one of the English tests, or a business report or a performance report.
However, applicants who want an exemption from the written academic achievement test will be conducted comprehensively through both the oral examination and the academic transcript.

(1) Admission for an exemption from the written academic achievement test (for only April 2022 Enrollment)

1) Applicants who wish to be exempted from the written academic achievement test will be judged by the academic transcript or a business report or a performance report.
For applicants exempted from a written academic achievement test will take an oral test.
Please note that you will take the written academic achievement test in case your request for an exemption of the test is disapproved..

2) Announcement for the result of qualification to be exempted from the written academic achievement test
Applicants who belong to Faculty of Engineering will be informed by each department on June 18.
Other applicants will be informed by postal mail send out on June 18.

3) Oral Test
Date: July 5, 2021
Place: Koganei Campus

4) Announcement for the of an Oral Test result
Applicants will be informed by postal　mail send out on July 9.
Please note that you will take the written academic achievement test in case you do not pass the oral test.

5) Announcement of successful applicants
September 3, 2021, at 1:30PM.

(2)Entrance Examination by a written academic achievement test and an oral test

1) Subjects

		written academic achievement test Basic subject and special subject	Oral examination
Biotechnology and Life Science		Life Science	Special subject concerned with desired department and related subject
Applied Chemistry	Substance Applied Chemistry	Math, Chemistry, Special subject concerned with desired department and related subject	
	Organic and Polymer Materials Chemistry	Chemistry or Physics (basic and special)	
	Chemical Engineering	Math, Chemistry, special subject concerned with desired department and related subject	
Mechanical Systems Engineering		Math, special subject concerned with desired department and related subject	
Applied Physics		Math, Physics	
Electrical and Electronic Engineering		Basic Electrical and Electronic Engineering*, Special subject concerned with desired department and related subject.*	
Computer and Information Sciences		Math, Information basic、special subject concerned with desired department and related subject	

* Basic Electrical and Electronic Engineering covers electrical circuits, electromagnetic, analysis and linear algebra.
* Special subject concerned with desired department and related subject. covers electrical circuits, electronic material and device, logical circuit and basic signal processing .

2) Date, Time and place

	Timetable		Tuesday, August 17							Wednesday, August 18	Place
			10	11	12	13	14	15	16		
Department	Biotechnology and Life Science					Life science (12:30～15:00)				Oral exam(9:30 ～)	Koganei Campus, TUAT
	Applied Chemistry	Substance Applied Chemistry	Chemistry (10:00～12:00)			Math (13:20～14:20)		Special subject (15:00～17:00)		Oral exam(9:30 ～)	
		Organic and Polymer Materials Chemistry	Chemistry or Physics (10:00～12:00)					Oral examination (14:30 ～)		Oral exam (Preliminary date)	
		Chemical Engineering	Math (10:00—11:00)			Chemistry (12:30～14:00)		Special subject (14:40～16:40)		Oral exam(9:30 ～)	
	Mechanical Systems Engineering		Math (10:00—11:00)			Special subject (12:30～14:30)				Oral exam(9:30 ～)	
	Applied Physics		Math (10:00—11:00)			Physics (12:30～15:00)				Oral exam(9:30 ～)	
	Electrical and Electronic Engineering		Basic Electrical and Electronic Engineering(10:00～12:00)				Special subject (13:30～15:30)			Oral exam(9:30 ～)	
	Computer and Information Sciences		Math (10:00—11:00)		Information basic (12:30～13:30)			Special subject (14:10～16:10)		Oral exam(9:30 ～)	

3)Special selection for adults

	Timetable		Tuesday, August 17							Wednesday, August 18	Place
			10	11	12	13	14	15	16		
Department	Biotechnology and Life Science					Life science (12:30～15:00)				Oral exam(9:30 ～)	Koganei Campus, TUAT
	Applied Chemistry	Substance Applied Chemistry	Chemistry (10:00～12:00)			Math (13:20—14:20)		Special subject (15:00～17:00)		Oral exam(9:30 ～)	
		Organic and Polymer Materials Chemistry	Chemistry or Physics (10:00～12:00)					Oral examination (14:30 ～)		Oral exam (Preliminary date)	
		Chemical Engineering						Special subject (14:40～16:40)		Oral exam(9:30 ～)	
	Mechanical Systems Engineering					Special subject (12:30～14:30)				Oral exam(9:30 ～)	
	Applied Physics		Math (10:00—11:00)			Physics (12:30～15:00)				Oral exam(9:30 ～)	
	Electrical and Electronic Engineering		Basic Electrical and Electronic Engineering(10:00～12:00)				Special subject (13:30～15:30)			Oral exam(9:30 ～)	
	Computer and Information Sciences							Special subject (14:10～16:10)		Oral exam(9:30 ～)	

6. Announcement of Successful Applicants

Date: Friday, September 3, 2021 at PM1:30
The list of successful applicants will be shown on the TUAT website
The *Notice of Acceptance* will be mailed to successful candidates on the same day.

7. Admission Procedure

(1) Date, Time and place for your admission procedure

1) October Enrollment students 2021
Date: September 14, 2021
Place: Tokyo University of Agriculture and Technology, Koganei Campus

2) April Enrollment students 2022
Date-: March 15, 2021
Place: Tokyo University of Agriculture and Technology, Koganei Campus

Details of admission procedures will be announced to successful candidates later.

(2) Required fees upon admission and others

1) Admission fee — 282,000 yen
2) Annual Tuition fee — 535,800 yen [267,900 yen each for the first and second semester]

Note: Payment of tuition fees is required after entrance.
The fees set above are current as of 2021, but may be subject to change before the date of admission procedure. In addition, should the tuition fee change during enrollment, the new fee will be applicable upon amendment.
Details on the payment of admission fee will be informed later.

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 persons such as the head of the department. Please note that if you are unable to submit the Entrance Agreement, your admission may be revoked.

8. Important Notes

(1) Ensure to contact and obtain confirmation from your potential supervisor before you apply.
(2) No signature (approval sign) of the potential supervisor in the application form, it cannot be filed.
(3) Applicant for Collaborative field who do not have a chance to meet supervisors until the application, obtain an approval sign on the application form by sending post to the supervisor in advance. So you must prepare applications fairly early.
(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 to take the examination.
(6) Ensure to bring your Examination Voucher with you when you come for your examination.
(7) Ensure to bring your writing tools. Apart from that, bring a scientific electronic calculator (Reset all), a straight edge ruler and a pair of compasses.
(8)Applicant cannot use electronic devices like electronic dictionaries, mobile phones, smartphones and wearable devices.
(9) In principle, applicants are not allowed to enter the examination room if 30 minutes or more elapsed since the start of the examination. Also, applicants are not allowed to leave the examination room within 30 minutes after the start of the examination.
(10) Successful applicants of a special selection for third-year undergraduates should submit an academic transcript issued by their universities to Admissions Section, Koganei Student Support Office by the end of March, 2022.
(11) If applying for exemption of admission/tuition fee and scholarship after enrollment, for upon the submission by the applicants and depending on the systems of the exemption of admission/tuition fee and scholarship, depending on the scholarship organization system, your academic transcript certificate of achievement which you submitted upon entrance exam application, and the result of your entrance examination may be used for consideration. Regarding personal information, acquired upon your application, your information will be adequately treated according to our Privacy Policy (available on the university website).
(12) The examination fee is non-refundable, regardless of any reason.
(13) No part of any potential department, division may be altered once application is submitted.
(14)In principle, the delay of Chuo-line is considered as delay of transportation on the day of the examination.
(15)In case a disaster occurs on the day of the examination or the day before, it will be notified on the following website.
http://t-board.office.tuat.ac.jp/T/menu.php
(16) Applicants who need special care due to disability (Prescribed in Article 22-3 of School Education Act), consult with an expected research supervisor and Admission Section, Koganei Student Support Office as soon as possible, before you apply.
(17) Based on Foreign Exchange and Foreign Trade Act, Tokyo University of Agriculture and Technology has established “Tokyo University of Agriculture and Technology Security Export Control” to conduct strict screening of accepting international students. Students subject to such regulation may not be able to pursue their desired course of education or research.

The Screening of Admission Qualifications (9)

Qualification approval will be conducted as follows.

1. Documents for Submission

1) Qualification Screening Application Form (provided form)

2) A personal history

An academic background, business career, research career and social activities (provided form)

3) Statement of Purpose（free format; A4, about 500 words)

4) Othersgraduation research, project study or research report

2. Submission date, time and place

Date: May 10, 2021 – May 14, 2021
Time: 9:00 AM – 12 PM, 1 PM – 5:00 PM
Place: Tokyo University of Agriculture and Technology. Koganei Campus
(Admissions Section on the 1st floor of Administration Building (CUBE))

Note: Submission of your application by postal mail is accepted; please write on the address side of the envelope in red, “Enclosing application documents for the Graduate School of Engineering (Master Course)”

3. Date of Oral Examination

Thursday, May 20, 2021

4. The result will be send out by postal mail on Monday, June 7, 2021.

The Pre-Screening of Admission Qualifications (10); Special Selection for Third-Year Undergraduates (only for April 2022 enrollment)

1. Documents for Submission

1) Pre-Screening Application Form (provided form)

2) Academic Transcript issued by their universities (departments

Applicants who are expected to graduate Tokyo Agriculture and Technology are not required for submission.

3) Statement of Purpose

Clearly state the general outline of the research you are currently conducting (wish to conduct), as well as why you wish to apply for the course. (Free format; A4)

4) Lecture notes or syllabus of Faculty/Department for Undergraduates

Applicants who are expected to graduate Tokyo Agriculture and Technology are not required to submit.

2. Submission date, time and place

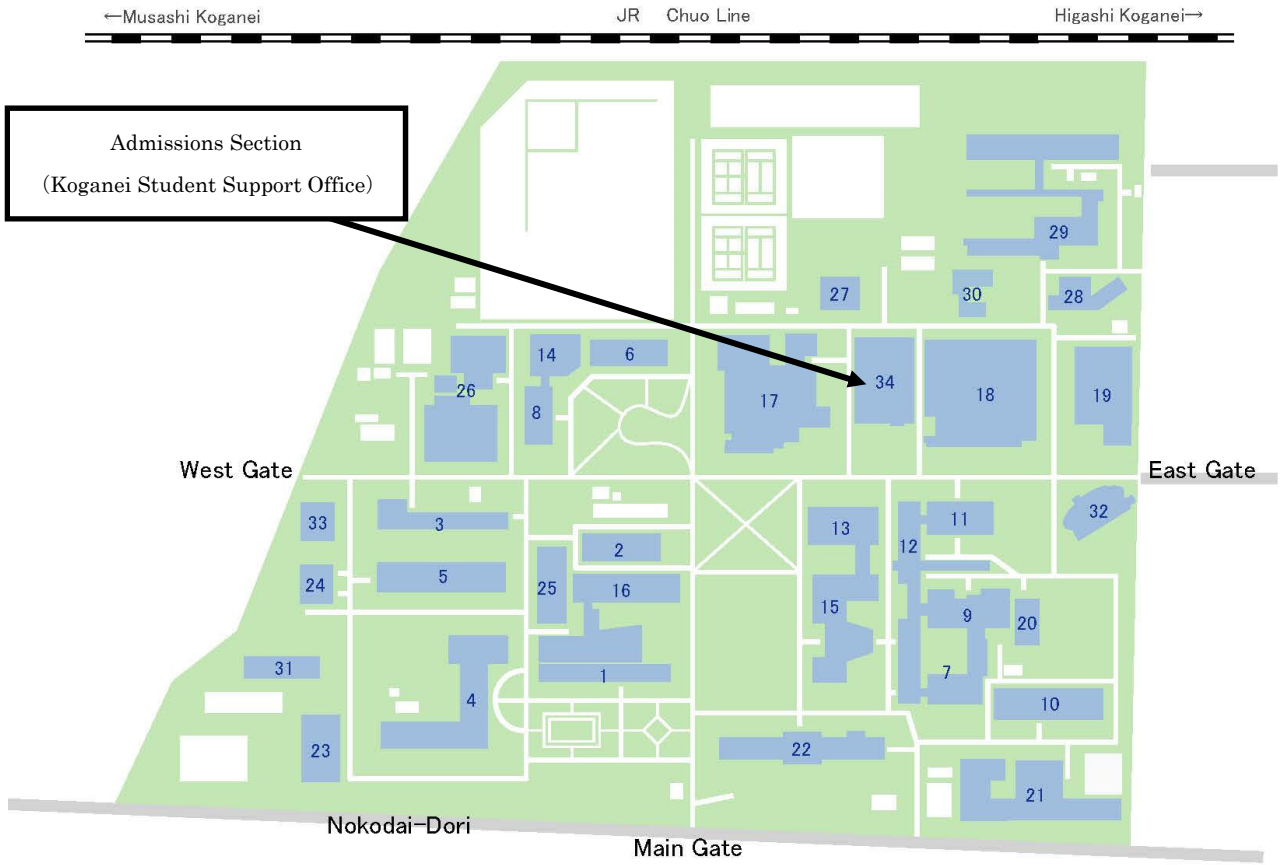
Date: May 10, 2021 –May 14, 2021
Time: 9:00 AM – 12 PM, 1 PM – 5:00PM
Place: Tokyo University of Agriculture and Technology, Koganei Campus
(Admissions Section on the 1st floor of Administration Building (CUBE))

Note: Submission of your application by postal mail is accepted; please write on the address side of the envelope in red, “Enclosing application documents for the Graduate School of Engineering (Master Course)”

3. The result will be send out by postal mail on Monday, June 7 2021.

4. Successful applicant of “Special Selection for Third-Year Undergraduates” will have their undergraduate student status withdrawn. Please note that you will no longer be eligible to take state examination that requires Bachelor's degree.
Students can file with the National Institution for Academic Degrees and Quality Enhancement of Higher Education to undergo an assessment and pass an examination, should they seek to obtain a Bachelor’s degree.

Koganei Campus



1	Building 1: Department of Applied Chemistry, Department of Organic and Polymer Materials Chemistry and Department of Chemical Engineering, Department of Applied Chemistry, Department of Applied Physics and Chemical Engineering
2	Building 2: Department of Mechanical Systems Engineering
3	Building 3: Department of Electrical and Electronic Engineering, Department of Electrical Engineering and Computer Science
4	Building 4: Department of Organic and Polymer Materials Chemistry, Department of Chemical Engineering, and Department of Applied Physics, Department of Biomedical Engineering, Department of Applied Chemistry, Department of Applied Physics and Chemical Engineering
5	Building 5: Department of Electrical and Electronic Engineering, Department of Biomedical Engineering, Department of Electrical Engineering and Computer Science, Instrumentation Analysis Center and Department of Industrial Technology and Innovation
6	Building 6: Department of Mechanical Systems Engineering
7	Building 7: Department of Computer and Information Science, Department of Electrical Engineering and Computer Science
8	Building 8: Information Media Center
9	Building 9: Department of Mechanical Systems Engineering
10	Building 10: Department of Biotechnology and Life Science, and Department of Computer and Information Sciences, Department of Electrical Engineering and Computer Science
11	Building11: Department of Biotechnology and Life Science
12	Building 12: Department of Biotechnology and Life Science, Department of Organic and Polymer Materials Chemistry, Department of Mechanical Systems Engineering, and Department of Computer and Information Sciences, Department of Applied Chemistry, Department of Electrical Engineering and Computer Science
13	Building 13: Organization for the Advancement of Education and Global Learning
14	Building 14: Department of Mechanical Systems Engineering, Department of Biotechnology and Life Science, and Department of Industrial Technology and Innovation
15	Lecture Hall Building for the Faculty of Engineering
16	New Building 1: Department of Applied Chemistry and Department of Electrical and Electronic Engineering, Department of Applied Chemistry, Department of Biomedical Engineering, Department of Electrical Engineering and Computer Science
17	Koganei Library
18	Graduate School of Bio-Applications and Systems Engineering (BASE)
19	Faculty of Engineering Multipurpose Hall, Co-op Store and Cafeteria
20	CAD/CAM Laboratory
21	University Research Administration Center - URAC
22	Nature and Science Museum
23	Research Center for Science and Technology
24	Center for Environment and Safety
25	Center for Design and Manufacturing
26	Gymnasium
27	Faculty of Engineering RI Laboratory Building
28	Koganei International House
29	Male Dormitory “Keyaki”
30	Female Dormitory “Sakura”
31	Staff Housing No. 2
32	The 140th Year Commemorative Building (Ellipse)
33	Research Center for Next Generation Capacitor
34	Administration Building(CUBE): Administration Office and Health Service Center

Guide to the Master Course
Graduate School of Engineering of Tokyo University of Agriculture and Technology

1. Purpose of learning

The Graduate School of Engineering accepts a range of students from home and abroad who have an interest in the natural environment and scientific technology, constantly seek enlightenment, have broad knowledge and perspective, possess the ability to get things done supported by a high degree of self-reliance and strong ethical character, and seek to become engineers and researchers capable of playing a role in international society. Recent development of scientific technology is notable: Information technology is advanced and sophisticated while interdisciplinary and boundary areas related to various specialized fields also see significant progress. The Graduate School of Engineering uniquely aims to provide a variety of academic education that meets the needs of the times, ranging from basic science and engineering to advanced application technology, and to cultivate creative researchers and engineers with broad knowledge and high-level research ability.

2. Admission policy

Based on the purposes of its education, research and human resources development, the Graduate School of Engineering seeks the following students who:

1. Have a broad perspective and basic academic skills for studying their major fields and are equipped with high morality.
2. Have inquisitive and creative minds exploring the truth of nature, have an interest in scientific technology in the fields of science and engineering, think independently through research activities, and work hard to contribute to the solution of research challenges and the development of society in cooperation with other people.
3. Have the ability to set their research themes independently by considering challenges faced by humankind from many perspectives and are highly motivated to try to address those challenges.
4. Have high communication skills in Japanese or foreign languages.

Department of Biotechnology and Life Science

We aim to develop students' international mindset, communication skills, and domestic and global presentation skills and to nurture human resources with the ability to find new needs and discover seeds that can meet the needs of modern society as experts of advanced biotechnology and life science and can work in the center of society as researchers, experts or professionals. So we seek the following students who:

1. Have an interest in research in the biotechnology and life science fields and are highly motivated to contribute to international society through activities in those fields.
2. Have sufficient basic knowledge and problem discovery and solving skills in the biotechnology and life science fields and are willing to venture into new research areas.

Department of Applied Chemistry (Division of Substance Applied Chemistry)

We aim to foster human resources who have advanced professional research and teaching skills for playing a leading role as chemists, resolve problems related to resources, energy, materials, and the global environment, and contribute to the development of basic and applied research and the formation of sustainable society. So we seek the following students who:

1. Create new value from the perspective of atom- and molecule-based chemistry and have the desire and creativity to contribute to international society.
2. Have sufficient basic knowledge and problem discovery and solving skills in the chemistry and related technological fields and are willing and ready to venture into new research areas.

Department of Applied Chemistry (Division of Organic and Polymer Materials Chemistry)

We aim to develop human resources who can play a leading role in the development of highly specialized science and technology related to broad organic materials chemistry, including organic and polymer materials and even inorganic materials and metal complexes, and to help realize the safe living environment throughout the world. So we seek the following students who:

1. Have an interest in chemical/physical properties of organic and polymer materials and their use and application and are motivated to contribute to society as experts in this field, including peripheral and interdisciplinary areas.
2. Have basic academic skills for chemistry or physics and work hard in research to advance their material scientific insights and problem discovery and solving skills to the level required for professional instructors.

Department of Applied Chemistry (Division of Chemical Engineering)

To contribute to shaping sustainable society, we aim to develop chemical engineers who solve chemical and technological problems related to energy, the global environment, drugs, food, and materials, have advanced professional teaching skills for playing a leading role, and utilize those results for social and international purposes. So we seek the following students. For the doctoral course, those motivated to further advance the ability gained in the master's course are preferred.

1. Have an interest in chemical and technological research related to energy, the global environment, drugs, food, and materials and are willing to contribute to international society through activities in those fields.
2. Have sufficient basic knowledge and problem discovery and solving skills in the chemical and technological fields and are willing to venture into new research areas.

Department of Mechanical Systems Engineering

We aim to nurture sophisticated engineers and researchers who design and create unique and best advanced mechanical systems to globally realize sustainable, environment-friendly, science technology-based society, based on basic analytical skills of physics and mathematics and broad, deep expertise in mechanical engineering, and who use deep understanding and insight of global society and culture and rich communication skills for international society. So we seek the following students who:

1. Have academic application skills for doing state-of-the-art research on mechanical engineering and advanced mechanical systems and have a strong intention to contribute to humankind and society through international activities in their specialized fields.
2. Have problem discovery and solving skills based on sophisticated analytical skills, expertise and insights in the fields of physics, mathematics and machinery engineering and are highly motivated to venture into challenges in new research areas or interdisciplinary areas.

Department of Applied Physics

Through basic and professional education of advanced physics, we aims to develop human resources who can learn the current status, concept and methods of research and development in their specialized fields, cultivate high-level logical thinking skills, discover and analyze problems on hand from a physical perspective, and deploy their solutions in a practical manner.

So we seek the following students who:

1. Have an interest in physical research and are motivated to contribute to international society through activities in the physics field.
2. Have sufficient basic knowledge and problem discovery and solving skills in the physics field and are willing to venture into new research areas.

Department of Electrical and Electronic Engineering

We aim to equip students with advanced technologies in electrical and electronic engineering and related expertise and to develop human resources with practical research and development skills based on social needs who contribute to the development of electrical and electronic engineering technologies through research activities in their specialized fields and partnerships with the business community. So we seek the following students who:

1. Have an interest in research in the electrical and electronic engineering field and are motivated to contribute to international society through activities in that field.
2. Have sufficient basic knowledge and problem discovery and solving skills in the electrical and electronic engineering field and are willing to venture into new research areas.

Department of Computer and Information Sciences

We aim to nurture human resources who can find solutions to unknown challenges in the information engineering and interdisciplinary fields by providing leading knowledge on information engineering and cultivating problem discovery skills, practical research skills, technological development skills, international mindset, information transmission skills, and flexibility to social needs—abilities required for independent researchers. So we seek the following students who:

1. Have an interest in information engineering research and are motivated to contribute to international society through activities in that field.
2. Have sufficient basic knowledge and problem discovery and solving skills in the information engineering field and are willing to venture into new research areas.

3. Organization

The Graduate School of Engineering consists of a Master's course and a Doctoral Division.

Master's course consists of 6 departments; "Biotechnology and Life Science", "Applied Chemistry", "Mechanical Systems Engineering", "Applied Physics", "Electrical and Electronic Engineering", and "Computer and Information Sciences". The graduate school is structured to support comprehensive and rigorous teaching and research. Each department is equipped to support state-of-the art technologies in their respective fields, offering two to four sub-specialties each.

The Graduate School of Engineering also has a Department of Industrial Technology and Innovation that aims to cultivate Research and Development capabilities and technology management through advanced engineering research. For further information, please refer to Industrial Technology and Innovation guide and forms.

4. Certification of Course-Completion and Degree Conferral

In principal, students who meets all of the following criteria will be conferred Master Degree (Technology or Academic).

1) Enrolled in the Graduate School of Engineering for 2 years or more
2) Earn 30 credits or more in each "Specialized Program."
3) Approved thesis for degree, and passed the final examination.

5. International Specialized Program

International Specialized Program (English course) established from April 2019 enrollment. All lectures will be 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.

Information about planned admission for International Specialized Program (English course) is included on Page 1, 1.Application Quota. All the procedures such as Application requirements, selection timeline, application procedures, application results, admission procedures and other related information will be the same as general examination process.

However, please note that the application Deadline will be from June 1, 2021 (Tuesday) to June 18 (Friday).

Department : Biotechnology and Life Science		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Biotechnology1		
Cell engineering	Professor 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.
	Associate Professor 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	Professor Yutaka KURODA ykuroda(at)cc.tuat.ac.jp	Biophysical and bioinformatics studies of protein/peptide aggregation, function, and immunogenicity at atomic/molecular level using recombinant DNA technologies, NMR, X-ray crystallography, and computational simulation.
	Associate Professor Yuuji TSUGAWA htsugawa(at)go.tuat.ac.jp	Our laboratory studies the complex metabolic system of living organisms through the development of mass spectrometry omics techniques that illuminate the diversity of metabolites from plant, human, and the associated microbiome.
Structure and cellular function of biomolecules	Professor 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.
Molecular biology and pathophysiology	Associate Professor Masaki INADA inada(at)cc.tuat.ac.jp (Collaborative faculty)	Molecular pathological investigation using gene targeted mice and disease models on mice.
	Associate Professor Yoshihiro OHTA ohta(at)cc.tuat.ac.jp	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.
	Senior Assistant Professor Michiko HIRATA 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	Professor Kazunori IKEBUKURO ikebu(at)cc.tuat.ac.jp	Nucleic acid engineering of aptamers for the application to diagnosis and novel bottom-up nanotechnology.

Department : Biotechnology and Life Science		
Specialty & Major Research Fields	Academic Advisor	Research Subject
	Professor 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.
Biobusiness	Associate Professor Wakako TSUGAWA tsugawa(at)cc.tuat.ac.jp (Collaborative faculty)	Development of novel biodevices for the in vitro diagnostics and environmental monitoring systems based on proteins or enzymes.
Molecular Biochemistry	Associate Professor 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.
Plant biotechnology	Professor Yoshihiro OZEKI ozeky(at)cc.tuat.ac.jp *Retires in March 2022	Molecular biological and biochemical studies on the enzymes involved in plant secondary metabolisms.
	Associate Professor Akiyo YAMADA yamaden(at)cc.tuat.ac.jp	Molecular biological analysis of the genes based on the function of the proteins related to salt-tolerance phenotype of the halophyte.
Biotechnology2		
Marine Biotechnology	Professor Tomoko YOSHINO y-tomoko(at)cc.tuat.ac.jp	Development of novel bio-nanomaterials through genetic engineering by microorganisms for biosensing and biomedical applications.
Biomolecular engineering	Associate Professor Atsushi ARAKAKI arakakia(at)cc.tuat.ac.jp	Molecular analysis of biomineralization mechanism. Biomimetic synthesis of organic/inorganic hybrid nanomaterials using biological molecules.
	Professor Tsuyoshi TANAKA tsuoyo(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.
Bioelectronics	Professor Nobuhumi NAKAMURA nobu1(at)cc.tuat.ac.jp	Bioelectrochemistry and Raman spectroscopy of metalloproteins and construction of biofuel cells. Development of ionic liquids as ion conductors, solvents for biomass extraction and energy conversion.
	Associate Professor 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.

Department : Biotechnology and Life Science		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Synthetic organic chemistry Bioorganic chemistry/chemical biology	Professor Kazuo NAGASAWA knaga(at)cc.tuat.ac.jp (Collaborative faculty)	Total synthesis of biologically active natural products. Development of organocatalyst.
	Associate Professor Kaori SAKURAI sakuraik(at)cc.tuat.ac.jp	Development of novel chemical tools to study biological functions of glycolipids and natural products.
	Associate Professor Masayuki TERA tera(at)go.tuat.ac.jp	Design and synthesis of functional molecules controlling nucleic acids, proteins, and cellular surfaces.
Biosociety engineering Biomolecules and proteomics	Professor Masafumi YOHDA yohda(at)cc.tuat.ac.jp	Structure and function of molecular chaperones. Genetic analysis systems for SNP genotyping and bioremediation.
	Associate Professor Kyosuke SHINOHARA k_shino (at)cc.tuat.ac.jp	We examine the role of cilia in our body. Cilia are nanomachine motor device that protrude from cell surface and play important role on transport of fluid in airway, brain, and oviduct. Using knockout mouse, electron microscopy, and protein engineering, we address molecular mechanism of motility and mechanical property of cilia: How cilia move or how cilia acquire their stiffness and integrity.
Human exercise systems	Professor Yukio TANAKA tyuki(at)cc.tuat.ac.jp *Retires in March 2022	Exercise physiology, Microcirculation and Respiration.
	Professor Hideyuki TANAKA Tanahide(at)cc.tuat.ac.jp	Basic research on perception and motor control mechanisms underlying human behaviors. Applied research based on the principle and theories of human behavior for prevention against activity-related accidents (e.g., falls and collisions during walking) and musculoskeletal injuries in daily life.
Theoretical linguistics	Associate Professor Yuji HATAKEYAMA hatayu(at)cc.tuat.ac.jp	Syntactic structure, semantic structure, and information structure.

※In the Graduate school of Engineering, Department of Biotechnology and Life Science, we give leading-edge research opportunities for adults such as cooperate researchers, to promote industry-academic collaborative research; we aim to provide a brush up course for adults in Department of Biotechnology (Course for Biosociety Engineering). In this course, adults can continue the work and obtain Master's degree and Doctor's degree; Quota is 4 for Master's course and 4 for Doctor's course.

Department : Applied Chemistry		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Division of Substance Applied Chemistry		
Opto-electronic Materials	Professor 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.
	Associate Professor Hisashi MURAKAMI faifai(at)cc.tuat.ac.jp	Crystal growth of semiconductor materials by chemical vapor reaction and characterization of optical and structural properties.
Energy Chemistry & Electrochemistry	Professor Katsuhiko NAOI k-naoi(at)cc.tuat.ac.jp *Retires in March 2023	Energy chemistry. Electrochemical energy storage by use of nano-structured materials. Lithium-ion battery, electrochemical supercapacitor. Hybrid nanoenergy device.
	Associate Professor 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 Transformation	Professor 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	Professor Takashi YAMAZAKI tyamazak(at)cc.tuat.ac.jp *Retires in March 2023	Development of stereoselective construction methods of fluorine-containing compounds. Clarification of effect of fluorine atoms towards a variety of characteristics of compounds.
	Associate Professor Akio SAITO akio-sai(at)cc.tuat.ac.jp	Development of novel and efficient procedures for the synthesis of heterocyclic compounds
Molecular Catalysis	Professor 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.
	Associate Professor 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	Associate Professor Kazuyuki MAEDA k-maeda(at)cc.tuat.ac.jp	Development of novel nanospace materials such as zeolite-related materials and coordination polymers, especially inorganic-organic hybrid nanosheets and related nanospace materials.
	Professor Tatsuo NOMA noma(at)cc.tuat.ac.jp (Collaborative faculty)	Synthesis and application of functional ceramic films including ferroelectrics, dielectrics and photo catalysts. Designing of processing method using high electric field at elevated temperatures.
Capacitor Technology (Sponsored Laboratories)	Visiting Professor Kenji TAMAMITSU 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.

Department : Applied Chemistry		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Communication Studies	Associate Professor Ri NIN ninri(at)cc.tuat.ac.jp	Sociolinguistic Studies: Language varieties, Language behavior, Language life, Language contact, Language change, Language consciousness, Language acquisition, and Language planning.
Division of Organic and Polymer Materials Chemistry		
Organic and Polymeric Materials for Electronics and Optoelectronics	Professor 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
	Associate Professor 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
Polymeric Biomaterials	Professor 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
	Professor 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	Professor Toshiyuki WATANABE toshi(at)cc.tuat.ac.jp	*Development of photoresponsive polymers *Development of reversible thermoresponsive recording of fluorescent image *Synthesis of diamond from carbon dioxide *Development of photoresponsive drug delivery systems
	Associate Professor Hiroyuki OZAKI hiroyuki(at)cc.tuat.ac.jp	*Electronic and Geometric Structure Analysis of Extrathin (4–10 Å) Molecular Aggregates on Clean Surfaces *Creation, Characterization, and Manipulation of a Single Sheet (or Chain) of a Polymer
Fundamental Organic Chemistry for Molecular and Polymeric Materials	Senior Assistant Professor Akiko OKAMOTO 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
Organic and Polymeric Materials with Integrated Molecular	Professor Hiroaki USUI hirousui(at)cc.tuat.ac.jp	*Physical Vapor Deposition of Organic Materials *Polymeric Film Formation by Vapor Deposition Polymerization *Interface Control of Thin Films Pertinent to Polymeric Materials *Electronic Devices Based on Organic Thin Films

Department : Applied Chemistry		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Structure	Senior Assistant Professor Yoko TATEWAKI 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
	Associate Professor Shinji KANEHASHI 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	Professor Hiroshi GODA goda(at)cc.tuat.ac.jp	*Knots, links and 3-dimensional manifolds
	Senior Assistant Professor Eri HATAKENAKA hataken(at)cc.tuat.ac.jp	*Invariants of knots and manifolds in low dimensions
Material Technology for Organic and Polymeric Substances	Professor Hiromu SAITO hsaitou(at)cc.tuat.ac.jp (Collaborative faculty)	*Polymer Blends *Mechanical and Optical Properties of Polymers *Morphology Design of Polymers by Supercritical Fluids *Crystallization of Polymers
Material Science & Technology aiming Human Health Support (Sponsored Lavoratories)	Professor Yoriko ATOMI yatomi(at)cc.tuat.ac.jp Associate Professor Miho SHIMIZU mshmz(at)cc.tuat.ac.jp	Material health science based on body-mind integrative science. Elucidation of the cell-body level of the essence of exercise essential to human health and its cooperation. Keywords: Slow muscle (Soleus) cytoskeletal protein (tubulin/microtubule), extracellular matrix (type I, III, V, X collagen, decorin), molecular chaperone (small HSPs, αB-crystallin), mitochondria, trunk exercises, natural wound healing materials, eggshell membrane cosmetics, supplements. Students from various backgrounds (simulation, organic chemistry, biophysics, biomechanics, biochemistry, molecular biology, physiology) are welcome.

Department : Applied Chemistry		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Communication Studies	Senior Assistant Professor Lukas RIESER rieserl(at)go.tuat.ac.jp	Linguistics, formal semantics and pragmatics. Analysis of phenomena related to language content and use by methods of formal logic, aiming to shed light on phenomena like discourse particles, expectations behind utterances, and intonation, which are difficult to capture with extant methods in formal linguistics.
Division of Chemical Engineering		
Process Systems Engineering	Professor Yoshiyuki YAMASHITA yama_pse(at)cc.tuat.ac.jp	Design and application of smart and dependable process control systems, process monitoring for connected industries, process simulators, and decision support for various process systems.
	Associate Professor 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.
Chemical Reaction Engineering	Professor 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.
	Associate Professor 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.
Interfacial Chemical Engineering	Professor Hiroshi TAKIYAMA htakiyam(at)cc.tuat.ac.jp	Research and development of industrial crystallization technology for producing crystalline particles such as pharmaceuticals, foods, battery materials and functional materials.
Chemical Energy Engineering	Professor Wuled Lenggoro labwl(at)cc.tuat.ac.jp	At the intersection of chemical processing, particle/aerosol technology, transport phenomena (fluid, mass, and heat), and bio-systems. Develop technologies to contribute to protect food production and water systems, and save critical ecosystems. Bridging the "micro" and "macro" material-energy transfers within the global environment.

Department : Applied Chemistry		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Environmental Bio-Engineering	Professor Akihiko TERADA akte(at)cc.tuat.ac.jp (Collaborative faculty)	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.
	Associate Professor 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.
Material Separation Engineering	Associate Professor 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.
	Associate Professor 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)
Chemical Information and Communication	Senior Assistant Professor Yi-Ting Chen chen(at)go.tuat.ac.jp	Empirical studies on the morphology and semantics of linguistic constructions. In particular, corpus-based studies with a focus on the nonarbitrary form-meaning links of constructions from a Cognitive Linguistics perspective.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Division of System Basic Analysis		
Fluid Mechanics	Professor Masaharu KAMEDA kame(at)cc.tuat.ac.jp	Bubbe dynamics, high-speed aerodynamics, and fluid measurements. Current research topics are (1) pressure-sensitive paint for unsteady aerodyanmics, (2) fragmentation of vesicular magma in volcanic eruption, (3) supersonic air-inlets, and (4) mass transport by bubbling.
	Professor 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.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Materials Engineering for Machinery	Professor Tohru TAKAHASHI takahas(at)cc.tuat.ac.jp	Research projects are under way about the microstructure, strength, deformation, performance and their interrelationship in metals, alloys and intermetallics. High temperature strength of TiAl-based intermetallics, thermo-mechanical behavior of NiTi-based shape memory alloys, and grain boundary sliding in Zn coincidence boundaries are experimentally investigated into their controlling mechanisms.
	Professor Toshio OGASAWARA ogasat(at)cc.tuat.ac.jp	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/intermetallics composites, high temperature polymer matrix composites, ablator.
	Professor 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.
Strength of Materials	Associate Professor Satoshi Takada 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.
Elasto-Plasticity and Material Forming	Professor Toshihiko KUWABARA kuwabara(at)cc.tuat.ac.jp	Numerical simulation of material forming, constitutive modeling of metals based on multi-axial stress tests, development of experimental methods for evaluating the formability of metals, development of novel material forming technology, intellectualization of forming machines and dies.
	Associate Professor 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	Professor Yasuhisa ANDO y-ando(at)cc.tuat.ac.jp	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		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Associate Professor Koji IKEDA ikedak(at)cc.tuat.ac.jp	Analysis, modeling, and evaluation of material degradation under contact, especially for the purpose of lower impact on environment. Target materials are lubricants derived from natural resource and polymers with self-lubrication, such as PVA-gel and palm-oil.
Division of Design Production System		
Vibration Analysis and Control	Professor Takayoshi KAMADA 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.
	Professor Ikuo MIZUUCHI mizuuchi(at)cc.tuat.ac.jp	Design, implementation, control methods, sensing mechanisms, actuation mechanisms, software architecture, artificial intelligence, and other aspects of intelligent robots: ongoing subjects include musculoskeletal humanoid robots inspired from human body structure, kitchen assistant robots, intelligent robots, and so on.
Thermal and Fluid Systems	Professor Akira MURATA murata(at)cc.tuat.ac.jp	Heat and fluid flow related to gas turbines, Numerical simulation of turbulent heat transfer, Flow visualization, and Heat transport device utilizing phase change.
	Professor 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).
	Associate Professor Takuma HORI 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.
Simulation Engineering	Professor Hiroshi MOURI h-mouri(at)cc.tuat.ac.jp	Aiming to automatic driving, recognition technology of the surrounding circumstances using on-board sensors, state estimation techniques and the vehicle control technology have been studied, e.g. the localization technique based on the data of laser range finder, camera and satellite. In addition, investigation on vehicle dynamics control and the one on analysis of human drivers' error based on driving recorder data have been achieved.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Professor 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.
Precision Measurement	Professor Wataru NATSU summer(at)cc.tuat.ac.jp (Collaborative faculty)	The main research topics are: research and development on environmental-friendly production system for shape generation with ECM, EDM and polishing; phenomena elucidation and application technology for electrochemical machining; research and development on machining simulation technology; shape generation for Hard-to-machine materials with electrochemical and mechanical polishing; and research on micro deep-hole machining by EDM.
Control Systems	Professor Yasutaka TAGAWA tagawa(at)cc.tuat.ac.jp	Research is under way in developing novel devices for modeling and controlling of mechanical systems. Basic research and device development are performed for vibrational testing systems for the next generation, advanced motion simulator, and power assist systems for man-machine cooperative motion. Design method is studied for controlling systems based on transfer functions.
	Professor Gentiane VENTURE venture(at)cc.tuat.ac.jp	The main research topics are at the edge of robotics and biomechanics. We are focusing on finding motion features that characterize the humans; and that can be understood by the robots. Research includes development of formalisms and methodologies to understand the human (actions, emotions) and the human motions from their dynamics, as well as to measure the humanoid dynamics. The range of applications includes human-robot interaction, medical diagnostics support, rehabilitation monitoring, sport science, entertainment.
Manufacturing System Engineering	Professor Hiroyuki SASAHARA sasahara(at)cc.tuat.ac.jp	Rapid 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 of a workpiece by cutting and frictional stir burnishing. New machining technology for energy saving and clean processing.
Mechanical Information Engineering	Associate Professor Kentaro IWAMI k_iwami (at) cc.tuat.ac.jp	Main research topic of Iwami group is Nano/Microelectromechanical Systems (NEMS/MEMS) based on nanooptics/nanophotonics. It covers basic engineering of micro/nanofabrication and scientific exploratory of plasmonics, and our interest is focusing on some practical applications such as massively-parallel electron beam lithography, nanomechanical sensing systems, and so on.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Precision Measurement	Associate Professor Itsuo HANASAKI hanasaki (at)cc.tuat.ac.jp	Cross-disciplinary approaches on the phenomena typically at micro/nano spatio-temporal scales with an emphasis on the theoretical aspects mainly based on the concepts of statistical mechanics and dynamical systems.
Geometric Mechanical Engineering	Associate Professor Hironobu MAEDA maeda(at)cc.tuat.ac.jp *Retires in March 2022	Study of geometric structures and arithmetic of the singularity on algebraic varieties of mixed characteristic.
Algebraic Mechanical Engineering	Associate Professor Katsuyuki NAOI naoik(at)cc.tuat.ac.jp	Representation theory of infinite-dimensional Lie algebras and their q-analog
Geometric Mechanical Engineering	Senior Assistant Professor Nobutaka NAKAZONO nakazono(at)go.tuat.ac.jp	Study of discrete integrable systems. (Keyword: Painlevé equation, soliton equation, Toda lattice)
Intelligent Systems for Mechanical Engineering	Associate Professor 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.
Mechanical Information and Communication	Professor Michio ITO petrus(at)cc.tuat.ac.jp *Retires in March 2022	A Study on the history of philosophy from a point of view of institutionalization about knowledge. A study on the philosophy of artifacts and design.
	Associate Professor Takeshi SATO tsato(at)cc.tuat.ac.jp	Applied Linguistics, Second Language Acquisition, Educational Technology, Foreign Language Education.
	Associate Professor Yuichi ASAI asai(at)go.tuat.ac.jp	.My major research fields are cultural anthropology, linguistic anthropology, and environmental anthropology. My research focuses on how human language constructs socio-cultural phenomenon and the natural environment. Since 2007, I have engaged in fieldwork in the Fiji Islands, South Pacific, and examined unique characteristics of Fijian ritual and mythical cosmology, through linguistic analysis of Fijian language.

Department : Applied Physics		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Division of Quantum Physics		
Quantum Functions	Associate Professor Yoshitaka MORISHITA morisita(at)cc.tuat.ac.jp	Fabrication, characterization of high-functional resistive random access memory using porous alumina.
	Professor Kenji IKUSHIMA ikushima(at)cc.tuat.ac.jp	Quantum device and advanced sensing. In particular, the creation of innovative quantum devices using semiconductors or atomic layer materials and the development of infrared/ultrasound imaging technologies. We aim for medical and industrial applications.
Atomic Processes	Professor Masatoshi UKAI ukai3(at)cc.tuat.ac.jp *Retires in March 2023	Physics of electronic, atomic, molecular, and photonic collisions and following relaxation processes in the gas and the condensed phases. Development of new experiments for atomic spectroscopy.
	Professor 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.
Semiconductor Quantum Electronics	Professor Kenzou MAEHASHI maehashi(at)cc.tuat.ac.jp	Synthesis of nanocarbon such as carbon nanotubes and graphene, and fabrication of quantum devices and high sensitive biosensors using nanocarbon-based devices.
Quantum Optics	Associate Professor Kazuyuki MUROO muroo(at)cc.tuat.ac.jp	Study on quantum property of non-classical photon states, such as entangled multiphoton states, their interaction with matter, and quantum control of these states.
Quantum Beams	Professor 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.
Quantum Electronics	Professor Kazuhiko MISAWA kmisawa(at)cc.tuat.ac.jp	Research on quantum-mechanical control of optical properties in condensed matters by using tailored femtosecond pulses, and its application to photonic devices, photochemical-reaction control, and molecular imaging.
	Associate Professor Godai MIYAJI gmiyaji(at)cc.tuat.ac.jp	Experimental study on nonlinear optical interaction process between light and mater with intense femtosecond laser pulses and its application to material nano-processing technique.
Division of Complex Systems		
Complex Functions of Materials	Associate Professor 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.

	Associate Professor 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.
Functional Material Engineering	Associate Professor Yuki AKAGI	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 ultrasound.
Superconducting Materials	Associate Professor 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.
Magnetism in Condensed Matter	Professor Hiroko KATORI h-katori(at)cc.tuat.ac.jp	Research on phase transition phenomena in magnetic materials, such as geometrically frustrated systems, in which the spin, charge and lattice degrees of freedom are intertwined complexly. Search for novel physical properties and functions in these systems
Organic Electronics	Associate Professor Toshihiko KAJI 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.
Physical Information and Communication	Professor Yukiko MORI argo(at)cc.tuat.ac.jp *Retires in March 2023	The study of the drama and the films from the viewpoint of visual communication. Included are the researches on the audience, the cultural backgrounds, and the development of visualizing techniques.
Department of Electrical and Electronic Engineering		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Division of Electrical and Electronic System Engineering		
Electronic System Engineering	Associate Professor 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.
Power Electronics	Professor 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.
Electrical Energy Conversion Engineering	Associate Professor Yasufumi IIMURA iimura(at)cc.tuat.ac.jp	Flat panel displays and their related topics, such as liquid crystal displays (LCDs), organic Electro-Luminescence displays (OLEDs) and organic TFTs.
Electronic Device Engineering	Professor Jun-ichi SHIRAKASHI shrakash(at)cc.tuat.ac.jp	Novel nanofabrication techniques, single-electron transistors (SETs), and ferromagnetic nanostructures.

	Associate Professor 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	Professor Tomo UENO tomoueno(at)cc.tuat.ac.jp	Development of Integrated Circuit based on novel device and process technology. Low temperature insulating film fabrication, OLED fabrication, electrical measurement, physical & chemical analysis.
	Associate Professor Hiromasa SHIMIZU h-shmz(at)cc.tuat.ac.jp	Research on Semiconductor / Magnetic Hybrid Materials, and Their Application to Novel Opto-Spintronics Devices.
Optoelectronics and Photonics	Professor Yasuhiro TAKAKI ytakaki(at)cc.tuat.ac.jp	Three-dimensional display, Holography, Three-dimensional camera, and Optical information processing.
	Associate Professor Yosuke TANAKA tyosuke(at)cc.tuat.ac.jp	Multi-function and high-speed optical signal processing, optical sensing system, and related devices and data processing technique.
Environmental Energy Engineering	Professor Ken NAGASAKA bahman(at)cc.tuat.ac.jp *Retires in March 2022	Power System Engineering, New Energies including Wind, Solar, Micro Hydro and Geothermal Generation, Planning and Operation of Micro Grids, Smart Grid, Load Forecasting, Power Deregulation, Energy Conservation, Application of Intelligent Engineering such as Neural Network to Power Systems, etc.
Electronic Information and Communication	Associate professor Ichiro OKANO i-okano(at)cc.tuat.ac.jp	Socio-Informatics, Social Systems Theory, Communication Studies
Division of Electronic Media Engineering		
Radio Communication System Engineering	Professor 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.
	Associate Professor 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.
Intelligent Systems	Associate Professor Kunihiro FUJIYOSHI fujiyosi(at)cc.tuat.ac.jp	Computer-Aided Design and Design-Automation of VLSI layout problem, using combinatorial algorithm and graph theory.
Electromagnetic Wave Engineering	Professor Toru UNO uno(at)cc.tuat.ac.jp *Retires in March 2022	Antennas and propagation, Computational electromagnetics, Bio-electromagnetics, Geophysical sensing, Electromagnetic environment, Electromagnetic metamaterials.

	Associate Professor Takuji ARIMA t-arima(at)cc.tuat.ac.jp	Computational electromagnetics, New materials for electromagnetic waves, Bio-electromagnetics.
Medical Information System Engineering	Professor 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.
	Associate Professor Ken TAKIYAMA 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.
Image Processing	Professor Toshihisa TANAKA tanakat(at)cc.tuat.ac.jp	Mathematical signal processing and its applications to: brain signal processing for brain-machine interfacing, image processing and pattern recognition, adaptive signal processing, and radar signal processing.
Electronic Information and Communication	Associate Professor Takanobu TOBISHIMA tobit(at)cc.tuat.ac.jp	Relation between technologies / societies and plastic arts ; Questions of "Modernity" in arts ; Studies in images and design in modern life.
Department of Computer and Information Sciences		
Division of Computer Science		
Specialty & Major Research Fields	Academic Advisor	Research Subject
Algorithmics	Professor Keiichi KANEKO k1kaneko(at)cc.tuat.ac.jp	Algorithms for interconnection networks, parallel/distributed processing, dependable computing.
	Associate Professor Ryuhei MIYASHIRO r-miya(at)cc.tuat.ac.jp	Mathematical programming, discrete optimization, algorithm, modeling.
Systems Software	Professor Mitaro NAMIKI namiki(at)cc.tuat.ac.jp (Collaborative faculty)	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.
	Associate Professor Hiroshi YAMADA hiroshiy(at)cc.tuat.ac.jp (Collaborative faculty)	Operating systems, system virtualization, parallel and distributed systems, system software for dependable computing and cloud computing.
Computer System Engineering	Associate Professor Yu Nakayama yu-nakayama(at)go.tuat.ac.jp	Mobile, IoT, and spatial information technologies for next generation information networks, applications, and schemes for utilizing them.
Artificial Intelligence	Associate Professor Katsuhide FUJITA katfuji(at)cc.tuat.ac.jp	Artificial intelligence related to autonomous agents, multi-agent systems, data mining, complex networks, knowledge management.

	Associate Professor Shun WATANABE shunwata(at)cc.tuat.ac.jp	Information theory, Communication Engineering Cryptography, Information security.
System Design	Professor Takafumi SAITO txsaito(at)cc.tuat.ac.jp	Computer graphics, visualization, image/video processing, shape processing.
	Associate Professor Yuichi TANAKA ytnk(at)cc.tuat.ac.jp	Signal processing, machine learning, image processing and computer vision, biomedical information processing, and their applications for engineering and industry.
Biologically-inspired computing	Professor Toshiyuki KONDO t_kondo(at)cc.tuat.ac.jp	Neurocomputing, evolutionary computation, cognitive robotics, cognitive interface design, brain-computer interface.
Image and vision computing	Associate Professor Ikuko SHIMIZU ikuko(at)cc.tuat.ac.jp	Computer vision, shape and appearance modeling, image recognition.
Computer networks	Professor Nariyoshi YAMAI nyamai(at)cc.tuat.ac.jp	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.
	Associate Professor Hironori NAKAJO nakajo(at)cc.tuat.ac.jp	Processor micro-architecture, parallel processing, VLSI design, high performance computing, embedded computer.
Statistical classification and retrieval	Associate Professor Seiji HOTTA s-hotta(at)cc.tuat.ac.jp	Classification and clustering, invariances in recognition, information retrieval.
Human computer interaction	Professor Kinya FUJITA kfujita(at)cc.tuat.ac.jp	Human-centered smart interface, telework, online communication, virtual reality.
Natural Language Information Science	Professor Kazuko SHINOHARA k-shino(at)cc.tuat.ac.jp *Retires in March 2024	Cognitive linguistics, Conceptual Metaphor Theory, Spatial cognition and language.
	Professor Ryoko UNO ryokouno(at)cc.tuat.ac.jp	Grammatical analysis and constructive approach to explore the cognitive basis of grammar
Mathematical Informatics	Professor Nobuo HARA nhara(at)cc.tuat.ac.jp	Algebraic geometry and commutative algebra in positive characteristic. In particular, study of algebraic varieties and their singularities via the Frobenius morphism
	Associate Professor Mikio MURATA 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))	Noriyuki NAKAMURA noriyuki-nakamura(at)aist.go.jp Chikashi NAKAMURA chikashi-nakamura(at)aist.go.jp Hyonchol KIM kim-hc(at)aist.go.jp	We develop a new biotechnology, “nanotechnology-based cell engineering”, by using nano/micro-device and nano-probe technologies to reveal functions of cancer cells, immune cells and iPS cells. The findings are applied for practical applications, in next-era cell therapies and diagnostics, e. g. genome editing therapy and liquid biopsy.
Department : Applied Chemistry		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Non-equilibrium Process Engineering (Cooperation Program with Mitsubishi Chemical Holdings Corporation)	Hiroyuki KAKIUCHI Naoki NOGUCHI Hideto HIDAKA	Most of industrial processing of chemical products is 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)	Tadao TAKIGAMI Motohide MATSUI Hajime TAKAMI	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 analyzed and evaluated.

Aero Space Engineering (Cooperation Program with National Institute of Japan Aerospace Exploration Agency)	Takashi YAMANE Takashi AOYAMA Yasushi WATANABE Yoshiyasu HIRANO	Aircraft propulsion engineering, high-speed aerodynamics, structure/materials, aerodynamics/aeroacoustics and rotorcraft concerned with the developments of airplane and spacecraft are studied. In 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)	Michiaki SEKINE	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.
Humanoid Engineering (Cooperation Program with National Institute of Advanced Industrial Science and Technology(AIST))	Ko AYUSAWA Natsuki YAMANOBE Ryusuke SAGAWA	Obstacle avoidance algorithm of humanoid robot for efficient object manipulation and carrying task, motion control of humanoid robot by considering its dynamic balance, and remote control of robot by BCI (brain-computer interface)
Automobile prevention safe engineering (Cooperation Program with National Traffic Safety and Environment Laboratory, National Agency for Automobile and Land Transport Technology)	Nobuyuki UCHIDA Hisashi IMANAGA	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 and Electronic Engineering		
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	Optoelectronic Devices, Nanophotonics, Bioinformatics.
Information-Communication Engineering (Cooperation Program with National Institute of Information and Communications Technology)	Masato TANAKA Akira ENDOH Soichi WATANABE Nobumitsu HIROSE	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 Keiichi KITAJO Shin YOSHIZAWA Masanobu MURAYAMA	Electronics in biomedical engineering related to measurement, signal processing, interfacing, imaging, simulation, and mechatronics.
Fundamentals of advanced intelligence (Cooperation Program with RIKEN)	Mihoko OTAKE Takanori MAEHARA Kazuki YOSHIZOE Naoto YOKOYA Qibin ZHAO KHAN Mohammad Emtiyaz	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.
Department: Computer and Information Sciences		
Urban Space Informatics (Cooperation Program with National Institute of Advanced Industrial Science and Technology(AIST))	Koichi KURUMATANI Akio SASHIMA	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	Research Subject: Artificial intelligence technologies that process and leverage Big-data collected in Internet-of-Things (IoT) environments.

If you choose your potential supervisor following lists, you must contact Admissions Section.

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
MAIL: tnyushi@cc.tuat.ac.jp
Office hour: 8:30am-12:00pm, 1pm-5:15pm

Biotechnology and Life Science
Yukio TANAKA
Hideyuki TANAKA
Yuji HATAKEYAMA

Applied Chemistry
Tatsuo NOMA
Ri NIN
Yi-Ting Chen
Lukas RIESER

Mechanical Systems Engineering
Michio ITO
Takeshi SATO
Yuichi ASAI

Applied Physics
Yukiko MORI

Electrical and Electronic Engineering
Takanobu TOBISHIMA
Ichiro OKANO

Computer and Information Sciences
Kazuko SHINOHARA
Ryoko UNO

For October 2021 Enrollment ・ For April 2022 Enrollment
（Circle an applicable item）

Identification Number.
*
MC —

*do not write

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

志 願 票

Admission Voucher

I am applying for an exemption from the written academic achievement test ☐Yes ☐No (Deadline:7th June, 2021)

Potential Department		Potential Division *Check Note	First choice		Potential Supervisor (Signature)	
			Second choice		Potential Supervisor (Signature)	

Furigana Name		sex	Domicile (or Nationality)	
Date of Birth	(day) (month) (year)	M /F		(Foreign students to provide nationality)

Current Address	(Postal Code —) (C/O)
	TEL: ( ) — Home/Cell Phone ( ) E-Mail:
Contact Address	(Postal Code —) (C/O)
	TEL: ( ) — Home/Cell Phone ( )

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, in a university, etc., please state it here.)		
	Remarks (Awards and penalties, or the period of school leave, etc.)		

Note 1: DO NOT fill in section marked *.

Note 2: Fill in only the Department and Supervisors indicated in the “Application Forms and Guide” for Master Course.
Note 3: Fill in only if you have second choice.
Note 4: In case you apply for Department of Applied Chemistry t, first and second Division must be same.
Note 5: In case you apply for Collaborative Study Fields of Graduate School of Engineering, fill in your Specialty &Major research fields in the column, “Potential Division.”
Note 6: In case you apply for International Specialized Program (English course), write International Specialized Program in Potential Division.
Note 7: USE black or blue pen only.
Note 8: Admission Voucher without the signature or the seal of your potential supervisor will NOT be accepted..
Note9: Read 8. Important Notes at page 7 carefully.

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

{ For October 2021 Enrollment
For April 2022 Enrollment }

Circle applicable enrollment

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)

Potential Department	
Potential Division	
Identification's No.	* MC —
Name	

Record of Attendance*	Attended / Absent

Note 1: DO NOT fill in section marked *.

DO NOT SEPARATE.

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

受 験 票

Examination Voucher

{ For October 2021 Enrollment
For April 2022 Enrollment }

Circle applicable enrollment

Potential Department	
Potential Division	
Identification's No.	* MC —
Name	

(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 for obtaining the Notice of Acceptance for successful applicants.
3. DO NOT fill in section marked *.

志　望　理　由　書

Statement of Purpose

(Also fill in English test scores)

University (graduated / expected to graduate)
Faculty

Name

Potential Department		Examinee's No.	* MC —
Potential Division			
Potential Supervisor			
Purpose(400-500words)			
Score of English (Circle an applicable item)	TOEIC- public test・TOEIC-IP	score	
	TOEFL-iBT ・ TOEFL-PBT ・ TOEFL-ITP		

DO NOT fill in sections marked *.
The statement may be made with a word processor using the same format.

Identification Number.
* MC —

Date

個別入学資格審査申請書
Qualification Screening Application Form

furigana
Name signature

I will apply for Master Course (Department:) in Tokyo University of Agriculture and Technology Graduate School of Engineering and apply for the prescribed documents for Qualification Screening Application.

To: Dean of the Graduate School of Engineering, Tokyo University of Agriculture and Technology

DO NOT fill in sections marked *.

History record
履歴調書
＊only for "The Screening of Admission Qualification(9)" applicants

Name				**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)
Sex	M/F	Domicile (or Nationality)		
Date of Birth	(day) (month) (year)			
Current Address				
	TEL: Home/Cell Phone E-Mail:			
Final Education	(month) (year) Graduate / Withdrawal			

Learning, Employment ,Research , Social history	**Period**	**Details**
	(month) (year)	
	(month) (year)	
	(month) (year)	
	(month) (year)	

Identification Number.
* MC —

３年次特別入試事前審査書
The Pre-Screening of Admission Qualifications Application Form

Current Address 〒 -

TEL

Home/Cell Phone

E-Mail

furigana

Name signature

Date of Birth (day) (month) (year)

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)

I will apply for Master Course (Department:) in Tokyo University of Agriculture and Technology Graduate School of Engineering and apply for The Pre-Screening of Admission Qualifications (10); Special Selection for Third-Year Undergraduates (only for April 2019 enrollment)

To: Dean of the Graduate School of Engineering, Tokyo University of Agriculture and Technology

DO NOT fill in sections marked *.

入学検定料納付確認票

Confirmation Voucher of Entrance Examination Fee Payment

Potential Department	
Potential Division	
Identification Number	* MC —

(Potential Department and Potential Division 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. Entrance examination fee is not refundable under any circumstances.

Name & Address Voucher

- Fill in your potential department and division, postal code, address and name in each designated columns.
- Ensure your name and addresses 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 *.

宛名票

Name & Address Voucher

Potential Department	
Potential Division	

For notice of acceptance.

Address

Mr./Ms

Examinee's No.	* MC—

Tear along here.

For mailing of entrance procedure information.

Address

Mr./Ms

Examinee's No.	* MC—

Spare copy.

Address

Mr./Ms

Examinee's No.	* MC—