February 17, 2022

Notification: Changes in the April 2023 Master's Program Entrance Examination Due to Reorganization of the Graduate School of Engineering

The Graduate School of Engineering plans to reorganize from April of FY 2023. When this reorganization is approved, the following changes will be made to the selection method for the Master's Program enrollees from April of 2023. **We assume the Ministry of Education, Culture, Sports, Science, and Technology will approve the reorganization according to our plan.** If there is a change to the reorganization plan, it will be announced on the university website, so please check the website regularly. Furthermore, from the October 2022 enrollment, we will no longer recruit students for the current majors (excluding special entrance exams for international students).

Outline of reorganization of Master's Program

From April 2023, we plan to reorganize the current six majors (Biotechnology, Applied Chemistry, Mechanical Systems Engineering, Applied Physics, Electrical and Electronic Engineering, Computer and Information Sciences) in the Master's Program of the Graduate School of Engineering so that they correspond to the six departments in the Faculty of Engineering (Biotechnology and Life Science, Biomedical Engineering, Applied Chemistry, Applied Physics and Chemical Engineering, Mechanical Systems Engineering, Electrical Engineering and Computer Science.)

1. Recruitment of students

The number of students recruited will be changed as follows:

Major		Recruited students
Department of Biotechnology and Life Science		58
Department of Applied Chemistry	Division of Substance Applied Chemistry	78
	Division of Organic and Polymer Materials Chemistry	
	Division of Chemical Engineering	
Department of Mechanical Systems Engineering		70
Department of Applied Physics		26
Department of Electrical and Electronic Engineering		66
Department of Computer and Information Sciences		42
Total		340

Major	Recruited students
Department of Biotechnology and Life Science	61
Department of Biomedical Engineering	33
Department of Applied Chemistry	54
Department of Applied Physics and Chemical Engineering	47
Department of Mechanical Systems Engineering	76
Department of Electrical Engineering and Computer Science	86
Total	357

2. Selection Method

(1) Entrance by exemption from entrance exam
Exemption from the written exam will not change the method for selecting entrance exams

(2) Entrance exams by written and oral exams
The subjects to be covered on the written and oral exams will be changed as noted below.

(Before change) General entrance exam

		Written test	**Oral test**
Department of Biotechnology and Life Science		Life Sciences	Advanced subjects and study related to the desired major
Dept. of Applied Chemistry	Division of Substance Applied Chemistry	Mathematics, chemistry, and advanced subjects and study related to desired major	
	Division of Organic and Polymer Materials Chemistry	Chemistry or physics (basic, advanced)	
	Division of Chemical Engineering	Mathematics, chemistry, and advanced subjects and study related to desired major	
Department of Mechanical Systems Engineering		Mathematics and advanced subjects and study related to desired major	
Department of Applied Physics		Mathematics, Physics	
Department of Electrical and Electronic Engineering		Basics of electrical and electronic engineering and advanced subjects and study related to desired major	
Department of Computer and Information Sciences		Advanced subjects and study related to the desired major	

(After change) General Entrance Examination

	Written test	**Oral test**
Department of Biotechnology and Life Science	Life Sciences	Advanced subjects and study related to the desired major
Department of Biomedical Engineering	Mathematics and advanced subjects and study related to the desired major	
Department of Applied Chemistry	Advanced subjects and study related to the desired major	
Department of Applied Physics and Chemical Engineering	Mathematics and advanced subjects and study related to the desired major*	
Department of Mechanical Systems Engineering	Mathematics and advanced subjects and study related to the desired major	
Department of Electrical Engineering and Computer Science	Mathematics and advanced subjects and study related to the desired major	

*Note: For the specialized subjects of the Department of Applied Physics and Chemical Engineering, select four subjects, including thermodynamics, from the following seven (thermodynamics, transport phenomena theory, reaction engineering, separation engineering, electromagnetics, quantum mechanics, and statistical mechanics.

(Before change) Test for adults

		Written test	Oral test
Department of Biotechnology and Life Science		Life sciences	Specialized subjects and study related to the desired major
Dept. of Applied Chemistry	Division of Substance Applied Chemistry	Mathematics, chemistry, and advanced subjects related to desired major	
	Division of Organic and Polymer Materials Chemistry	Chemistry or physics (basic and advanced)	
	Division of Chemical Engineering	Advanced subjects and study related to the desired major	
Department of Mechanical Systems Engineering		Advanced subjects and study related to the desired major	
Department of Applied Physics		Mathematics and Physics	
Department of Electrical and Electronic Engineering		Basics of electrical and electronic engineering, advanced subjects and study related to desired major	
Department of Computer and Information Sciences		Advanced subjects and study related to the desired major	

(After change) Test for adults

	Written test	Oral test
Department of Biotechnology and Life Science	Life sciences	Advanced subjects and study related to the desired major
Department of Biomedical Engineering	Mathematics and advanced subjects and study related to the desired major	
Dept. of Applied Chemistry	Advanced subjects and study related to the desired major	
Dept. of Applied Physics and Chemical Engineering	Mathematics and advanced subjects and study related to the desired major*	
Dept. of Mechanical Systems Engineering	Advanced subjects and study related to the desired major	
Dept. of Electrical Engineering and Computer Science	Mathematics and advanced subjects and study related to the desired major	

*Note: For the specialized subjects of the Department of Applied Physics and Chemical Engineering, select four subjects, including thermodynamics, from the following seven: thermodynamics, transport phenomena theory, reaction engineering, separation engineering, electromagnetics, quantum mechanics, and statistical mechanics.

3. Application and recruitment schedule for entrance to TUAT in April 2023

Student recruitment for entrance to TUAT in April 2023 will be carried out by promptly publishing the student application after the reorganization plan is approved by the Ministry of Education, Culture, Sports, Science and Technology. Please note that the times of application and examination in 2023 will differ from those of the usual year. The application and examination for entrance to TUAT is planned to be carried out according to the following schedule.

Schedule	**Process**
Early July, 2022	Publish the *Student Recruitment Guidelines*
Late July, 2022	Start accepting applications
Mid-August, 2022	Hold entrance exams for those exempt from the written exam Hold oral exams
Early-September, 2022	Hold entrance exams (written and oral)
Mid-September, 2022	Announce successful examinees

***Please note that the above schedule is only planned and may be postponed or changed according to when the reorganization is approved by the Ministry of Education, Culture, Sports, Science, and Technology.** When the reorganization is approved, the approval will be announced via the university website, and the recruitment schedule will be posted in the *Student Recruitment Guidelines*.

Educational Objectives and Admissions Policies

1. Education objectives

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

2. Admissions policy

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

(1) Applicants who have a high level of ethics, sufficient basic academic knowledge of their field of study, and a broad view of their area of specialization.

(2) Applicants who are on a quest to find truth in nature, have a manufacturing mindset, and are interested in science and technology. They should also be able to think independently in pursuing their research and cooperate and collaborate with others while being dedicated to solving research problems and contributing to society.

(3) Applicants who are willing to take on the challenges facing humankind and can consider and judge from multiple perspectives and set their own research themes.

(4) Applicants who have a high level of communication ability in Japanese or English.

Department of Biotechnology and Life Science

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

admissions policy:

(1) Applicants must have (i) sufficient basic academic skills in chemistry, life sciences, and engineering to study in the field of biotechnology and life science and (ii) the high ethical standards required of researchers and engineers.
(2) Applicants must have an inquisitive mind for cutting-edge research in the field of biotechnology and be eager to contribute to society through interdisciplinary and international cooperation and collaboration.
(3) Applicants must be able to (i) set research themes proactively through advanced expertise, analytical skills, and insight in the field of biotechnology and (ii) be willing to take on the challenges facing humanity boldly.
(4) Applicants must possess advanced communication skills in Japanese or English.

Department of Biomedical Engineering

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

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

Department of Applied Chemistry

By teaching fundamental academic skills in chemistry and physics and conveying specialized

knowledge in applied chemistry, materials science, and related fields, this program aims to foster highly skilled people who can (i) play leading roles in advancement of highly specialized science and technology as chemists and materials scientists working in fields related to nature, life, the environment, energy, and others, (ii) contribute to the formation of a safe and secure sustainable society, and (iii) play active roles internationally through their rich communication skills. In consideration of these aims, we therefore seek people who satisfy the following: admissions policy:

(1) Applicants should possess sufficient basic academic skills in chemistry and physics and related fields and meet the ethical standards necessary for researchers and engineers.
(2) Applicants should be willing and able to create new value in regard to chemical substances from the atomic and molecular level and contribute to society and the world as experts in the field.
(3) Applicants should be willing to set their own research agenda in the fields of chemistry and materials science related to nature, life, environment, energy, etc. and boldly pursue unexplored theories and development of new research areas.
(4) Applicants should possess excellent communication skills in Japanese or English.

Department of Applied Physics and Chemical Engineering

The objective of the master's program is to foster engineers and scientists who can contribute to the formation of a sustainable society and play an active role in society and on the international stage. In particular, students will gain the ability to solve problems related to energy, the environment, and new materials through (i) their integrated understanding and application of expertise in chemical and physical engineering as well as (ii) their advanced professional leadership skills that will play a leading role in the field. In accordance with the above-described objectives of educational research and development of human resources, the Department of Chemical and Physical Engineering seeks students who satisfy the following requirements:

(1) Applicants should have sufficient basic academic skills in chemistry, physics, mathematics, English, etc. for studying chemical engineering and physical engineering as well as a broad perspective and a strong sense of ethics.
(2) Applicants should (i) be interested in research in the fields of chemical and physical engineering related to energy, the global environment, medicine and food, resources and materials or the process and measurement technologies that form the basis for solving problems in those fields and (ii) have a desire to contribute to society and the international community through activities in those fields.
(3) Applicants should be able to (i) consider and judge various problems facing humanity from multiple perspectives by integrating and utilizing chemical engineering and physical engineering,

(ii) set their own research agenda, and (iii) be willing to boldly take on the challenge of solving those problems.

(4) Applicants should have excellent communication skills in Japanese or English languages.

Department of Mechanical Systems Engineering

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

(1) Applicants must have a broad perspective, sufficient basic academic skills for studying mechanical and systems engineering, and a high level of ethics.

(2) Applicants must have (i) a high level of academic ability for applying oneself to cutting-edge research in the field of mechanical-systems engineering and (ii) a strong desire to contribute to humanity and society through international activities in their field of specialization.

(3) Applicants must (i) have the ability to identify and solve problems based on advanced analytical skills, specialized knowledge, and insight in the fields of mathematics, physics, and mechanical-systems engineering and (ii) be highly motivated to take on research challenges in new and interdisciplinary research fields boldly.

(4) Applicants must have advanced communication skills in Japanese or English languages.

Department of Electrical Engineering and Computer Science

The aims of this program are twofold: first, to train students to acquire advanced technologies and related expertise in information engineering and electrical and electronic engineering, which support the foundations of modern society and, second, to train advanced IT engineers and researchers who can (i) explore and devise new technologies in electrical engineering and computer science in accordance with social needs and (ii) work internationally with advanced R&D capabilities created through collaboration with those having different specialties. In consideration of these aims, we therefore seek people who satisfy the following: admissions policy:

(1) Applicants must have acquired sufficient basic knowledge and ethics in information engineering, electrical and electronic engineering, and basic science and engineering subjects.

(2) Applicants must (i) be interested in research in the fields of information engineering and electrical

and electronic engineering and (ii) have a strong desire to contribute to society and the international community through activities in those fields.

(3) Applicants must (i) have the ability to identify and solve problems on the basis of their expertise in information engineering and electrical and electronic engineering and (ii) be willing to take on challenges in new research areas.

(4) Applicants must have excellent communication skills in Japanese or English languages