

2027

Department of Chemical System Engineering

**Graduate School of Engineering
The University of Tokyo**

Guide to Entrance Examination

Master's Program

Doctoral Program

If you have any questions about this guide, please contact:

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- **Education and research objectives of the Department of Chemical System Engineering**

Our department aims to produce globally competitive engineers and researchers in the discipline of chemical system engineering, which focuses on the design, control, and analysis of chemical phenomena across scales ranging from the molecular to the global. Our department aims to contribute to a sustainable society through problem-solving research in areas such as the environment, energy, safety, and medicine. These goals represent the core educational and research objectives of our department.

- **Department website:**

<https://www.chemsys.t.u-tokyo.ac.jp/?lang=en>

- **Information about the entrance examinations including past exam problems:**

<https://www.chemsys.t.u-tokyo.ac.jp/curriculum/graduate/admission/?lang=en>

- **Briefing sessions for the entrance examination:**

The details of the briefing sessions for the entrance exam will be announced on the above department website.

To enroll in the Graduate School of Engineering, applicants should complete the Entrance Application Form using the Admission Application Form Creator available on the Graduate School of Engineering Application Guidelines website.

Note: Please check the latest version of the guide posted on the department website.

Information about the 2027 Entrance Examinations of the Department of Chemical System Engineering, Graduate School of Engineering, The University of Tokyo

Please check the website below for the latest information. Any updates or changes to the Guidelines for Applicants for the Graduate School of Engineering or the Guide to Entrance Examinations for the Department of Chemical System Engineering will be posted on the website.

Graduate School of Engineering website:

<https://www.t.u-tokyo.ac.jp/en/study-at-utokyo/soe/apply>

Department of Chemical System Engineering website:

<https://www.chemsys.t.u-tokyo.ac.jp/curriculum/graduate/admission/?lang=en>

1. Application Period, Examination Dates, etc.

(Also refer to the Guidelines for Applicants for the Graduate School of Engineering)

Master's Program (Regular Admission in Oct. 2026/Apr. 2027, and Special Selection for Foreign Students)

| | |
|---|--|
| Application Period ¹⁾ | May 29 to June 4, 2026 |
| Foreign Language | Submission of TOEFL or TOEIC L&R ²⁾ score |
| Examination Dates ³⁾ | August 31 to September 1, 2026 ⁴⁾ |
| Announcement of Successful Applicants ⁵⁾ | September 10, 2026 |

Doctoral Program

| | | Application Schedule A | | Application Schedule B |
|---|-----------|--|---|---|
| | | Admission in Apr. 2027 | Admission in Oct. 2026 | Admission in Apr. 2027 |
| Application Period ¹⁾ | | May 29 to June 4, 2026 | | November 27 to December 3, 2026 |
| Foreign Language | | Submission of TOEFL or TOEIC L&R ²⁾ score | | |
| Examination Dates | Primary | August 31 to September 2, 2026 ⁴⁾ | | February 4, 2027 ⁴⁾ |
| | Secondary | February 4, 2027 ⁶⁾ | Conducted concurrently with the primary examination | Conducted concurrently with the primary examination |
| Announcement of Successful Applicants ⁵⁾ | | February 12, 2026 (Primary: September 10, 2026) | September 10, 2026 | February 12, 2027 |

- 1) The application form and other required documents should be prepared using the Web Application System and uploaded online.
- 2) See page 7 for submission of official TOEFL scores.
- 3) Prior to the examination dates, document screening will be conducted based on the documents enclosed with the application form. Applicants will be notified of acceptance or rejection by e-mail when the examination admission card is issued in early July.
- 4) Refer to the "Examination Schedule" (page 10).
- 5) The examinee ID number of successful applicants will be posted on the website of the Graduate School of Engineering.
- 6) Details will be announced in due course. For applicants who have already obtained a master's degree or a professional degree at the time of application, or who are expected to receive a master's degree by September 30, 2026, the secondary examination will be conducted concurrently with the primary examination.

2. Examination Location

The examination will be held at the Hongo Campus, The University of Tokyo. Please refer to the “Campus Map for Examination” (page 11).

- (1) The examination rooms for the subjects to be taken by each applicant will be announced when the examination admission card is issued. Applicants should refer to the department website for further information.
- (2) Examinees are required to enter the designated examination room or waiting room at least 30 minutes before the start of the written and oral examinations. Examinees arriving late must report immediately to the proctor.
- (3) Examinees who are less than 30 minutes late for the start of each examination will be allowed to take the examination. Examinees who are late for the start of the oral examination will not be allowed to take the examination.

3. Items to Bring

- (1) Items that must be brought: Examination admission card; black pencil (or mechanical pencil); eraser.
- (2) Items that may be brought: A calculator capable of performing exponential and logarithmic calculations (mobile phones including smart phones may not be used as a calculator); pencil sharpeners (not desk-top type); watches (with timekeeping functions only).
- (3) Mobile phones must be turned off before entering the examination room and placed in a bag or purse. Mobile phones may not be used as watches or calculators.
- (4) Other instructions may be provided separately to applicants for the doctoral program.

4. Notes on the examination

- (1) Once the examination has begun, examinees will not be allowed to leave the room even if they have completed all the answers or wish to forfeit the examination.
- (2) The examination admission card must be placed on the desk at all times during the examination.
- (3) Answer sheets and problem booklets must not be taken out of the examination room.

5. Other Notes

- (1) Any changes to an applicant’s e-mail address or current address after submission of the application must be reported immediately to Managing Director.
- (2) Successful applicants will be announced on the website of the Graduate School of Engineering using their examinee ID numbers. Inquiries about examination status by telephone or e-mail will not be accepted.
- (3) Laboratory assignments for successful applicants will be announced on the website and bulletin board of the Department of Chemical System Engineering at Engineering Building No. 5. Applicants will also be contacted by e-mail. Inquiries by telephone will not be accepted.
- (4) Successful applicants must immediately contact the supervisor of the laboratory to which they have been assigned.

Master's Program, Admission Application Guide

1. Applicants must be eligible for admission to the master's program, regardless of their academic major or year of qualification.
2. Applicants must select the laboratory of their choice from the list of the department laboratories.
3. Applicants must download and fill in the Questionnaire Sheet and Reasons for Application and Career Plan from the department website and submit them together with the application form. Applicants must fill in their order of laboratory preference on the Questionnaire Sheet. Applicants must **contact the laboratory of their first choice in advance and receive detailed guidance and permission to apply from the prospective supervisor**. Laboratory preferences have no bearing on admission decisions. Successful applicants will be notified of their laboratory assignment after the announcement of admission results.
4. Document screening will be conducted based on the documents submitted with the application form to comprehensively assess the applicant's basic academic skills and suitability for the Department of Chemical System Engineering. Applicants will be notified of the results of the document screening by e-mail when the examination admission card is issued in early July.
5. Foreign applicants who have graduated or are expected to graduate from a foreign university may apply for the Special Selection for Foreign Students. They should contact the desired supervisor in advance to obtain permission to apply under this category. The examination subjects for the Special Selection are the same as those for general admission. Successful applicants for the Special Selection will be assigned to the laboratory of their desired supervisor.
6. Only those who have passed the document screening can take the following examination subjects A–C. Note that failure to take all of the required subjects will result in disqualification.
7. Admission decisions will be made based on a comprehensive evaluation of the results of examination subjects A–C.

A. Foreign Languages (English): Maximum Score 120 points

Applicants must take the TOEFL iBT/TOEFL iBT Home Edition or the TOEIC Listening & Reading test. Score from the TOEFL or TOEIC L&R tests may not be substituted with scores from any other foreign language (English) examinations. Details regarding the submission of official scores are provided on page 7, "Notes regarding Submission of Official Language (English) Examination Scores" and in the document titled "AY 2027 Graduate School of Engineering Entrance Examinations Guidelines for Submission of TOEFL Scores", which can be downloaded from the Graduate School of Engineering website.

B. Written Examination: Maximum Score 450 points

| Examination Subject | Remarks |
|---|---|
| Major Subjects <ul style="list-style-type: none"> • Physical Chemistry (2 problems) (Thermodynamics, Chemical Kinetics, Quantum Chemistry, etc.) • Inorganic Chemistry (1 problem) • Chemical Engineering (2 problems) (Mass and Heat Transfer, Reaction Engineering, Unit Operations, Process Systems Engineering, etc.) | <p>Select and answer three problems from a total of five listed on the left.</p> <p>Please refer to notes below</p> |

NOTES:

Applicants who wish to receive the problem booklet in English should mark the designated box on the Questionnaire Sheet with a circle.

C. Oral Examination

Applicants will be asked about their reasons for application, career plans, and the research they wish to pursue in the master's program. Basic academic skills and suitability for the Department of Chemical System Engineering will also be assessed. The total examination time will be about 10 minutes. Details will be provided when the examination admission card is issued.

Doctoral Program, Admission Application Guide

1. Applicants must be eligible for admission to the doctoral program, regardless of their academic major or year of qualification.
2. Applicants must **contact the laboratory of their choice in advance and receive detailed guidance and permission to apply from the prospective supervisor**
3. Applicants must download and fill in the Questionnaire Sheet from the department website and submit them together with the application form.
4. Examination subjects are listed below. For applicants who have completed, or are expected to complete the master's degree at the University of Tokyo, only the oral examination is conducted in the primary examination.
5. Admission decisions will be made based on a comprehensive evaluation of the results of examination subjects A–C.

I. Primary Examination

A. Foreign Languages (English) : Maximum Score 120 points

Applicants must take the TOEFL iBT/TOEFL iBT Home Edition or the TOEIC Listening & Reading test. Scores from the TOEFL or TOEIC L&R tests may not be substituted with scores from any other foreign language (English) examinations. Details regarding the submission of official scores are provided on page 7, “Notes regarding Submission of Official Language (English) Examination Scores” and in the document titled “AY 2027 Graduate School of Engineering Entrance Examinations Guidelines for Submission of TOEFL Scores”, which can be downloaded from the Graduate School of Engineering website.

B. Written Examination: Maximum Score 450 points

| Examination Subject | Remarks |
|--|---------------------------------|
| Specialized Sciences <ul style="list-style-type: none">• Examination on basic subjects related to Chemical System Engineering (Up to two problems from the major Subjects of the master’s program examination. The number of problems to be answered and subjects will be designated by the prospective supervisor)• Examination in the applicant’s field of expertise | Please refer to the notes below |

NOTES:

Applicants who wish to receive the problem booklet in English should mark the designated box on the Questionnaire Sheet with a circle.

C. Oral Examination

Applicants will give a 10-minute presentation on their past research results and future research plans, followed by a 10-minute question-and-answer session and a comprehensive evaluation. Details will be provided when the examination admission card is issued.

II. Secondary Examination

Applicants who successfully pass the primary examination will be required to take the secondary examination regarding their master’s thesis. Details will be provided later.

Notes regarding Submission of Official Language (English) Examination Scores

Applicants must submit an official TOEFL or TOEIC Listening & Reading score. Applicants must select which score to submit at the time of application and may not change their selection after the application period has closed. Only scores from tests taken on or after September 2024 【Master's Program and Application Schedule A of Doctoral Program】 or after February 2025 【Application Schedule B of Doctoral Program】 will be accepted. As score reporting may take time, applicants are advised to take the test well in advance and allow for sufficient time.

Regarding submission of official TOEFL scores:

Details of official TOEFL score submission are provided in the document titled “AY 2027 Graduate School of Engineering Entrance Examinations Guidelines for Submission of TOEFL Scores”, which can be downloaded from the Graduate School of Engineering website.

<https://www.t.u-tokyo.ac.jp/en/study-at-utokyo/soe/apply/guideline>

The deadlines (in JST) for submitting the score reports to the Department of Chemical System Engineering are listed below.

| | | Deadline for submitting the score report |
|------------------|------------------------|--|
| Master's program | | August 5, 2026 (Wed) |
| Doctoral Program | Application Schedule A | August 5, 2026 (Wed) |
| | Application Schedule B | January 8, 2027 (Fri) |

When registering for the TOEFL test, applicants must request that the official score be sent to the destination listed below. Applicants who already have a TOEFL score and plan to submit it must also request that the official score report be sent to the destination shown listed below.

| | |
|-----------------------------------|-------------|
| DI (Designated Institution) code: | 8596 |
| Department code: | 99 |

Regarding submission of official TOEIC score:

Applicants must upload either the digital official TOEIC Listening & Reading score report or a scanned copy of the paper official score report to the web application system. For digital official score reports, applicants must register the URL of the digital official score report in the web application system. For paper official score report, applicants must also mail the original score report to the Office of the Department of Chemistry and Biology.

The Office of the Department of Chemistry and Biology, Graduate School of Engineering,
The University of Tokyo: 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, JAPAN

Foreign language (English) test score conversion method

The percentage score (%) for the Foreign Language (English) examination will be calculated according to the table below. Scores falling between listed values will be linearly interpolated within each interval. Scores outside the specified range will be converted to the corresponding endpoint values.

| TOEFL | TOEIC L&R | Percentage score (%) for the foreign language (English) examination |
|-------|-----------|---|
| 0 | 10 | 0 |
| 48 | 650 | 45 |
| 95 | 990 | 90 |
| 105 | - | 100 |

Research Laboratories







[Recruiting]

Master's Program: 28 students

The number of students in the master's program per research laboratory is in principle 1 to 5.

Doctoral Program: 13 students

| Laboratories | Supervisors | QR code |
|--|---|---|
| YAMADA-KITADA LAB. | Atsuo YAMADA, Professor Atsushi KITADA, Associate Professor Seongjae KO, Lecturer |  |
| SAKAI-NISHIKAWA LAB. | Yasuyuki SAKAI, Professor Masaki NISHIKAWA, Associate Professor |  |
| TAKANABE-OBATA-KISHIMOTO LAB. | Kazuhiro TAKANABE, Professor Masao KATAYAMA, Associate Professor (Environmental Science Center) Keisuke OBATA, Lecturer Fuminao KISHIMOTO, Lecturer |  |
| NAKAYAMA LAB. | Akira NAKAYAMA, Professor |  |
| SUGIYAMA-BADR LAB. | Hirokazu SUGIYAMA, Professor Sara BADR, Associate Professor |  |
| TUNG LAB. | Vincent TUNG, Professor |  |
| ITO-INAGAKI LAB. | Taichi ITO, Professor Natsuko INAGAKI, Associate Professor |  |
| WAKIHARA LAB. Institute of Engineering Innovation | Toru WAKIHARA, Professor |  |
| OHTA LAB. Institute of Engineering Innovation | Seiichi OHTA, Associate Professor |  |
| MURAOKA LAB. Institute of Engineering Innovation | Koki MURAOKA, Associate Professor |  |

| | | |
|--|-------------------------------------|---|
| MOGI LAB. Environment, Health and Safety Office | Toshio MOGI, Professor |  |
| OGURA LAB. Institute of Industrial Science ¹⁾ | Masaru OGURA, Professor |  |
| SUGIHARA LAB. Institute of Industrial Science ¹⁾ | Kaori SUGIHARA, Associate Professor |  |
| TSUJI LAB. Environmental Science Center | Yoshiko TSUJI, Professor |  |
| KIKUCHI LAB. Institute for Future Initiatives | Yasunori KIKUCHI, Professor |  |
| KANSHA LAB. Organization for Programs on Environmental Sciences, Graduate School of Arts and Sciences ³⁾ | Yasuki KANSHA, Professor |  |

[Locations of Research Laboratories]

All research laboratories except those marked with 1) and 2) are located on the Hongo Campus.
Hongo Campus 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, JAPAN

- 1) Institute of Industrial Science
4-6-1 Komaba, Meguro-ku, Tokyo 153-8505
- 2) Organization for Programs on Environmental Sciences, Graduate School of Arts and Sciences
3-8-1 Komaba, Meguro-ku, Tokyo 153-8902

[Contact]

If you have any questions about this guide, please contact:

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Managing Director, Department of Chemical System Engineering
Phone: +81 (0)3 5452 6321
e-mail: admission@chemsys.t.u-tokyo.ac.jp

Examination Schedule

| Program | Subject | | Date | Notes |
|---|--------------------------------------|--|--|---|
| Masters' Program | Foreign Language (English) | | Submit official language (English) test score by August 5 (Wed). | • See page 7 |
| | Written Examination (Major Subjects) | | August 31 (Mon) 13:00 to 15:30 (JST) | |
| | Oral Examination | | September 1 (Tue) from 9:00 (JST) | • Details will be provided when the examination admission card is issued. |
| Doctoral Program (Application Schedule A) | Primary ¹⁾ | Foreign Language (English) | Submit official language (English) test score by August 5 (Wed). | • See page 7 |
| | | Written Examination (Specialized Sciences) | August 31 (Mon) 13:00 to 15:30 (JST) | • Applicants must follow the instructions of the desired supervisor |
| | | Oral Examination | September 2 (Wed) from 9:00 (JST) | • Details will be provided when the examination admission card is issued. |
| | Secondary | | February 4 (Thu), 2027 | • Conducted concurrently with the primary examination for admission in Oct. 2026. |
| Doctoral Program (Application Schedule B) | Primary ¹⁾ | Foreign Language (English) | Submit official language (English) test score by January 8 (Fri), 2027 | • Submit TOEFL score |
| | | Written Examination (Specialized Sciences) | February 4 (Thu), 2027 | • Details will be provided when the examination admission card is issued. |
| | | Oral Examination | February 4 (Thu), 2027 | • Details will be provided when the examination admission card is issued. |
| | Secondary | | Conducted concurrently with the primary examination | |

- 1) For applicants who have completed or are expected to complete the master's course at the University of Tokyo, only the oral examination is conducted in the primary examination.

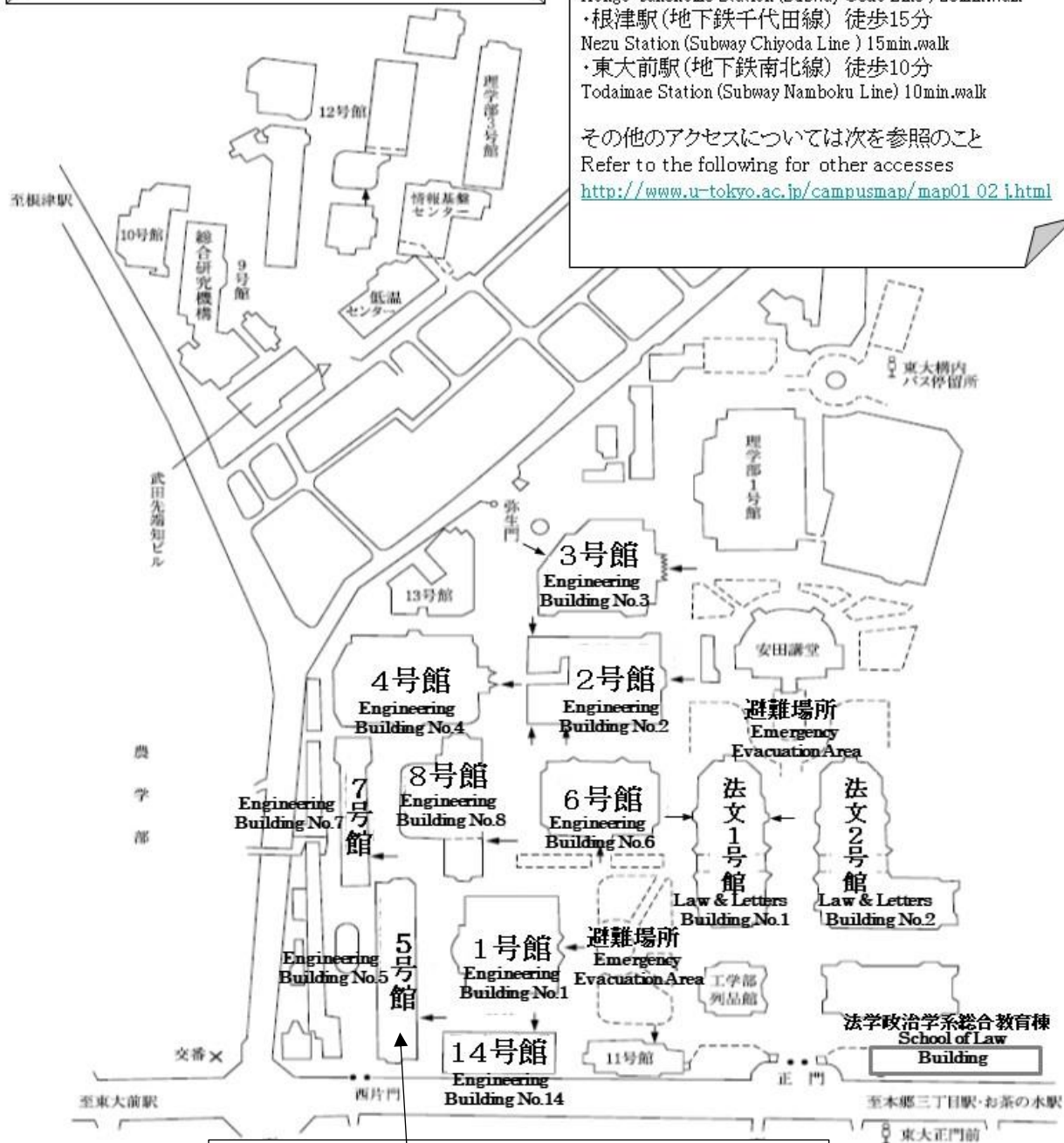
試験場案内(東京大学本郷キャンパス)
Campus Map for the Examination
(Hongo campus, the University of Tokyo)

地下鉄利用 Subway

- ・本郷三丁目駅(地下鉄丸の内線) 徒歩20分
Hongo-sanchoe Station (Subway Marunouchi Line) 20min.walk
- ・本郷三丁目駅(地下鉄大江戸線) 徒歩20分
Hongo-sanchoe Station (Subway Oedo Line) 20min.walk
- ・根津駅(地下鉄千代田線) 徒歩15分
Nezu Station (Subway Chiyoda Line) 15min.walk
- ・東大前駅(地下鉄南北線) 徒歩10分
Todaimae Station (Subway Namboku Line) 10min.walk

その他のアクセスについては次を参照のこと
Refer to the following for other accesses

http://www.u-tokyo.ac.jp/campusmap/map01_02_1.html



工学部 5号館
化学システム工学専攻掲示板
Engineering Building No.5
Bulletin board for Department of Chemical System Engineering

Be sure to submit Questionnaire Sheet downloaded from the department website with your application form

Questionnaire Sheet (Sample)

Department of Chemical System Engineering, Graduate School of Engineering,
The University of Tokyo

| | | | |
|-----------------------|--|---------------------|--|
| Full Name | | *Examinee ID Number | |
| Graduation University | University: Faculty and/or Department: | | |
| Contact Information | Address: Phone number: E-mail address: | | |

*Do not fill in

Order of preference of laboratories (Master's program)

- Provide your numerical order of preference in the boxes to the right of each laboratory.
- Make sure to fill in the boxes all up to the 16th choice.
- Laboratory preference has no bearing on admission decision. Successful applicants will be notified of their laboratory assignment after the announcement of admission results.
- Contact the supervisor of the laboratory of your first choice in advance, and mark the corresponding box on the right with a circle.

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

Laboratory of your choice (Doctoral program)

- Fill in the name of the desired laboratory.
- Contact the supervisor of the laboratory of your choice in advance, and mark the corresponding box on the right with a circle.

| | | |
|--------------------|--|--------------------------|
| Name of Laboratory | | <input type="checkbox"/> |
|--------------------|--|--------------------------|

Mark the box on the right with a circle if you wish to receive the English version of the major subjects or specialized sciences examinations.

Applicants for the master’s program only: Be sure to submit “Reasons for Application and Career Plan (about 400 English words)” on one A4 sheet downloaded from the department website with your application form. The contents may be used in the oral examination. The use of generative AIs such as Chat GPT is strictly prohibited.

Reasons for Application and Career Plan Sheet (Sample)

Department of Chemical System Engineering, Graduate School of Engineering,
The University of Tokyo

| | | | |
|-----------|--|------------------------|--|
| Full Name | | *Examinee ID Number | |
|-----------|--|------------------------|--|

*Do not fill in

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|--|
| |
|--|