

**2021 Entrance Examination Guide  
for Admission to  
Department of Computer Science**

Entrance time: September 2020 or April 2021

**Graduate School of Information Science and Technology,  
The University of Tokyo**

Master's Programs  
and  
Doctoral Programs

Contact:

Administration Office of Department of Computer Science,  
Graduate School of Information Science and Technology,  
The University of Tokyo,  
7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan  
EMAIL: admissions@is.s.u-tokyo.ac.jp TEL: 03-5841-4111

Web page for admission:

[https://www.i.u-tokyo.ac.jp/edu/course/cs/admission\\_e.shtml](https://www.i.u-tokyo.ac.jp/edu/course/cs/admission_e.shtml)

In addition to this brochure, be sure to refer to the online Admission Guide materials available on the above web page.



## Department Overview

The mission of Department of Computer Science is to contribute to research and education on fundamental theories of computer science, their implementation as computer systems, and application to natural science, which provide foundations for information technologies indispensable in today's society. Of particular interest is an in-depth research focus at the core of information and computation rather than using information technologies as a tool. The research focus includes, but is not limited to: Discrete Mathematics, Numerical Algorithms, Programming Languages, Algorithms, Quantum Computation, Molecular Computation, Computer Architecture, Operating Systems, Software, Machine Learning, Artificial Intelligence, Bioinformatics, Computational Science, Natural Language Processing, Information Retrieval, Computer Vision, Human Computer Interaction, and Graphics. For more details, refer to "Faculty and Labs in Department of Computer Science" attached to this Guide.

# Master's Program

## (1) Introduction

- A. Department of Computer Science conducts Summer Entrance Examinations and Winter Entrance Examinations for Master's Program. The schedules and examination methods differ for Summer and Winter Entrance Examinations.
- B. Before sending Application Form, the applicants (except those who are completing the Undergraduate Program of Department of Information Science in the Faculty of Science at the University of Tokyo) should contact at least one of the faculty members of the selected Labs specified in the "Preference Card (Master's Program)".
- C. Fill out the "Preference Card (Master's Program)" in this Guide, write your Research Plan as instructed in "Preference Card (Master's Program)", and send them with the Application Form. For the selection of Labs, see "Faculty and Labs in Department of Computer Science" attached to this Guide.
- D. For Winter Entrance Examinations:
  - I. All the examinations (submitted documents, questions and answers) are conducted in English.
  - II. Applications with a TOEFL score of **less than 90 (iBT) or 577 (PBT)** will be rejected.
  - III. Together with the application form, submit a Letter of Recommendation. The letter should be enclosed in a sealed envelope by your recommender, with her/his signature written across the flap. Typically, but not necessarily, the recommender is an academic who knows you well, such as your current supervisor. The recommender should not be a faculty member of Department of Computer Science, The University of Tokyo.

## (2) Examination Schedule

### (2.1) Summer Entrance Examinations

#### ① Document Screening

Document screening will be conducted based on the submitted documents. Regarding the notification of the screening, refer to the Graduate School Application Guidelines.

#### ② Written Examinations

Date	Time	Venue	Subject
Monday August 17 2020	10:00-12:30	Notified when the Examination admission card is delivered.	Mathematics
Tuesday August 18 2020	10:00-12:30	Room 83, Floor B1, Faculty of Engineering Bldg. 8 工学部 8 号館地下 83 講義室 (in Japanese)	Specialized Subjects

#### Remarks:

- ✓ Refer to the Admission Guide of the Graduate School for the Written Examinations of Mathematics.
- ✓ In the Written Examinations of Specialized Subjects, five problems will be asked (the number may vary) from the following subjects, and applicants are required to answer all the problems.

**Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems, Digital Circuits, Machine Learning**

- ✓ Java or C language may be used in the examinations.

③ **Oral Examinations**

Date	Time	Venue	Subject
Wednesday August 19 2020	10:00- 18:00	Room 214, Floor 2F Faculty of Science Bldg. 7 理学部 7 号館 2 階 214 講義室 (in Japanese)	Specialized Subjects

**Remarks:**

- ✓ You will be notified of the exact time and place when the Written Examinations are finished.

(2.2) **Winter Entrance Examinations**

① **Document Screening**

Document screening will be conducted based on the submitted documents. Regarding the notification of the screening, refer to the Graduate School Application Guidelines.

② **Written Examinations**

Date	Time	Venue	Subject
Tuesday February 2 2021	10:00- 12:30	Room 214, Floor 2F Faculty of Science Bldg. 7 理学部 7 号館 2 階 214 講義室 (in Japanese)	Mathematics Specialized Subjects

**Remarks:**

- ✓ Four problems will be asked (the number may vary) from the following subjects, and applicants are required to answer all the problems.  
**Mathematics, Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems, Digital Circuits, Machine Learning**
- ✓ Exam questions will be given, and answers must be, in English.
- ✓ Java or C language may be used in the examinations.

③ **Oral Examinations**

Date	Time	Venue	Subject
Wednesday February 3 2021	10:00- 14:00	Room 214, Floor 2F Faculty of Science Bldg. 7 理学部 7 号館 2 階 214 講義室 (in Japanese)	Subjects Related to Your Research Fields

**Remarks:**

- ✓ Applicants are required to:

- Present your research plan within 5 minutes. You must be prepared; you may show slides on a projector, in case you find it useful. Bring your own PC in that case.
  - Answer a few technical questions on the topics that are relevant to your research fields. You can use a whiteboard or a blackboard to answer the questions.
- ✓ All the presentations and answers must be given in English.

# Doctoral Program and Doctoral Program (Special Admission for Working Graduates)

## (1) Introduction

- A. Department of Computer Science conducts Summer Entrance Examinations and Winter Entrance Examinations for its Doctoral Program. The schedules and examination methods differ for Summer and Winter Entrance Examinations.
- B. Before sending an Application Form, applicants must contact their supervisor of choice and show their research proposals.
- C. Fill out the "Preference Card (Doctoral Program)" in this Guide, write "Research Results, Selected Publication List, and Research Plan" as instructed in "Preference Card (Doctoral Program)", and then send them with the Application Form. Choose a prospective supervisor from the faculty members of Department of Computer Science, given in "Faculty and Labs in Department of Computer Science" attached to this Guide.
- D. For Summer Entrance Examinations:
  - I. Those who have completed or are completing programs in Department of Computer Science in the Graduate School of Information Science and Technology at the University of Tokyo, or Department of Information Science in the Graduate School of Science at the University of Tokyo, are exempted from the following:
    - ✓ Submission of the TOEFL score
    - ✓ Written Examinations of Primary Examinations
  - II. Those who are completing the Master's Program of Department of Computer Science in the Graduate School of Information Science and Technology at the University of Tokyo are not required to take Oral Examinations of Primary Examinations. Secondary Examinations will be conducted separately.
  - III. Secondary Examinations for those who have completed their Master's Program at the time of the application and for those who wish for September 2020 entry, will be conducted at the same time as Oral Examinations of Primary Examinations.
- E. For Winter Entrance Examinations:
  - I. All the examinations (submitted documents, questions and answers) are conducted in English.
  - II. Applications with a TOEFL score of **less than 90 (iBT) or 577 (PBT)** will be rejected.
  - III. Together with the application form, submit a Letter of Recommendation. The letter should be enclosed in a sealed envelope by your recommender, with her/his signature written across the flap. Typically, but not necessarily, the recommender is an academic who knows you well, such as your current supervisor. The recommender should not be a faculty member of Department of Computer Science, the University of Tokyo.
  - IV. The applicants for Doctoral Program (Special Admission for Working Graduates) who have completed programs in Department of Computer Science in the Graduate School of Information Science and Technology at the University of Tokyo, or Department of Information Science in the Graduate School of Science at the University of Tokyo, are exempted from the following:
    - ✓ Submission of the TOEFL score
    - ✓ Submission of the Letter of Recommendation
    - ✓ Document Screening
    - ✓ Written ExaminationsOral Examinations are conducted in the following manner:
    - ✓ Present the research from your Master's course (in about 9 minutes) and the research plan for your doctoral course (in about 1 minute) in Japanese or in

English. Research results after completion of Master's course can be included. Bring two copies of your Master's thesis (which can be in any language, not only Japanese or English) and two copies of a few published papers on the presented research, if there are any. Each examinee should prepare a PC for presentation.

## (2) Examination Schedule

### (2.1) Summer Entrance Examinations

#### ① Primary Examinations (Written Examinations)

Date	Time	Venue	Subject
Monday August 17 2020	10:00- 12:30	Notified when the Examination admission card is delivered.	Mathematics
Tuesday August 18 2020	10:00- 12:30	Room 83, Floor B1, Faculty of Engineering Bldg. 8 工学部 8 号館地下 83 講義室 (in Japanese)	Specialized Subjects

#### Remarks:

- ✓ Refer to the Admission Guide of the Graduate School for the Written Examinations of Mathematics.
- ✓ In the Written Examinations of Specialized Subjects, five problems will be asked (the number may vary) from the following subjects, and applicants are required to answer all the problems.  
**Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems, Digital Circuits, Machine Learning**
- ✓ Java or C language may be used in the examination

#### ② Primary Examinations (Oral Examinations)

Date	Time	Venue	Subject
Wednesday August 19 2020	10:00- 18:00	Room 214, Floor 2F Faculty of Science Bldg. 7 理学部 7 号館 2 階 214 講義室 (in Japanese)	Specialized Subjects

#### Remarks:

- ✓ You will be notified of the exact time and place when Written Examinations of Primary Examinations are finished.

#### ③ Secondary Examinations

The applicant's Master's thesis or its equivalent is reviewed and examinations by oral presentation are conducted.

- I. Details will be announced later. The dates will be from February 1st through 5th, 2021, and the place will be located in Faculty of Science Bldg. 7. Secondary Examinations for those who have completed Master's Program at the time of the



application and for those who wish for September 2020 entry, will be conducted at the same time as Oral Examinations of Primary Examinations.

- II. Present the research from your Master's course (in about 9 minutes) and the research plan for your doctoral course (in about 1 minute). Research results after completion of Master's course can be included. Bring two copies of your Master's thesis (which can be in any language, not only Japanese or English) and two copies of a few published papers on the presented research, if there are any. Each examinee should prepare a PC for presentation.

## (2.2) Winter Entrance Examinations

### ① Document Screening

Document screening will be conducted based on the submitted documents. Your eligibility for the Written and Oral Examinations will be announced on the website

[https://www.i.u-tokyo.ac.jp/edu/course/cs/admission\\_e.shtml](https://www.i.u-tokyo.ac.jp/edu/course/cs/admission_e.shtml)

from Friday, December 25, 2020, 15:00 JST, for the period of three days (72 hours). The announcement will be according to the examinee's number that is found on the examination admission card delivered in advance.

### ② Written Examinations

Date	Time	Venue	Subject
Tuesday February 2 2021	10:00- 12:30	Room 214, Floor 2F Faculty of Science Bldg. 7 理学部 7 号館 2 階 214 講義室 (in Japanese)	Mathematics Specialized Subjects

#### Remarks:

- ✓ Four problems will be asked (the number may vary) from the following subjects, and applicants are required to answer all the problems.  
**Mathematics, Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems, Digital Circuits, Machine Learning**
- ✓ Exam questions will be given, and answers must be, in English.
- ✓ Java or C language may be used in the examinations.

### ③ Oral Examinations

Date	Time	Venue	Subject
Wednesday February 3 2021	10:00- 14:00	Room 214, Floor 2F Faculty of Science Bldg. 7 理学部 7 号館 2 階 214 講義室 (in Japanese)	Subjects Related to Your Research Fields

#### Remarks:

- ✓ Applicants are required to:
  - Present your Master's thesis within 15 minutes. Research results obtained after the completion of Master's degree can be included. Bring two copies of your Master's thesis (which can be in any language) and two copies of published papers on the presented results, if there are any. You must be prepared; you may show slides on a projector, in case you find it useful. Bring your own PC in that case.

- Present your research plan within 5 minutes. You must be prepared; you may show slides on a projector, in case you find it useful. Bring your own PC in that case.
  - Answer a few technical questions on the topics that are relevant to your research fields. You can use a whiteboard or a blackboard to answer the questions.
- ✓ All the presentations and answers must be given in English.

**Notices for Examinees of Entrance Examinations for Master's and Doctoral Program,  
Department of Computer Science,  
Graduate School of Information Science and Technology, the University of Tokyo,  
2021**

**1. Examination Schedule**

Refer to "Examination Schedule" listed in this Guide.

**2. Examination Location**

Hongo Campus, the University of Tokyo (7-3-1 Hongo, Bunkyo-ku, Tokyo)

Transportation by subway:

Marunouchi Line and Oedo Line: Get off at Hongo-sancho Station (M21/E08)

Chiyoda Line: Get off at Nezu Station (C14)

Namboku Line: Get off at Todaimae Station (N12)

Mita Line: Get off at Kasuga Station (I12)

Transportation by bus:

Toei Bus "Todai Seimon Mae" or "Todai Konai"

Refer to "Venue" listed in this Guide.

Refer to Map of Examination Locations on the last page.

Examinees should be in the designated examination room no later than 15 minutes before the start of examination. In the case of being late, the applicant should find the examination supervisor for further directions.

**3. What to bring**

- (1) Examination admission card (受験票)
- (2) Writing instruments (black pencils, black mechanical pencils, black fountain pens, or black ball-point pens), erasers, pencil sharpeners (electric pencil sharpeners are not accepted), and a clock or watch (only for checking the time; devices with other functions are not accepted).

Caution: During the examination period, all mobile phones must be turned off. Examinees will not be permitted to wear mobile phones (on neck straps, in pockets, etc.)

**4. Examination Rules**

- (1) Examinees will not be permitted to leave the examination room, even when he or she finishes or gives up answering.
- (2) As a rule, examinees will not be allowed to leave the examination room temporarily during the examination period. An examinee should tell the examination supervisor when she/he feels ill or wants to use the washroom facilities.
- (3) Examination admission cards (受験票) must be kept on top of the desk throughout the entire examination period.
- (4) Examinees must enter their examinee's number on all answer sheets. Examinees must not write their names. Enter answers on the corresponding answer sheets. If there is not enough space, write answers on the back of the answer sheets.
- (5) Examinees are not allowed to remove and take out answer sheets or problem booklets from the examination room.
- (6) Examinees should not use any devices other than writing instruments, pencil sharpeners, and erasers.





(This page is intentionally left blank)

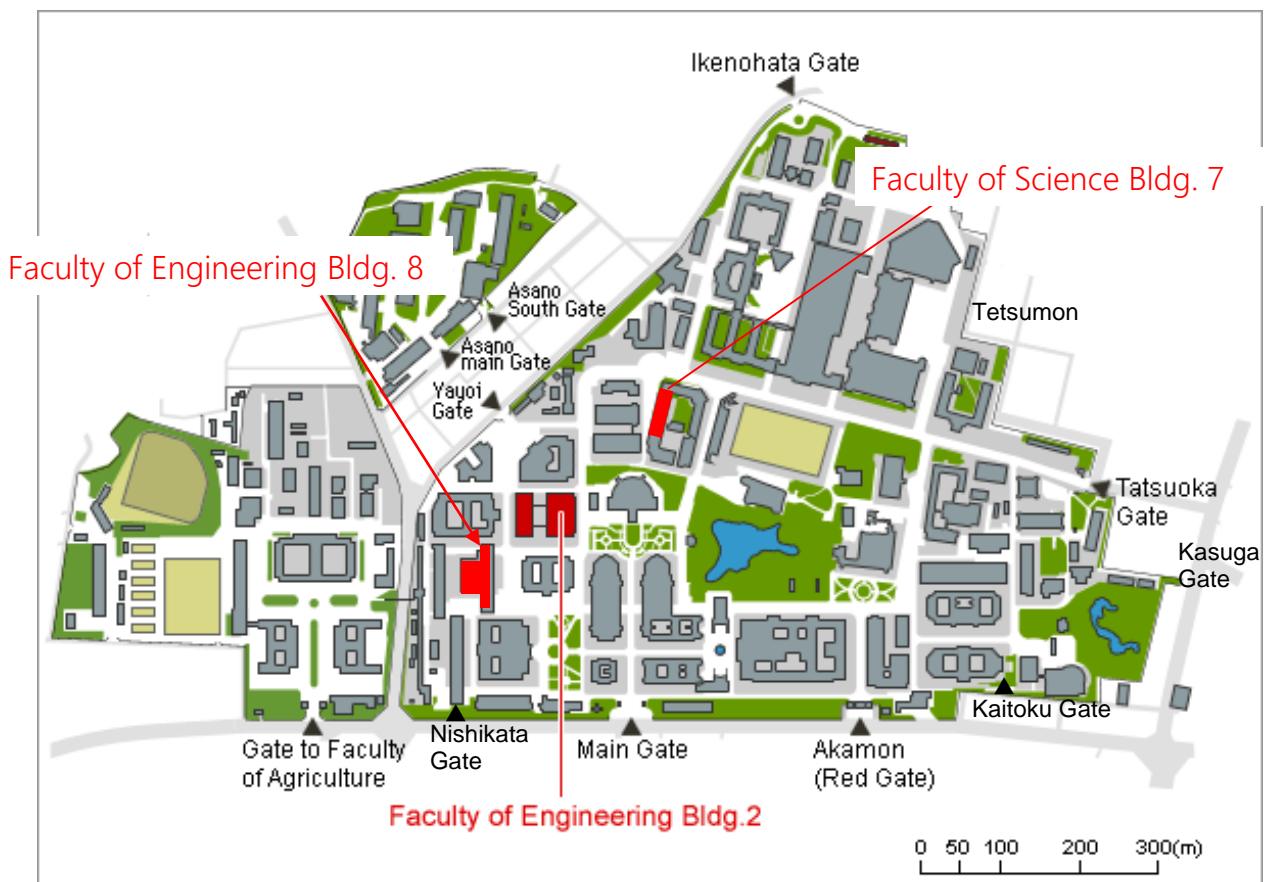


(This page is intentionally left blank)



Map of Examination Locations:  
Hongo Campus, the University of Tokyo,  
7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656

Department of Computer Science,  
Graduate School of Information Science and Technology



By subway:

Marunouchi Line and Oedo Line: Get off at Hongo-sanchome Station (M21/E08)

Chiyoda Line: Get off at Nezu Station (C14)

Namboku Line: Get off at Todaimae Station (N12)

Mita Line: Get off at Kasuga Station (I12)

By Bus:

Toei Bus "Todai Seimon Mae" or "Todai Konai"



## Required Documents

	Summer Examination		Winter Examination	
	Documents to be Submitted	Who to Submit	Documents to be Submitted	Who to Submit
Master's Course	Preference Card (for Master's Program)	All Applicants	Preference Card (for Master's Program)	All Applicants
	Research Plan (written in Japanese or English, 2 A4-sized pages)	All Applicants	Research Plan (written in English, 3 A4-sized pages)	All Applicants
	TOEFL Score Submission Form	All applicants except those who wish to use a TOEFL-ITP score to fulfill the foreign language exam requirement	TOEFL Score Submission Form (TOEFL-iBT score: no less than 90/TOEFL-PBT score: no less than 577) Recommendation Letter from 1 person who is not a faculty member of Department of Computer Science, The University of Tokyo; it must be enclosed in a sealed envelope by the recommender	All Applicants
Doctoral Course	Preference Card (for Doctoral Program)	All Applicants	Preference Card (for Doctoral Program)	All Applicants
	Research Results, Selected Publication List, Research Plan in the Doctoral Program (written in Japanese or English, 4 A4-sized pages)	All Applicants	Research Results, Selected Publication List, Research Plan in the Doctoral Program (written in English, 4 A4-sized pages)	All Applicants
	TOEFL Score Submission Form	All applicants except: • those who wish to use a TOEFL-ITP score to fulfill the foreign language exam requirement • those who have completed (or are expected to complete) programs in Department of Computer Science in the Graduate School of Information Science and Technology or Department of Information Science in the Graduate School of Science at the University of Tokyo	TOEFL Score Submission Form (TOEFL-iBT score: no less than 90/TOEFL-PBT score: no less than 577) Recommendation Letter from 1 person who is not a faculty member of Department of Computer Science, The University of Tokyo; it must be enclosed in a sealed envelope by the recommender	All Applicants
Doctoral Course <Special Selection for Professionals>	Preference Card (for Doctoral Program)	All Applicants	Preference Card (for Doctoral Program)	All Applicants
	Research Results, Summary of study or research achievements during period of employment, Selected Publication List, Research Plan in the Doctoral Program (written in Japanese or English, 4 A4-sized pages)	All Applicants	Research Results, Summary of study or research achievements during period of employment, Selected Publication List, Research Plan in the Doctoral Program (written in English, 4 A4-sized pages)	All Applicants
	TOEFL Score Submission Form	All applicants except: • those who wish to use a TOEFL-ITP score to fulfill the foreign language exam requirement • those who have completed (or are expected to complete) programs in Department of Computer Science in the Graduate School of Information Science and Technology or Department of Information Science in the Graduate School of Science at the University of Tokyo	TOEFL Score Submission Form (TOEFL-iBT score: no less than 90/TOEFL-PBT score: no less than 577) Recommendation Letter from 1 person who is not a faculty member of Department of Computer Science, The University of Tokyo; it must be enclosed in a sealed envelope by the recommender	All applicants except those who have completed (or are expected to complete) programs in Department of Computer Science in the Graduate School of Information Science and Technology or Department of Information Science in the Graduate School of Science at the University of Tokyo All applicants except those who have completed (or are expected to complete) programs in Department of Computer Science in the Graduate School of Information Science and Technology or Department of Information Science in the Graduate School of Science at the University of Tokyo