2019 Entrance Examination Guide
for Admission of

Department of Computer Science

Entrance time: September 2018 or April 2019

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:
http://www.i.u-tokyo.ac.jp/
Follow link "ENGLISH" and then "How to apply."

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

(i) 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 Undergraduate Program of Department of Information Science of Faculty of Science of the University of Tokyo) should contact the supervisor of their first selection.

c. Fill up the "Preference Card (Master's Program)" in this Guide, and write your Research Plan as instructed in "Preference Card (Master's Program)", then send them with the Application Form. Choose prospective supervisors from the faculty members of Department of Computer Science, given in "Faculty and Labs in Department of Computer Science" in this Guide.

(2) Examination Schedule
(2.1) Summer Examinations

a. General Education Subjects

Schedule	Venue	Examination Subjects	Additional Information
10:00-12:30, Monday, August 20th, 2018	Room 212, 1st floor, Faculty of Engineering Bldg. 2 (工学部 2 号館 1 階 212 講義室 in Japanese)	Mathematics	

b. Specialized Subjects

1) Written Examinations

Schedule	Venue	Examination Subjects	Additional Information
13:45-15:15, Monday, August 20th, 2018	Room 212, 1st floor, Faculty of Engineering Bldg. 2 （工学部 2 号館 1 階 212 講義室 in Japanese）	Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems.	Three problems will be asked (the number may vary), and applicants are required to answer all the problems. Java or C language may be used in the examinations.
15:45-17:15, Monday, August 20th, 2018	Room 212, 1st floor, Faculty of Engineering Bldg. 2 （工学部 2 号館 1 階 212 講義室 in Japanese）	Machine Learning, Graphics, Natural Language Processing, Bioinformatics, in addition to the topics listed above.	Six problems will be asked (the number may vary), and applicants are required to choose and answer two of them. Java or C language may be used in the examinations.

2) Oral Examinations

Time: 14:00 – 18:00, Tuesday, August 21st, 2018

Place: Rooms 102 and 202, Faculty of Science Bldg. 7

Waiting Room: Room 214, Faculty of Science Bldg. 7

(Enter the Waiting Room no later than 13:45)

(2.2) Winter Examinations

a. Overview

1. All the examinations (submitted documents, questions and answers) are conducted in English.
2. The submitted documents are examined first and its outcome determines the applicant's eligibility for the Written and Oral Examinations. An examination admission card will be delivered, regardless of the applicant's eligibility for the Written and Oral Examinations.
3. If your TOEFL score is **less than 90 (iBT) or 577 (PBT)**, the application is rejected.
4. 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.

b. Examinations by Submitted Documents

The submitted documents are reviewed and the outcome determines the applicant's eligibility for the Written and Oral Exams.

An application with a TOEFL score less than 90 (iBT) or 577 (PBT) is rejected.

Your eligibility for the Written and Oral Examinations is announced on the website

http://www.i.u-tokyo.ac.jp/edu/course/cs/admission_e.shtml

from Monday, January 21st, 2019, 21:00 JST, for the period of three days (72 hours). The announcement is by the examinee's number that is found on the examination admission card delivered in advance.

c. Written Examinations

Schedule	Venue	Examination Subjects	Additional Information
10:00-12:30, Tuesday, February 5th, 2019	Room 214, 2nd floor, Faculty of Science Bldg. 7 (理学部 7 号館 1 階 214 講義室 in Japanese)	**General Education Subjects** (Mathematics), and **Specialized Subjects** (Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems).	Four problems will be asked (the number may vary), and applicants are required to answer all the problems. The problems will be given, and the answers must be, in English. Java or C language may be used in the examinations.

d. Oral Examinations

- Time: 10:00-14:00, Wednesday, February 6th, 2019
  (Enter the Waiting Room no later than 9:45)
- Waiting Room: Room 214, Faculty of Science Bldg. 7 (理学部 7 号館 in Japanese)
- Contents:
  - ✧ **Specialized Subjects:** out of
    - the topics listed above for the Written Examinations, and
    - Machine Learning, Graphics, Natural Language Processing, Bioinformatics, in addition,
    the ones that are relevant to your research fields are chosen, and a few technical questions are asked on those topics. You can use a whiteboard or a blackboard to answer the questions.
  - ✧ **Presentation of Research Plan:** describe 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.
- All the presentations and answers must be given in English.

(ii) Doctoral Program
(1) Introduction

a. Department of Computer Science conducts Summer Entrance Examinations and Winter Entrance Examinations for Doctoral 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 Master's Program of Department of Computer Science of Graduate School of Information Science and Technology of the University of Tokyo) should contact the supervisor of their selection and show their research proposals.

c. Fill up the "Preference Card (Doctoral Program)" in this Guide, and write "Research Results, Selected Publication List, and Research Plan" as instructed in "Preference Card (Doctoral Program)", 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" in this Guide.

d. For Summer Entrance Examinations, those who have completed or are completing programs in Department of Computer Science of Graduate School of Information Science and Technology of the University of Tokyo, or Department of Information Science of Graduate School of Science of the University of Tokyo are exempted from submission of TOEFL score.

(2) Examination Schedule
(2.1) Summer Examinations
A. Primary Examinations
a. General Education Subjects

Applicants will not be required to take these examinations if they have completed or are completing the Master's Program of Department of Computer Science of Graduate School of Information Science and Technology, or of Department of Information Science of Graduate School of Science, the University of Tokyo.

Schedule	Venue	Examination Subjects	Additional Information
10:00-12:30, Monday, August 20th, 2018	Room 212, 1st floor, Faculty of Engineering Bldg. 2 （工学部 2 号館 1 階 212 講義室 in Japanese）	Mathematics	

b. Specialized Subjects

1) Written Examinations

Applicants will not be required to take these examinations if they have completed or are completing the Master's Program of Department of Computer Science of Graduate School of Information Science and Technology, or of Department of Information Science of Graduate School of Science, the University of Tokyo.

Schedule	Venue	Examination Subjects	Additional Information
13:45-15:15, Monday, August 20th, 2018	Room 212, 1st floor, Faculty of Engineering Bldg. 2 （工学部 2 号館 1 階 212 講義室 in Japanese）	Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems.	Three problems will be asked (the number may vary), and applicants are required to answer all the problems. Java or C language may be used in the examinations.
15:45-17:15, Monday, August 20th, 2018	Room 212, 1st floor, Faculty of Engineering Bldg. 2 （工学部 2 号館 1 階 212 講義室 in Japanese）	Machine Learning, Graphics, Natural Language Processing, Bioinformatics, in addition to the topics listed above.	Six problems will be asked (the number may vary), and applicants are required to choose and answer two of them. Java or C language may be used in the examinations.

2) Oral Examinations

Applicants will not be required to take Oral Examinations if they are completing the Master's Program of Department of Computer Science of Graduate School of Information Science and Technology of the University of Tokyo.

Time: 10:00 – 18:00, Tuesday, August 21st, 2018

Place: Rooms 102 and 202, Faculty of Science Bldg. 7

Waiting Room: Room 214, Faculty of Science Bldg. 7

(Enter the Waiting Room no later than 9:45)

B. Secondary Examinations

Examinations by Master's Thesis or its Equivalent and Oral Presentation

a. Details will be announced later. The dates will be from 4th to 8th, February, 2019, and the place will be located in Faculty of Science Bldg. 7.

b. Present your research in master's course (in about 9 minutes) and research plan in doctoral course (in about 1 minute). Research results after completion of master's course can be included. Bring two copies of Master's thesis (which can be in any other language than Japanese and English) and of a few published papers on the presented research, if any. Each examinee should prepare a PC for presentation.

- For applicants who are completing Master's Program of Department of Computer Science of Graduate School of Information Science and Technology of the University of Tokyo, the Secondary Examinations will be conducted separately.

- Secondary Examinations for those who have completed Master's Program and for those who wish for September 2018 entry will be conducted at the same time as the Oral Examinations of the Primary Examinations.

(2.2) Winter Examinations

a. Overview

1. All the examinations (submitted documents, questions and answers) are conducted in English.
2. The submitted documents are examined first and its outcome determines the applicant's eligibility for the Written and Oral Examinations. An examination admission card will be delivered, regardless of the applicant's eligibility for the Written and Oral Examinations.
3. If your TOEFL score is **less than 90 (iBT) or 577 (PBT)**, the application is rejected.
4. 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.

b. Examinations by Submitted Documents

The submitted documents are reviewed and the outcome determines the applicant's eligibility for the Written and Oral Exams.

An application with a TOEFL score less than 90 (iBT) or 577 (PBT) is rejected.

Your eligibility for the Written and Oral Examinations is announced on the website

http://www.i.u-tokyo.ac.jp/edu/course/cs/admission_e.shtml

from Monday, January 21st, 2019, 21:00 JST, for the period of three days (72

hours). The announcement is by the examinee's number that is found on the examination admission card delivered in advance.

Written Examinations

Schedule	Venue	Examination Subjects	Additional Information
10:00-12:30, Tuesday, February 5th, 2019	Room 214, 2nd floor, Faculty of Science Bldg. 7 (理学部 7 号館 2 階 214 講義室 in Japanese)	**General Education Subjects** (Mathematics), and **Specialized Subjects** (Information Mathematics, Numerical Algorithms, Discrete Mathematics, Algorithms and Complexity, Formal Languages, Logic, Programming Languages, Computer Architecture, Operating Systems).	Four problems will be asked (the number may vary), and applicants are required to answer all the problems. The problems will be given, and the answers must be, in English. Java or C language may be used in the examinations.

d. Oral Examinations

- Time: 10:00-14:00, Wednesday, February 6th, 2019
  (Enter the waiting room no later than 9:45)
- Place: Wait at Room 214, Faculty of Science Bldg. 7 (理学部 7 号館 in Japanese)
- Contents:
  - ✧ **Specialized Subjects:** out of
    - the topics listed above for the Written Examinations, and
    - Machine Learning, Graphics, Natural Language Processing, Bioinformatics, in addition,

    the ones that are relevant to your research fields are chosen, and a few technical questions are asked on those topics. You can use a whiteboard or a blackboard to answer the questions.
  - ✧ **Presentation of Master's Thesis:** 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 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.
  - ✧ **Presentation of Research Plan:** describe 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.
- All the presentations and answers must be given in English.

(iii) Doctoral Program (Special Admission for Working Graduates)
(1) Introduction

a. Department of Computer Science conducts Summer Entrance Examinations and Winter Entrance Examinations for Doctoral Program. The schedules and examination methods differ for Summer and Winter Entrance Examinations.

b. Before sending Application Form, all applicants should contact the supervisor of their selection and show their research proposals.

c. Fill up the "Preference Card (Doctoral Program)" in this Guide, and write "Research Results, Selected Publication List, and Research Plan" as instructed in "Preference Card (Doctoral Program)", 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" in this Guide.

d. For both Summer and Winter Examinations, those who have completed programs in Department of Computer Science of Graduate School of Information Science and Technology of the University of Tokyo, or Department of Information Science of Graduate School of Science of the University of Tokyo are exempted from submission of TOEFL score.

(2) Examination Schedule
(2.1) Summer Examinations

Same as (2.1) Summer Examinations, (2) Examination Schedule of (ii) Doctoral Program.

(2.2) Winter Examinations

Same as (2.2) Winter Examinations, (2) Examination Schedule of (ii) Doctoral Program, except:

- In Winter Examinations, only the Oral Examinations are conducted for those who have completed programs in Department of Computer Science of Graduate School of Information Science and Technology of the University of Tokyo, or Department of Information Science of Graduate School of Science of the University of Tokyo.

  - Time: 10:00-14:00, Wednesday, February 6th, 2019
    (Enter the Waiting Room no later than 9:45)
  - Waiting Room: Room 214, Faculty of Science Bldg. 7 (理学 7 号館 in Japanese)

  - Present your research in master's course (in about 9 minutes) and research plan in 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 Master's thesis (which can be in any other language than Japanese and English) and of a few published papers on the presented research, if any. Each examinee should prepare a PC for presentation.

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,
2019

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-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)
Transportation by bus:
Toei Bus "Todai Seimon Mae" or "Todai Konai"
Refer to "Venue" listed in this Guide.
Refer to Map of Examination Locations at the last page.
Examinees should be in the designated examination room no later than 15 minutes before the start of examination. In 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 not acceptable), and a clock or watch (for only checking the time; devices with other functions not acceptable).
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 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 the desktop through the 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 booklet from the examination room.
(6) Examinees should not use any devices other than writing instruments, pencil sharpeners, and erasers.

【Preference Card (Master's Program)】

Department of Computer Science,
Graduate School of Information Science and Technology, the University of Tokyo

Program	Master		
Applicant's Full Name		Examinee's Number	(Leave blank)
University of Graduation	Department: Faculty: University:		
Contact Address during Examinations	E-mail TEL		
Your Selection of Supervisor (For Winter Examinations, select one)	1st	3rd	
	2nd	4th	

Check ☐ if you wish to enter September 2018:   ☐
Check ☐ if you enclose a recommendation letter: ☐
(For Winter Examinations, the recommendation letter is required)

Describe your study purpose and research plan in the following format on A4 paper, and enclose it with the Application Form. For Summer Examinations, the description should be in one page in Japanese or English. For Winter Examinations, it should be in three pages, in English; describe your notable achievements too, if any.

Research Plan

Name: *** ***

New information processing is enabled by the progress of computers. Still there remains a problem of …. In Master's Course I want to tackle this problem based on the following ideas:
(1) …

(For Winter Examinations, include your notable achievements if any)
Notable achievements: …

◆ Fill this form and send it with the Application Form.

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【Preference Card (Doctoral Program)】

Department of Computer Science,
Graduate School of Information Science and Technology, the University of Tokyo

Program	Doctoral		
Applicant's Full Name		Examinee's Number	(Leave blank)
Universities of Graduation and Master's Degree	(Graduation) Department: Faculty: University:	(Master's degree) Department: Graduate School: University:	
Contact Address during Examinations	E-mail TEL		
Your Selection of Supervisor			

Check □ if you take examinations as working graduates: □
Check □ if you wish to enter September 2018: □
Check □ if you enclose a recommendation letter: □
(For Winter Examinations, the recommendation letter is required)

Describe your research results (try lucid explanations e.g. using figures), list your major publications, and research plan in the Doctoral Program in the following format in four A4 pages. Send them with the Application Form. Use Japanese or English (for Summer Examinations); use English (for Winter Examinations).

> Name: Xxx Yyy
>
> 1. Research results
>
> 1.1 Fast algorithm of linear solution [1]
> We have developed a fast algorithm for solution of large scale systems of linear equations…
>
> 1.2 Summary of study or research achievement during the period of employment
> (Include this section if you take examinations as working graduates)
>
> 2. Selected Publication list
> [1] Xxx Yyy, "Fast algorithm of linear solution," Master's thesis, Graduate School of Information Science and Technology, the University of Tokyo (2011).
> [2] Xxx Yyy and Aaa Bbb, "Fast algorithm of linear solution," proceedings of 2011 annual meeting of research society, pp. 101-102, 2011.
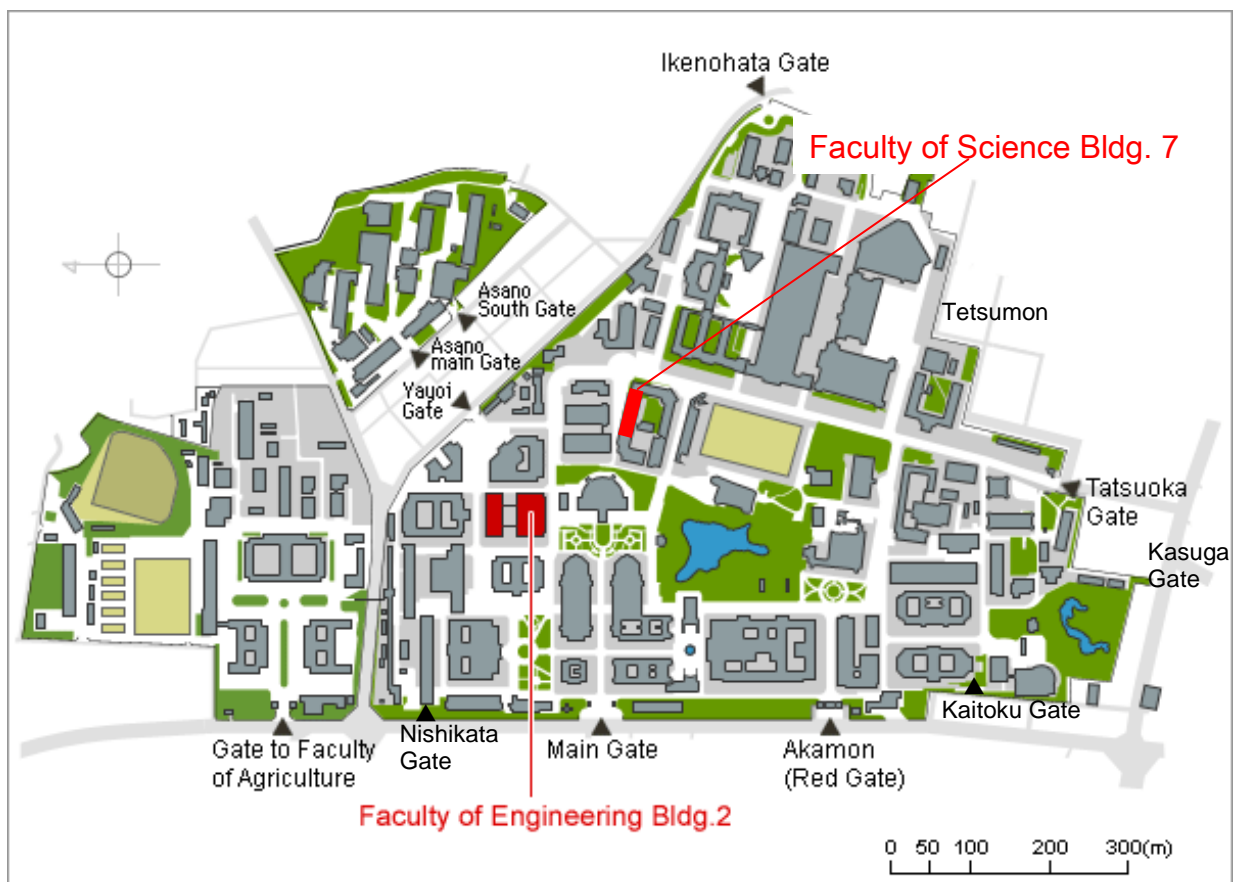
◆ Fill this form and send it with the Application Form.

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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"