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**AY2025 Admission Guide**  
**for Department of Creative Informatics**  
**Graduate School of**  
**Information Science and Technology**  
**The University of Tokyo**  
**Examinations Conducted in AY2024**

Contact: Department Administration Office

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University of Tokyo Graduate School of Engineering / Information Science  
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Department's website for Entrance Examinations:

Visit [https://www.i.u-tokyo.ac.jp/index\\_e.shtml](https://www.i.u-tokyo.ac.jp/index_e.shtml)

Admissions > Departments and Faculty > Creative Informatics > Admissions

Note 1: In addition to this document, carefully read Admission Guide for Graduate School of Information Science and Technology (read the guide for the applicant's program: Master's program, Doctoral program, or Doctoral program [Special Selection for Professionals]), as well as the Guidelines for Submission of TOEFL Scores.

Note 2: The Department of Creative Informatics conducts Summer entrance examinations and Winter entrance examinations for both the Master's and Doctoral programs. Summer and Winter entrance examinations differ in schedules, examination subjects, and examination methods.

Note 3: Successful applicants may be allowed October 2024 entry for Summer entrance examinations and April 2025 entry for Winter entrance examinations (hereafter referred to as "Early Entrance") if applicants indicate this preference on the application form.

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## **1. Message for applicants**

The Department of Creative Informatics is the newest department within the comparatively new Graduate School of Information Science and Technology. It was founded in 2005. The Department of Creative Informatics currently incorporates aspects of five fields: Computer Science, Mathematical Informatics, Information Physics and Computing, Information and Communication Engineering, and Mechano-Informatics. The educational philosophy is “To refine practical creativity for realizing outstanding ideas, through creative practices over interdisciplinary fields.” To achieve this goal, the Department will combine projects and advanced personnel training, and will promote collaborations among industry, government, and academia aimed at human resource cultivation. We hope that students completing this Department's program will play a leading role in the field of information technology.

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## 2. Master's program

### 2.1 Examination schedules and examination subjects

#### i) Summer entrance examination

##### (1) Document screening

Document screening will be conducted based on the submitted documents. Regarding the notification of the screening, refer to Admission Guide for Graduate School.

##### (2) General education subjects

Applicants must select either Mathematics or Programming at the time of application.

Those who are absent from the examination in the general education subject are considered to have withdrawn from the entrance examination.

Subject	Date and location	Description
Mathematics	Refer to Admission Guide for Graduate School	
Programming	Friday, August 16, 2024 13:00 – 15:30  School of Engineering; Bldg. No. 6 (tentative) (Details will be posted on the website by the day of the examination)	The basic skills of programming are examined. The applicants must bring their own laptop PCs and write programs for the given topics. They may use their preferred programming languages. Answering time is 150 minutes in total.

Notes: A programming environment must be installed in the laptop PCs used during the programming examination. The applicants may use documents, source programs, libraries, and other resources stored in the PC. Connecting the PC to any network is prohibited during the examination. Confirm that the PC can read from and write to a USB flash drive (type A). The applicants can bring and use a mouse. The applicants can use a two-pronged power outlet.

##### (3) Foreign language

TOEFL Scores will be used to evaluate the applicants' English skills. For details, refer to "Guidelines for Submission of TOEFL Scores (for AY2025 Entrance Examinations)".

##### (4) Specialized subjects

Applicants shall select one of the following five specialized subjects at the time of application. The applicants not selecting Creative Informatics should find out the details by referring to the Admission Guide for the corresponding department. Those who are absent from the examination in the specialized subjects are considered to have withdrawn from the entrance examination.

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Subject	Dates and locations	Description
Creative Informatics	Monday, August 19, 2024 13:00 – 15:30 School of Engineering Bldg., No. 6 (tentative) (Details will be posted on the website by the day of the examination)	Applicants solve three problems in the fields related to software and algorithms, computer hardware, information systems, and other related fields. Answering time is 150 minutes in total.
Computer Science	Refer to Admission Guide for Department of Computer Science.	
Mathematical Informatics	Refer to Admission Guide for Department of Mathematical Informatics.	
Information Physics and Computing	Refer to Admission Guide for Department of Information Physics and Computing.	
Information and Communication Engineering	Refer to Admission Guide for Department of Information and Communication Engineering.	

#### (5) Oral examination

The oral examination is conducted online on Wednesday, August 21, 2024 (when the examination starts and ends depends on the number of applicants). The oral examination schedule will be posted on the website by the day of the examination. In the oral examination, applicants will be asked about the issues such as the written examinations, current research topics, and a research plan at the graduate school.

#### ii) Winter entrance examination

##### (1) Document screening

Document screening will be conducted based on the submitted documents. Regarding the notification of the screening, refer to Admission Guide for Graduate School.

##### (2) General education subject

The applicants must select programming for Winter entrance examination unlike Summer entrance examination. Those who are absent from the examination in the general education subject are considered to have withdrawn from the entrance examination.

Subject	Dates and location	Description
Programming	Friday, January 31, 2025 13:00 – 15:30 School of Engineering; Bldg. No. 6 (tentative) (Details will be posted on the website by the day of the examination)	Refer to the description for Summer entrance examination.

Note: Refer to the description for Summer entrance examination

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**(3) Foreign language**

TOEFL Scores will be used to evaluate the applicants' English skills. For details, refer to "Guidelines for Submission of TOEFL Scores (for AY2025 Entrance Examinations)".

**(4) Specialized subject**

Unlike the Summer entrance examination, applicants cannot take examinations for the specialized subjects of other departments. Those who are absent from the written examination are considered to have withdrawn from the entrance exam.

Subject	Dates and location	Description
Creative Informatics	Thursday, January 30, 2025 13:00 – 15:30 School of Engineering, Bldg. No.6 (tentative) (Details will be posted on the website by the day of the examination)	Refer to the description for Summer entrance examination.

**(5) Oral examination**

The oral examination is conducted online on Monday, February 3, 2025 (when the examination starts and ends depends on the number of applicants). The oral examination schedule will be posted on the website by the day of the examination. In the oral examination, applicants will be asked about the issues such as the written examinations, current research topics, and a research plan at the graduate school.

**2.2 Submission of Research Plan**

Applicants must submit a pdf document of Research Plan along with other application materials, clearly describing the research field you want to study, the reason for your application, the research plan after your enrollment, and your past activities and achievements. It must be one page of A4-size paper. Figures and tables may be included but if an external URL is included, it will not be used at the examinations.

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### 3. Doctoral program / Doctoral program [Special Selection for Professionals]

#### 3.1 Examination schedules

##### i) Summer entrance examination

##### (1) Primary examination

Subject	Dates and location	Description
Specialized subject Creative Informatics	Monday, August 19, 2024 13:00 – 15:30 School of Engineering Bldg., No. 6 (tentative) (Details will be posted on the website by the day of the examination)	Applicants solve three problems in the fields related to software and algorithms, computer hardware, and information systems, and other related fields. Answering time is 150 minutes in total.
Oral examination	Tuesday, August 20, 2024  (When the number of applicants is large, the examination may be also held on Thursday, August 22. When the examination starts and ends depends on the number of applicants.)  The oral examination is conducted online. Its schedule will be posted on the website by the day of the examination.	Applicants give a presentation on their Master's thesis or its alternative and doctoral research plans (about 20 min.; slides can be used), and then they are asked questions on the presentation and other issues.

Notes:

- (a) TOEFL Scores will be used to evaluate the applicants' English skills. For details, refer to "Guidelines for Submission of TOEFL Scores (for AY2025 Entrance Examinations)".
- (b) Applicants are exempted from submitting the TOEFL Scores and taking the examination in specialized subjects if they have graduated or they are expected to complete Master's program at Graduate School of Information Science and Technology, The University of Tokyo.

##### (2) Secondary examination

The secondary examination is conducted during the days for Winter examination. It is an oral examination. The applicants who have passed the primary examination will be informed later of the details. According to the given instructions, submit a master's thesis (not necessarily the final version) or its alternative by the time of the oral examination. If the applicants are master students at Department of Creative Informatics, in principle, their secondary examinations are conducted from Thursday, January 23 to Friday, January 24, 2025. For applicants who wish to enter the graduate school in October 2024, and those who wish to enter in April 2025 but have completed or are expected to complete a Master's or Professional degree program by September 30, 2024, the secondary examinations will be conducted together during the oral examination for the primary examinations.

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**ii) Winter entrance examination**

The primary and secondary examinations are conducted during the period from Thursday, January 30 to Monday, February 3, 2025, excluding Saturday and Sunday. Only a limited number of applicants will be accepted. The examination method will be the same as the method for Summer entrance examination. For the details of the examination in the specialized subject, refer to the corresponding examination for Winter entrance examination for the Master's program.

**3.2 Submission documents for the Doctoral program**

The prospective applicants for the Doctoral program should make close contact with their prospective faculty advisor before the application period. Applicants must submit their Research Plan along with other application materials. For the details of Research Plan, refer to "2.2 Submission of Research Plan" for the Master's program. A faculty advisor will be immediately assigned to an applicant (but subject to change) when he/she passes the primary examination.

**3.3 Submission documents for the Doctoral program [Special Selection for Professionals]**

In addition to Research Plan written in 3.2, the applicants must submit a one- or two-page A4-size document, which summarizes major achievements during their employment, as "Outline of Work Achievements" listed in 7. Application Documents in Admission Guide: Doctoral Program [Special Selection for Professionals].

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The University of Tokyo Graduate School of Information Science and  
Technology, Department of Creative Informatics

Faculty Advisors and Concurrent Faculty Advisors (as of April 2024)

Select your advisor(s) among the faculty members in this list, and enter your selection (up to ten for master's program, one for doctoral program) through the Web application system.

**Faculty Advisors**

Professor Shigeru Chiba

Programming Languages, Software Infrastructure

Professor Takeo Igarashi

User Interface, Computer Graphics

Professor Kunihiko Sadakane

Algorithms and Data Structures, Big Data Processing

Professor Hiroshi Saruwatari

Speech and Acoustic Information Processing, Statistical Signal Processing,  
Machine Learning

Professor Hiroshi Esaki

Smart Internet, Sensor Network

Professor Kei Okada

Everyday Life Robotics, Robot System Software

Associate Professor Hideki Nakayama

Machine Perception, Natural Language Processing, Machine Learning

Associate Professor Ryota Shioya

Computer Architecture, System Software, Information Security

Associate Professor Manabu Tsukada

Computer Network, Cyber Physical Systems

Associate Professor Nobuyuki Umetani

Computer Graphics, Physics Simulation

Associate Professor Tomoharu Ugawa

System Software, Programming Language, Concurrency, Embedded Systems

**Concurrent Faculty Advisors who belong to other departments**

Professor Yusuke Miyao (Dept. of Computer Science)

Natural Language Processing, Computational Linguistics

Professor Tsuyoshi Takagi (Dept. of Mathematical Informatics)

Mathematical Cryptography, Applied Cryptography

Professor Hiroshi Nakamura (Dept. of Information Physics & Computing)

Computer System, IoT/Cyber-Physical System, Computer Architecture

Professor Kenjiro Taura (Dept. of Information & Communication Engineering)

Parallel and distributed computing, programming languages, big data processing,  
high-performance computing, and their applications

Professor Tatsuya Harada (Dept. of Mechano-Informatics)

Computer Vision, Machine Learning, Real-world Intelligent Information Processing

Associate Professor Masaki Ito (Social ICT Research Center)

Traffic Informatics, Cyber-physical Systems, Intelligent Transport Systems (ITS),  
Human-computer Interaction



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Concurrent Faculty Advisors who belong to other departments

name	Yusuke Miyao	Research Fields	Natural Language Processing, Computational Linguistics
<p>Our group conducts research in the field of natural language processing and computational linguistics. Humans communicate, understand information, and behave using natural language. Our goal is to clarify how this works by making full use of mathematical models and linguistic theories. Specifically, our research is focused on the following areas.</p> <ul style="list-style-type: none"> <li>- Syntactic and semantic analysis, semantic inference: computing the structure and meaning of sentences in natural language.</li> <li>- Grounding: connecting the meaning of natural language with real-world data such as images and numerical data.</li> <li>- Dialogue systems: building computer systems that use natural language to exchange information.</li> </ul>			

name	Tsuyoshi Takagi	Research Fields	Mathematical Cryptography, Applied Cryptography
<p>We investigate the theory and practice of cryptography which underpins the security of our information society.</p> <p>(1)Mathematical Cryptography: We study post-quantum cryptography based on the mathematical problems (such as coding theory, lattice theory, multivariate polynomials, graph theory, etc), which are computationally intractable even in the era of quantum computing.</p> <p>(2)Applied Cryptography: We are engaged in the development of new efficient cryptographic algorithms and implementation secure against physical attacks, which can be used in our life, for example, copyright protection, electronic voting, cryptocurrency, and so on.</p>			

name	Hiroshi Nakamura	Research Fields	Computer System, IoT/Cyber-Physical System, Computer Architecture
<p>We mainly address high-performance, dependable, and low-power computer system to realize advanced interaction between physical and cyber worlds.</p> <ul style="list-style-type: none"> <li>- IoT/Cyber-Physical System: Optimization of total computer systems by integrating sensors and server systems in IoT world.</li> <li>- Ultra Low Power Computer System: Ultra low power VLSI systems and high-performance and low-power computing through co-optimization between circuit technology, computer architecture, system software, and algorithm.</li> </ul>			

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name	Kenjiro Taura	Research Fields	Parallel and distributed computing, programming languages, big data processing, high-performance computing, and their applications
<p>(Visit our homepage at <a href="https://tinyurl.com/taulab">https://tinyurl.com/taulab</a>) Central topics of Taura group are software to deliver high-performance computing to everyone and high-performance applications. A pillar is designing programmer-friendly programming languages or libraries and their high-performance implementations with SIMD, multicores, GPUs, and supercomputers. The challenge is to attain both productivity and performance on complex hardware. They include domain-specific systems for machine learning, pattern extractions and N-body problems, general-purpose systems for load balancing and distributed shared memory and libraries for special-purpose hardware such as digital annealer (digital implementation of quantum annealer). Another pillar is big data processing and its applications. They include mining of company home pages for finding good business succession and analysis of electronic medical records for reducing medical accidents, around which we are seeking good synergies with research on machine learning frameworks and/or big data processing.</p>			

name	Tatsuya Harada	Research Fields	Computer Vision, Machine Learning, Real-world Intelligent Information Processing
<p>Our laboratory focuses on machine intelligence. Our goal is to invent hyper-intelligent systems by combining useful but infinite information in the physical space with a huge amount of data and powerful computational resources in the cyberspace. To tackle this challenging problem, we utilize all resources in the area of computer science including machine learning, computer vision, natural language processing and robotics.</p>			

name	Masaki Ito	Research Fields	Traffic Informatics, Cyber-physical Systems, Intelligent Transport Systems (ITS), Human-computer Interaction
<p>Ito Laboratory at the Social ICT Research Center conducts research to create advanced mobility systems through information technology. We are conducting practical research including traffic sensing, optimization of traffic signals, simulation of human and vehicle traffic, large-scale spatio-temporal data processing platforms, big data analysis of various traffic data, optimization of bus schedules and routes, and behavior change technology of people and vehicles. We welcome students who are interested in social issues such as urban planning and management of depopulated areas, students who are (or have been) interested in railroads, buses, automobiles, and other vehicles, and students who wish to conduct practical research using real data and real fields in collaboration with companies and local governments.</p>			

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### Department-specific Conditions on Submitted Documents

For other conditions on submitted documents common to all the departments, check the Admission Guide of the Graduate School.

#### List of Department-Specific Documents:

	Summer Examination		Winter Examination	
	Documents to be Submitted	Who to Submit	Documents to be Submitted	Who to Submit
Master's Program	Research Plan (1 page in A4-size)	All Applicants	Research Plan (1 page in A4-size)	All Applicants
Doctoral Program	Research Plan (1 page in A4-size)	All Applicants	Research Plan (1 page in A4-size)	All Applicants
Doctoral Program <Special Selection for Professionals>	Research Plan (1 page in A4-size)	All Applicants	Research Plan (1 page in A4-size)	All Applicants
	Major achievement during employment (no more than 2 pages in A4-size)	All Applicants	Major achievement during employment (no more than 2 pages in A4-size)	All Applicants

#### Department-specific Conditions on TOEFL Scores:

	Summer Examination	Winter Examination
Master's Program	All Applicants	All Applicants
Doctoral Program	All applicants except those who have completed (or are expected to complete) a master's program in the Graduate School of Information Science and Technology, the University of Tokyo	All applicants except those who have completed (or are expected to complete) a master's program in the Graduate School of Information Science and Technology, the University of Tokyo
Doctoral Program <Special Selection for Professionals>	All applicants except those who have completed a master's program in the Graduate School of Information Science and Technology, the University of Tokyo	All applicants except those who have completed a master's program in the Graduate School of Information Science and Technology, the University of Tokyo