

**2026 Guide to Entrance Examinations
Master's/Doctoral Program
Application Schedule B
Department of Systems Innovation**

Graduate School of Engineering, The University of Tokyo

Contact address:

Department of Systems Innovation
Graduate School of Engineering, The University of Tokyo
7-3-1, Hongo, Bunkyo-ku, Tokyo 113-8656, Japan

E-mail: admission@sys.t.u-tokyo.ac.jp

Contact us: <https://www.sys.t.u-tokyo.ac.jp/contact/>

Website: <https://www.sys.t.u-tokyo.ac.jp>

2026 Master's Program

This document contains important information on the entrance examination at the Department of Systems Innovation. It is supplementary to the "Graduate School of Engineering, The University of Tokyo, Guidelines for Applicants to the 2026 Master's Program [Application Schedule B]". The entrance examination of our department consists of Document Based Selection, Oral Examinations (general and technical) and English Examination. Further information will be announced on the Department of Systems Innovation website (<https://www.sys.t.u-tokyo.ac.jp>).

1 Entrance Examination

(1) Examination Subjects and Schedules

Date	Examination Subject(s) & Times	Notes
January 20 th (Tue) - January 21 st (Wed)	9:00-19:00 JST ⁽¹⁾ Oral Examinations (general and technical) ⁽²⁾	For eligible applicants who pass the Document Based Selection

Footnotes:

⁽¹⁾ Examination times may be changed.

⁽²⁾ Oral Examinations will be held online.

(2) Examination Procedures

a) Document Based Selection

Selection of applicants for admission will first be conducted by evaluating application documents (more specifically, documents described in 2-(3) below, as well as the applicant's academic transcripts during undergraduate, etc.) submitted by the applicant. Applicants will be notified of the results of the Document Based Selection by December 25th (Thu) via the department website. Subsequently, the Oral Examinations (general and technical) will be held only for applicants who successfully pass the Document Based Selection. Applicants who do not pass the Document Based Selection will not be invited to take Oral Examinations (general and technical).

b) Oral Examination (general)

An oral examination (online) will be given focusing on the applicant's undergraduate thesis research, planned undergraduate thesis research, or an equivalent research project, as well as the desired research for the master's program. It is designed to assess the applicant's knowledge in the academic field, readiness for the master's program, and overall research capabilities. Details about the examination format, schedule, and important instructions will be announced on the department's website by December 25th (Thu).

c) Oral Examination (technical)

Applicants will be asked to submit a response to pre-assigned technical questions. An oral examination (online) will be given on the content. Details of the examination method, timetable, and precautions will be notified on the department website by December 25th (Thu).

d) English Examination

English proficiency will be evaluated based on the submission of an official TOEFL iBT® score (including the Home Edition). This department will use only the official TOEFL iBT® Test Date score and will not accept MyBest scores.

(3) Notes

- The application fee will NOT be refunded under any circumstances, even for applicants who do not pass the Document Based Selection stage.
- For the online exam, the applicant must prepare a PC with a camera, microphone, and stable Internet connection.
- Further notifications on the Oral Examinations (general and technical) will be announced on the department website. Details of the exam will also be announced in the Entrance Examination Information Session on November 1st (Sat). Information about the session will be announced on the department website.
- Do not share the URL, password, or any related information for the online exams. Do not post any examination materials on the internet. Unless explicitly instructed otherwise by the examiner, taking photographs, capturing screenshots, and/or making audio and video recordings are strictly prohibited during the online exams.
- It is recommended to contact your preferred supervisor before applying for the Entrance Examinations.

2 Required Documents

Applicants must submit the following documents. For submission method of document (1), please refer to "Graduate School of Engineering, The University of Tokyo, Guidelines for Applicants to the 2026 Master's Program [Application Schedule B]". For the documents of (2)-(4), they should be submitted through the My Page of the online application system of the Graduate School of Engineering, the University of Tokyo. For submission method of document (5), please refer to "Notice regarding Foreign Language (English) Examinations in 2026 The University of Tokyo Graduate School of Engineering Entrance Examinations (How to submit TOEFL score) (Master's Program, Doctoral Program [Application Schedule A·B])"

- (1) **[Application period: November 28th, Friday - December 4th, Thursday 3pm JST]** Applicants must submit the required documents listed in "Graduate School of Engineering, The University of Tokyo, Guidelines for Applicants to the 2026 Master's Program [Application Schedule B]".
- (2) **[Deadline: December 4th, Thursday, 3pm JST] Declaration of Preferred Supervisors**
- (3) **[Deadline: December 4th, Thursday, 3pm JST] Motivation Letter with Research Plan**
Applicants must download the prescribed format from the Department of Systems Innovation website. In the letter, applicants should describe (in Japanese or English) their motivation to study at the Department of Systems Innovation along with their reason for choosing the faculty member as their preferred supervisor and provide a coherent summary of the research project they intend to undertake.
- (4) **[Deadline: January 8th, Thursday, 3pm JST] Answers to Technical Questions**
Applicants must download the prescribed format from the Department of Systems Innovation website and provide answers to the technical questions given on December 25th, Thursday.
- (5) **[Deadline: January 8th, Thursday] Official TOEFL iBT® score**

3 Others

- (1) For Application Schedule B, successful applicants can enroll in the Master's program in April 2026 only.

2026 Doctoral Program

This document contains important information on the entrance examinations at the Department of Systems Innovation, which is supplementary to the “Graduate School of Engineering, the University of Tokyo, Guidelines for Applicants to the 2026 Doctoral Program”. The entrance examination of our department consists of Document Based Selection, Oral Examinations (general and technical) and English Examination. Further information will be announced on the Department of Systems Innovation website (<https://www.sys.t.u-tokyo.ac.jp>).

1 Entrance Examination

(1) Examination Subjects and Schedules

Date	Examination Subject(s) & Times	Notes
January 20 th (Tue) - January 21 st (Wed) ⁽¹⁾	9:00-19:00 JST ⁽²⁾ Oral Examinations (general and technical) ⁽³⁾	For eligible applicants who pass the Document Based Selection

Footnotes:

⁽¹⁾ The examination schedule for successful candidates in the primary examination of Application Schedule A (Summer Exam) differs from the above schedule.

⁽²⁾ Examination times may be changed.

⁽³⁾ Oral Examinations will be held online.

(2) Examination Procedures

a) Document Based Selection

Selection of applicants for admission will first be conducted by evaluating application documents (more specifically, documents described in 2-(3) below, as well as the applicant’s academic transcripts during undergraduate and graduate school, etc.) submitted by the applicant. Applicants will be notified of the results of the Document Based Selection by December 25th (Thu), via the department website. Subsequently, the Oral Examinations (general and technical) will be held only for applicants who successfully pass the Document Based Selection. Applicants who do not pass the Document Based Selection will not be invited to take Oral Examinations (general and technical).

b) Oral Examination (general)

An oral examination (online) will be given focusing on the applicant’s master’s thesis research, planned master’s thesis research, or an equivalent research project, as well as the proposed research for the doctoral program. This oral examination is designed to assess the applicant’s knowledge in the academic field, readiness for the doctoral program, and overall research capabilities. Details about the examination format, schedule, and important instructions will be announced on the department’s website by December 25th (Thu).

The examination for Application Schedule B, held on the schedule in 1-(1), is only for applicants who already have a master’s or professional degree (including those expecting to obtain it by the end of March 2026) and wish to enroll in April 2026.

c) Oral Examination (technical)

Applicants will be asked to submit a response to pre-assigned technical questions. An oral examination (online) will be given on the content. Details of the examination method, timetable, and precautions will be notified on the department website by December 25th (Thu).

Note: Applicants who have completed or are expected to complete a master’s program (or professional degree program) at the Graduate School of Engineering, the Graduate School of Frontier Sciences, the Graduate School of Information Science and the Technology, Graduate School of Interdisciplinary Information Studies in the University of Tokyo are exempt from the Oral Examination (technical).

d) English Examination

English proficiency will be evaluated based on the submission of an official TOEFL iBT® score (including the Home Edition). This department will use only the official TOEFL iBT® Test Date score and will not accept MyBest scores.

Note: Applicants who have completed or are expected to complete a master’s program (or professional degree program) at the University of Tokyo are exempt from the English Examination (submission of official TOEFL iBT® Test Date score is not required).

(3) Notes

- a) The application fee will NOT be refunded under any circumstances, even for applicants who do not pass the Document Based Selection stage.
- b) For the online exam, the applicant must prepare a PC with a camera, microphone, and stable Internet connection.
- c) Further notifications on the Oral Examinations (general and technical) will be announced on the department website. Details of the exam will also be announced in the Entrance Examination Information Session on November 1st (Sat). Information about the session will be announced on the department website.
- d) Do not share the URL, password, or any related information for the online exams. Do not post any examination materials on the internet. Unless explicitly instructed otherwise by the examiner, taking photographs, capturing screenshots, and/or making audio and video recordings are strictly prohibited during the online exams.
- e) It is obliged to contact your preferred supervisor before applying for the Entrance Examinations.

2 Required Documents

Applicants must submit the following documents. For submission method of document (1), please refer to "Graduate School of Engineering, The University of Tokyo, Guidelines for Applicants to the 2026 Doctoral Program". For the documents of (2)-(4) and (6), they should be submitted through the My Page of the online application system of the Graduate School of Engineering, the University of Tokyo. For submission method of document (5), please refer to "Notice regarding Foreign Language (English) Examinations in 2026 The University of Tokyo Graduate School of Engineering Entrance Examinations (How to submit TOEFL score) (Master's Program, Doctoral Program [Application Schedule A-B])"

(1) **[Application period: November 28th, Friday - December 4th, Thursday 3pm JST]** Applicants must submit the required documents listed in "Graduate School of Engineering, The University of Tokyo, Guidelines for Applicants to the 2026 Doctoral Program".

(2) **[Deadline: December 4th, Thursday, 3pm JST] Declaration of Preferred Supervisors**

(3) **[Deadline: December 4th, Thursday, 3pm JST] Documents for the "Document based Selection"**

- ① Summary of research content and outline of research plans for doctoral program (6 pages in A4 or US letter format)
- ② List of research achievements
- ③ Master's thesis (if graduated from master's program) or supplemental documents for ① and ② above (up to three items total, include published papers, conference presentation materials, draft of the master's thesis, etc.)

Note: The format of ① should conform to the formats of academic conference proceedings. In addition, ② should be divided into the following categories: academic journal papers, review/commentary papers, conference oral presentations, and others (patents, awards, etc.). All the documents of ①, ②, and ③ need to be submitted in PDF format.

(4) **[Deadline: January 8th, Thursday, 3pm JST] Answers to Technical Questions**

Applicants must download the prescribed format from the Department of Systems Innovation website and provide answers to the technical questions given on December 25th.

Note: applicants who meet the criteria under 1-(2)-(c) are exempt from submission.

(5) **[Deadline: January 8th, Thursday] Official TOEFL iBT® score**

Note: applicants who meet the criteria under 1-(2)-(d) are exempt from submission.

(6) **[Deadline: January 18th, Sunday, Noon JST] Presentation slides for the "Oral Examination (general)"**

Note: Please submit in PDF format regardless of the format that will be used in the presentation of oral examination (general).

3 Others

(1) For Application Schedule B, successful applicants can enroll in the Doctor's program in April 2026 only.

Faculty Members and Outlines of their Research (1/3)

Supervisor's No.	Name of Supervisor	Research field
1	Kazuhiro AOYAMA Prof. (Research into Artifacts, Center for Engineering)	System Architecture Design, Product Family and Product Platform Design, Product Lifecycle Management (PLM), Model-Based System Design (MBSD), Project Management, Product Service System (PSS), Service Design, Human Centered Manufacturing System, Industry 4.0, Knowledge Management.
2	Kiyoshi IZUMI Prof.	(1) Financial informatics: Artificial market simulation; Financial text mining; AI application in finance. (2) Engineering based economics: Consumer data analysis; Movement data analysis; Marketing simulation. Those who want to join our laboratory should visit /https://socsim.t.u-tokyo.ac.jp/ .
3	Yukio OHSAWA Prof.	(1) Methods for discovering opportunities and risks from commercial, natural, and/or behavioral data, (2) Realizing cognition, thought, and decisions for innovating businesses in designed markets of data where strategies for combining/using/reusing data are communicated and created.
4	Yoji OKABE Prof. (Institute of Industrial Science)	Health diagnostics of advanced composite structures, Structural health monitoring, Non-destructive inspection, Fiber-optic ultrasonic sensing systems applicable to high-temperature environments, Internal damage detection using ultrasonic guided waves, Laser-ultrasonic visualization system, Carbon nanotube composite sensor.
5	Tomoya KAWASAKI Assoc. Prof.	Management Science in supply chain, logistics, and global value chain. Application of optimization, simulation, complex networks, statistical analysis, and machine learning.
6	Tomoya KAWABATA Prof.	Realization research of liquefied hydrogen, high-pressure hydrogen and ammonia transport and storage systems in the energy supply chain supporting a low-carbon society. Fracture mechanics and material nanoscale microstructure design by combining state-of-the-art numerical simulation and experimental observation techniques.
7	Taro KANNO Assoc. Prof.	Human-Centered Systems Design, Operation, & Management: Team Cognition, Organizational Simulation, Cognitive and Behavioral Data Analysis, Human Factors and Resilient Systems Design in Medical, Nursing, ATC, and Emergency Response. Sociotechnical Systems Resilience.
8	Daisuke KITAZAWA Prof. (Institute of Industrial Science)	Marine food production system, renewable energy utilization system and marine ecosystem preservation. Ocean space utilization. Environmental impact assessment. Interactions between the natural environment, marine organisms, and marine structures. Marine ecosystem model. Experiments on flexible structures and behavior of animals in water tank.
9	Takashi GODA Assoc. Prof.	Numerical algorithms (e.g., Monte Carlo, quasi-Monte Carlo and multilevel Monte Carlo methods): from theory to engineering applications, Uncertainty quantification, Global sensitivity analysis, Decision making, Value of information analysis, Machine learning, Other related applied mathematics and statistics
10	Hajime KOBAYASHI Assoc. Prof. (Frontier Research Center for Energy and Resources)	(1) Advanced Reservoir Engineering for Sustainable Development of Energy Resources (researches on bio-inorganic multi-tracer, smart field, fluid dynamics, natural analogs) (2) Researches on "bio-manufacturing" technologies (CO2 conversion by hybrid bio-inorganic systems) (3) Engineering for Sustainable Development of Subsurface Environments (remediation, diffusion prevention, monitoring and detection of pollutants in subsurface environments)
11	Ryuichi SHIBASAKI Assoc. Prof.	Global transport network modelling and policy simulation: international, intermodal container cargo simulation, logistics and transport analysis/modelling using the large-scale vessel movement database, and sequential modelling of international trade and logistics. Model applications to many kinds of logistics and transport projects mainly planned for developing countries of the world
12	Kazuya SHIBATA Assoc. Prof.	Investigation of Phenomena and Optimization of Design by Numerical Simulation, Development of New Systems Using Physics-Based Simulation, Numerical Analysis of Fluid Force Acting on Ships and Offshore Structures, Tsunami Simulation in Coastal Areas, Engineering of Disaster Prevention and Mitigation, Development of Evaluation Method for Safety, Particle Methods.
13	Kazuki SHIBANUMA Assoc. Prof.	Structural integrity to achieve sustainable society: Investigation on fracture mechanics of materials and structures, Development of prediction method of aging degradations and maintenance theory, Innovative physical modeling to integrate multiscale
14	Takashi SHIMADA Assoc. Prof.	Statistical Physics and nonlinear science on biological, ecological, social and economic systems. Namely, ①Theoretical study of universal aspects, such as robustness, of open and evolving systems ②Simulation study of collective phenomena in biological, social, economic systems ③Data analysis of the dynamics of real complex systems.
15	Jun TAKAHASHI Prof.	Innovative lightweight technology using CFRP for low-carbon society (e.g. structural optimization simulation of ultra-lightweight EV and ultra-large floating offshore wind turbine), innovative evaluation technology for ultra-circular society (e.g. probabilistic recycled CFRP design by Monte Carlo method, future value prediction using dynamic LCA) (Supervise with Lecturer Yi Wan)
16	Yutaro TAKAYA Assoc. Prof.	Waste management and recycling; Utilization method of intractable wastes; Mineral processing and hydrometallurgical process of the deep-sea mineral resources; Carbon fixation with concrete sludge, slag, and silicate
17	Takeshi TSUJI Prof.	Exploration and monitoring for CO2 geological storage and energy development. Exploration and monitoring earthquake faults and volcanoes. Exploration of the moon and Mars. Modeling of subsurface dynamics based on digital rock physics. Monitoring traffic based on machine learning and seismometer networks.

Faculty Members and Outlines of their Research (2/3)

Supervisor's No.	Name of Supervisor	Research field
18	Chiharu TOKORO Prof.	Advanced separation technology/process and environmental purification technology/process to achieve sustainable resource circulation, and social system/policy proposal for them.
19	Gjergj DODBIBA Assoc. Prof.	(1) Resources processing for materials recovery and recycling; (2) Synthesis of adsorbent for wastewater treatment; (3) Environmental impact assessment.
20	Fujio TORIUMI Prof.	Computational Social Science (Social Data Analysis, Agent-based Simulation) and AI for Society. Topics: Social Media, News Media, Web Services, Transportation Data Methods: Complex Networks, Machine Learning, NLP, Agent-based Simulation and Game Theory.
21	Akihiro NAKAO Prof.	DX (Digital Transformation) through next-generation cyber infrastructure (5G / Beyond 5G). Large-capacity, low-latency, multi-connection. Low power consumption and improved safety and reliability. Autonomy by machine learning / AI-based failure prediction / automatic repair. Expandability to space / ocean. Resolving regional issues and creating new value.
22	Kentarō NAKAMURA Prof.	(1) Efficient methods for exploring deep-sea mineral resources, (2) Analytical methods for simple and precise determination of rare metals, (3) Formation processes and geological background of metal resources, (4) Evolution of Earth's surface environment and life.
23	Kimihiro HASHIBA Assoc. Prof.	Innovation in resource engineering: sophisticated mining system (advancement of mining machinery, rapid excavation, deep sea mining), risk reduction in resource development, long-term usage of underground structures (rock property, long-term behavior), and geomechanical modeling/simulation.
24	Teruaki HAYASHI Lecturer	(1) System Design and Dynamics of the Data Ecosystem: Data ecosystem, Cross-disciplinary data exchange and collaboration, Data market simulation, Complex networks, Institution design. (2) Support Technology for Data Origination and Exploration: Data design, Knowledge representation and structuring, Data embedding, Synthetic data, Search/recommendation systems.
25	Katsunori FUKUI Prof. (Note 1)	Systems Innovation Engineering of Resources Exploration and Development for Safe and Secure Society (Deep Sea Mining, Preservation of the Environment), Geospace Engineering, Rock Mechanics and Engineering (mechanical modeling/simulation), Mining Machinery.
26	Hideki FUJII Assoc. Prof.	R&D of social system simulation using multi-agent systems or cellular automata, etc., and virtual social experiments (especially microscopic car-traffic or crowd simulation). Simulation-based decision support for social systems in the real world.
27	Hidetaka HOUTANI Lecturer	Fundamental understanding of ocean waves and their applications in ocean engineering: Research topics include ocean waves, nonlinear waves, freak/rogue waves, wave-structure interaction (including ships and offshore structures), hydroelasticity, stochastic prediction of extreme events, and hydrodynamic model experiments on ships and offshore structures in wave tanks.
28	Hideaki MIYAMOTO Prof.	Space resource development based on the latest scientific knowledge, with a focus on asteroid and lunar resource utilization. Technology development and data analysis for space missions, including Artemis (NASA's lunar program), MMX (Martian Moon sample return), LUPEX (lunar polar exploration), and TSUKIMI (lunar resource exploration).
29	Shinsuke MURAKAMI Prof. (Department of Technology Management for Innovation)	Mineral Economics & Industrial Ecology (MFA/MSA): Sustainable Resource Use, Design and Evaluation of Social Systems for the implementation of Circular Economy (Business Models, Consumer Behavioral Changes and Legislation Framework), Analysis of National Resource Security, Minerals market analysis. Both data analysis and simulation will be used as analytical tools.
30	Hideaki MURAYAMA Prof.	Digital twin, Intelligent Material Systems and Structures, Advanced Composites, Fiber-Optic Sensors and Networks, Underwater Optical Wireless Communication System, Advanced Maritime-Transportation System, Autonomous/Unmanned Surface Vehicle (ASV/AUV), Model-based development (MBD), Model-based systems engineering (MBSE)
31	Kazutaka YASUKAWA Assoc. Prof. (Frontier Research Center for Energy and Resources)	(1) Characterization of seafloor mineral resources based on chemical analyses, (2) Elucidating genesis of seafloor mineral resources by multivariate statistical techniques, (3) Clarification of Earth system's responses to climate changes based on statistical and modeling approaches. Targeting resources and environmental issues by understanding the Earth system.
32	Tomonori YAMADA Assoc. Prof.	Computational Mechanics Simulation for Safe Society, High Performance Computing on Cutting Edge Supercomputers (FUGAKU etc.), Large-scale Simulation and Machine Learning, Multiphysics Simulation.
34	Masataka WATANABE Assoc. Prof.	Unraveling the neural mechanism of consciousness through the establishment of machine consciousness. Firstly, as for the machine, we will develop a large-scale spiking neural network that mimics the functions and dynamics of a mammalian brain through learning, and secondly, mutually connect it to a biological brain for validating its consciousness.
35	Yi WAN Lecturer	Advanced composite materials for future society (self-driving EV, extra-large wind turbine, etc.), comprehensive researches of advanced composite materials (combining material mechanics with novel techniques), study of variation (prediction and control of property-variation of advanced composite materials). (Supervise with Prof. Jun Takahashi)

Faculty Members and Outlines of their Research (3/3)

Supervisor's No.	Name of Supervisor	Research field
36	Yusuke HARA Assoc. Prof. (Transport Innovation Research Center)	Urban Transportation Data Science and Mechanism Design for Transportation Systems: Travel behavior analysis, transportation network analysis, decision-making modeling of urban activities, traffic monitoring and the design of human and freight mobility systems, co-evolutionary models of cities, transportation, and activities, and transportation service design.

Note 1: Faculty member #25 will only accept applicants for the Master's program.

Note 2: Faculty member #33 is an unassigned number.