

Guidelines for Applicants to the 2025 Master's/Doctoral Courses

# Department of Advanced Materials Science

Graduate School of Frontier Sciences,  
The University of Tokyo

## Examination Schedule

### ◆ Master's course, Ordinary Examination and Special Selection for Applicants with Overseas Education

#### [Schedule A]

Application period

From Thursday, June 6 to Wednesday, June 12, 2024

Examination date

1st-stage examination Specialized subject From 13:40 to 16:40, on Tuesday, August 20

2nd-stage examination Oral examination From 9:00 to 18:00, on Monday, August 26

### ◆ Doctoral course, Ordinary Examination and Special Selection for Applicants with Overseas Education

#### [Schedule A]

Application period

From Thursday, June 6 to Wednesday, June 12, 2024

Examination date

Specialized subject From 13:40 to 16:40, on Tuesday, August 20

Oral examination From 13:00 to 18:00, on Friday, August 23

#### [Schedule B only for Special Selection for Applicants with Overseas Education]

Application period

From Tuesday, November 12 to Monday, November 18, 2024

Examination date

Specialized subject Monday, January 20, 2025

Oral examination Tuesday, January 28, 2025

### ◆ Special Selection for Applicants with Professions for Doctoral course

#### [Schedule A]

Application period

From Thursday, June 6 to Wednesday, June 12, 2024

Examination date

Oral examination From 13:00 to 18:00, on Friday, August 23

# Contents

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- 1 Overview of Department of Advanced Materials Science
- 1 Introduction of Faculty Members
- 7 Master's course,  
Ordinary Examination and Special Selection for Applicants with Overseas Education, Schedule A
- 9 List of Application Documents (Master's course) / Inquiry Sheet (Master's course)
- 11 Doctoral course,  
Ordinary Examination and Special Selection for Applicants with Overseas Education, Schedule A
- 13 Doctoral course,  
Special Selection for Applicants with Professions (only for Doctoral course, Schedule A)
- 15 List of Application Documents (Doctoral course, Schedule A) / Inquiry Sheet (Doctoral course, Schedule A)
- 17 Doctoral course, Special Selection for Applicants with Overseas Education, Schedule B
- 19 List of Application Documents (Doctoral course, Schedule B) / Inquiry Sheet (Doctoral course, Schedule B)
- 21 Examination guidelines / Venue



# Course / Field of study / Laboratory

Course	Field of study	Laboratory
Applied Physics	Correlated-Matter Physics	Arima & Tokunaga Lab.
	Quantum Phase of Matter	Shibauchi & Hashimoto Lab.
	Functional Materials Physics	Kimura Lab.※1
	Single Atom Molecule Science	Sugimoto Lab.
	Condensed Matter Physics	Yoshimi Lab.
New Materials and Interfaces	Organic Electronics Science	Takeya & Tamai Lab.
		Watanabe Lab.
		Ariga Lab.
	Energy-conversion Quantum Science	Uchida Lab.
Materials Design and Processing	Process Science for Advanced Materials	Ito Lab.
	High-Temperature Materials Design	Mitarai Lab.
	Nano-Space Function Design	Kita Lab.
Imaging Science	Multiple-Image Science	Sasaki Lab.
Solid State Physics and Chemistry (The Institute for Solid State Physics)	Condensed Matter Science	Yamashita Lab.
		Takagi Lab.
	Materials Design	Okamoto Lab.
		Yamaura Lab.
	Quantum Materials	Miwa Lab.
	Functional Materials	Inoue Lab.
	Nanoscale Science	Yoshinobu Lab.※2
		Lippmaa Lab.
	International MegaGauss Science	Matsuda Lab.
		Miyata Lab.
	Laser and Synchrotron	Okazaki Lab.
	Synchrotron Radiation Science	Harada Lab.
	Neutron Science	Masuda Lab.
		Mayumi Lab.

※1 : No recruitment for Master's course students

※2 : No recruitment for Doctoral course students

# Overview of Dep. Advanced Materials Science

The Department of Advanced Materials Science (AMS) consists of the three majors of the Graduate School of Engineering, "Applied Physics", "Materials Engineering", and "Applied Chemistry", and the Institute for Solid State Physics participates as a cooperative course. It was newly established in April 1999 as one of the four majors in the Graduate School of Frontier Sciences, the University of Tokyo. So far, we have been working as a new 21st century graduate school major at this Kashiwa campus. Currently, we become the world's largest research center for interdisciplinary materials science research bases and are implementing leading materials science research, which has been done in collaboration with RIKEN, National Institute of Advanced Industrial Science and Technology (AIST), National Institute for Materials Science (NIMS), and SPring-8 (synchrotron radiation facility). We are conducting a new scheme of materials science education based on academic fusion, aiming to develop researchers and engineers who can play an active role on the international stage in the future. Let's learn and practice cutting-edge science and disseminate it to the world with us.

## Faculty members

### Applied Physics



#### Arima & Tokunaga Lab.

##### Correlated-Matter Physics

Professor

#### Taka-hisa Arima

##### Keywords

Cross-correlated phenomena, Non-reciprocal phenomena, Neutron scattering, Synchrotron x-ray scattering

**e-mail** arima@k.u-tokyo.ac.jp

**TEL** 04-7136-3805



#### Arima & Tokunaga Lab.

##### Correlated-Matter Physics

Associate Professor

#### Yusuke Tokunaga

##### Keywords

Cross-correlated phenomena, Magnetoelectric effect, Strongly correlated electron systems, Novel material functions

**e-mail** y-tokunaga@k.u-tokyo.ac.jp

**TEL** 04-7136-3770



#### Shibauchi & Hashimoto Lab.

##### Quantum Phase of Matter

Professor

#### Takasada Shibauchi

##### Keywords

Superconductivity, Quantum critical phenomena, Low temperature physics, Topological quantum physics

**e-mail** shibauchi@k.u-tokyo.ac.jp

**TEL** 04-7136-3774



#### Shibauchi & Hashimoto Lab.

##### Quantum Phase of Matter

Associate Professor

#### Kenichiro Hashimoto

##### Keywords

Superconductivity, Quantum phase transition, Quantum liquid/glass, Strongly correlated electron systems

**e-mail** k.hashimoto@edu.k.u-tokyo.ac.jp

**TEL** 04-7136-4048



## Kimura Lab. ※1

### Functional Materials Science

Professor

## Tsuyoshi Kimura

#### Keywords

Single crystal growth, Exploration for functional materials, Correlated electron systems, Multiferroics

**e-mail** tkimura@ap.t.u-tokyo.ac.jp

**TEL** 03-5841-6820

※1 No recruitment for Master's course students



## Sugimoto Lab.

### Single Atom Molecule Science

Professor

## Yoshiaki Sugimoto

#### Keywords

Surface science, Atom manipulation, Atomic-scale characterization, Atomic force microscopy

**e-mail** ysugimoto@k.u-tokyo.ac.jp

**TEL** 04-7136-4058



## Yoshimi Lab.

### Condensed Matter Physics

Associate Professor

## Ryutaro Yoshimi

#### Keywords

Functional materials development, Molecular beam epitaxy, Topological quantum physics

**e-mail** r-yoshimi@edu.k.u-tokyo.ac.jp

**TEL** 04-7136-3752

## New Materials and Interfaces



## Takeya & Tamai Lab.

### Organic Electronics Science

Professor

## Jun Takeya

#### Keywords

Organic electronics, Organic semiconductor physics, Organic chemistry, Organic device

**e-mail** takeya@k.u-tokyo.ac.jp

**TEL** 04-7136-3790



## Takeya & Tamai Lab.

### Organic Electronics Science

Associate Professor

## Yasunari Tamai

#### Keywords

Organic electronics, Organic photophysics · photochemistry, Ultrafast spectroscopy, Organic device

**e-mail** tamai@edu.k.u-tokyo.ac.jp

**TEL** 04-7136-3765



## Watanabe Lab.

### Organic Electronics Science

Associate Professor

## Shun Watanabe

#### Keywords

Polymer physical chemistry, Supramolecular functional materials, Molecular electronics and spintronics

**e-mail** swatanabe@edu.k.u-tokyo.ac.jp

**TEL** 04-7136-3788





## Ariga Lab.

### Organic Electronics Science

Professor

## Katsuhiko Ariga

#### Keywords

Molecular Machine & Nanocar, Organic Device, Functional Nanomaterial, Sensor

**e-mail** ariga.katsuhiko@nims.go.jp

**TEL** 029-860-4597 (NIMS) 04-7136-4062



## Uchida Lab.

### Energy-conversion Quantum Science

Professor

## Ken-ichi Uchida

#### Keywords

Spintronics, Spin caloritronics, Thermoelectrics, Thermal engineering

**e-mail** kuchida@edu.k.u-tokyo.ac.jp

**TEL** 029-859-2062(NIMS) 04-7136-3756

## Materials Design and Processing



## Ito Lab.

### Process Science for Advanced Materials

Associate Professor

## Tsuyohito Ito

#### Keywords

plasma materials processing, laser-induced processing, non-equilibrium, interfacial processing, nano-composite materials

**e-mail** tsuyohito@plasma.k.u-tokyo.ac.jp

**TEL** 04-7136-3782



## Mitarai Lab.

### High-Temperature Materials Design

Professor

## Yoko Mitarai

#### Keywords

Jet engine materials, Design of high-temperature alloys, Processing, mechanical properties, creep

**e-mail** mitarai.yoko@edu.k.u-tokyo.ac.jp

**TEL** 04-7136-3783



## Kita Lab.

### Nano-Space Function Design

Professor

## Koji Kita

#### Keywords

Advanced power devices, Near-interface nanoregion, Oxide thin films, Widedgap semiconductors

**e-mail** kita@edu.k.u-tokyo.ac.jp

**TEL** 04-7136-5456

## Imaging Science



## Sasaki Lab.

### Multiple-Image Science

Professor

## Yuji Sasaki

#### Keywords

X-ray Single Molecule, Time-resolution, C.elegans, Nano-biology, Material Dynamics

**e-mail** ycsasaki@edu.k.u-tokyo.ac.jp

**TEL** 04-7136-3892



## Yamashita Lab.

Condensed Matter Science

Associate Professor

**Minoru Yamashita**

### Keywords

Quantum spin liquid, Superconductivity,  
Developments of ultra-low temperature equipments

**e-mail** my@issp.u-tokyo.ac.jp

**TEL** 04-7136-3350



## Takagi Lab.

Condensed Matter Science

Associate Professor

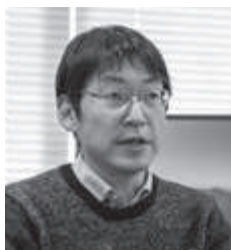
**Rina Takagi**

### Keywords

New material development,  
Control of many-body nanostructure,  
Strongly correlated electron systems, Crystal synthesis

**e-mail** rina.takagi@issp.u-tokyo.ac.jp

**TEL** 04-7136-3245



## Y. Okamoto Lab.

Materials Design

Professor

**Yoshihiko Okamoto**

### Keywords

Crystalline, Solids, New Materials,  
Exotic Quantum Phenomena,  
Electronic Functions

**e-mail** yokamoto@issp.u-tokyo.ac.jp

**TEL** 04-7136-3250



## Yamaura Lab.

Materials Design

Associate Professor

**Jun-ichi Yamaura**

### Keywords

Multimodal structural physics, Novel quantum solids,  
Functional materials

**e-mail** jyamaura@issp.u-tokyo.ac.jp

**TEL** 04-7136-3252



## Miwa Lab.

Quantum Materials

Associate Professor

**Shinji Miwa**

### Keywords

Quantum materials spintronics,  
Chiral molecular spintronics, Operando spectroscopy

**e-mail** miwa@issp.u-tokyo.ac.jp

**TEL** 04-7136-3300



## Inoue Lab.

Functional Materials

Associate Professor

**Keiichi Inoue**

### Keywords

Photoreceptive protein,  
Advanced biological molecular spectroscopy,  
Development of new biomolecular tools, Deep learning

**e-mail** inoue@issp.u-tokyo.ac.jp

**TEL** 04-7136-3230



## Yoshinobu Lab. ※2

**Nanoscale Science**

Professor

**Jun Yoshinobu**

### Keywords

Surface and interface, Catalytic reaction,  
Low-dimensional materials,  
Surface spectroscopy, Local probe microscopy

**e-mail** yoshinobu@issp.u-tokyo.ac.jp

**TEL** 04-7136-3320

※2 No recruitment for Doctoral course students



## Lippmaa Lab.

**Nanoscale Science**

Professor

**Mikk Lippmaa**

### Keywords

Oxide, Thin film, Surface, Interface

**e-mail** lippmaa@issp.u-tokyo.ac.jp

**TEL** 04-7136-3315



## Matsuda Lab.

**International MegaGauss Science**

Professor

**Yasuhiro H. Matsuda**

### Keywords

Ultra-high magnetic fields, Strongly correlated electrons,  
Quantum spin systems,  
Magnetic field-induced phase transitions

**e-mail** ymatsuda@issp.u-tokyo.ac.jp

**TEL** 04-7136-5329



## Miyata Lab.

**Ultrahigh magnetic field science**

Associate Professor

**Miyata Atsuhiko**

### Keywords

Ultra-high magnetic fields, Magneto-optics, Quantum magnets,  
Magnet technology

**e-mail** a-miyata@issp.u-tokyo.ac.jp

**TEL** 04-7136-5531



## Okazaki Lab.

**Laser and Synchrotron**

Associate Professor

**Kozo Okazaki**

### Keywords

Photoemission spectroscopy, Superconductivity,  
Strongly correlated electron system

**e-mail** okazaki@issp.u-tokyo.ac.jp

**TEL** 04-7136-3351



## Harada Lab.

**Synchrotron Radiation Science**

Professor

**Yoshihisa Harada**

### Keywords

Synchrotron radiation, Soft X-ray emission spectroscopy,  
Electronic states, Solution chemistry

**e-mail** harada@issp.u-tokyo.ac.jp

**TEL** [Harima] 0791-58-0802-3966  
[Kashiwa] 04-7136-3401



## Masuda Lab.

**Neutron Science**

Professor

**Takatsugu Masuda**

### Keywords

Quantum magnet, Frustrated magnet, Topological magnon,  
Neutron scattering

**e-mail** masuda@issp.u-tokyo.ac.jp

**TEL** 04-7136-3415





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## Mayumi Lab.

**Neutron Science**

Associate Professor

**Koichi Mayumi**

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### Keywords

Polymer, Soft matter, Neutron scattering

**e-mail** [kmayumi@issp.u-tokyo.ac.jp](mailto:kmayumi@issp.u-tokyo.ac.jp)

**TEL** 04-7136-3418

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# Master's course, Ordinary Examination and Special Selection for Applicants with Overseas Education, Schedule A

## Selection method

Admission decision will be made based on the submitted documents and the results of the written/oral examinations.

### 1. Application Period from Thursday, June 6 to Wednesday June 12, 2024.

To apply, follow the procedures on the Online Application Site. Please access the online application from the Information on Entrance Examinations page on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>.

Please read carefully "Guidelines for Applicants to the 2025 Master's Course, Graduate School of Frontier Sciences, The University of Tokyo", which is uploaded on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>.

### 2. Written Examinations

#### (1) Foreign languages (English)

Submit TOEFL-iBT scores. Submit your Test Data Scores to the Online Application Site by noon Thursday, August 8, 2024. Only Reading and Listening scores are taken. Please refer to 7. English Score Report section in "Guidelines for Applicants to the 2025 Master's Course Graduate School of Frontier Sciences The University of Tokyo".

#### (2) Specialized Subjects

Choose three questions and answer them out of three fields of physics (classical mechanics, electromagnetics/optics, quantum mechanics, thermodynamics/statistical mechanics, condensed matter physics, experimental physics, etc...), chemistry (physical chemistry, inorganic chemistry, analytical chemistry, organic chemistry, etc...), and materials science (thermodynamics/phase diagram, material structure, transport phenomenology/reaction theory, materials physics, materials chemistry, materials process, materials theory, materials design, etc...). Three to four questions are provided from each of the three fields. (You may choose three questions from two or more fields.)

The written examination is allocated 75 points for foreign languages and 300 points for specialized subjects. Each score and its total score will be evaluated.

### 3. Oral examination

An oral examination tests the qualifications appropriate for a graduate student. Details of the oral examination will be notified by e-mail.

### 4. Examination Schedule

#### (1) 1st-stage examination

Subject	Date	Venue (a)
Specialized subject	Tuesday, August 20 13 : 40 ~ 16 : 40※	Main conference room, 6F Kashiwa Research Complex

※The estimated time to leave may be around 18:00.

#### (2) 2nd-stage examination (b)

Subject	Date	Venue
Oral examination	Monday, August 26 9 : 00 ~ 18 : 00	Online (c)

(a) Details of the examination venue will be notified by e-mail. For the written examination on Tuesday, August 20, please arrive with plenty of time to avoid being late.

(b) 2nd-stage examination will be conducted only for those who passed the 1st-stage examination. Successful applicants of the 1st-stage examination will be notified by e-mail around 11:00 am on Friday, August 23.

(c) Be sure to participate in the preliminary connection test on Saturday, August 24. If you do not participate in the preliminary connection test and have connection problems on the day of the test, we will not take remedial measures such as retesting.

After all examinations are completed, the informal decision will be sent by e-mail on Monday, August 26. The final results will be announced on Wednesday, September 4 after deliberations by the GSFS.

## 5. Application Submission

See the List of Application Documents (Master's course) on page 9. Submit the Inquiry Sheet (Master's course) online together with the application documents. In the Inquiry Sheet (Master's course), fill in the numbers starting 1 in the order of preference in the column next to the laboratory to which you wish to be assigned. Please read the following notes carefully when preparing documents. Please download the pdf of the Inquiry Sheet (Master's course) from the entrance examination information page [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html).

### Notes

- (1) Be sure to fill in the numbers from your 1st choice to your 10th choice at least. Do not fill in the same number.
- (2) Applicants who wish to be assigned to other laboratories if their requests are not fulfilled should also fill in the number of their 11th choice and later.
- (3) Changes in the order of preference for laboratories after submission are not permitted.

Please fill in the form after careful consideration. Please refer to the Introduction of Faculty Members in this guideline, the Department of Advanced Materials Science homepage [https://www.k.u-tokyo.ac.jp/materials/index\\_e.html](https://www.k.u-tokyo.ac.jp/materials/index_e.html), and the orientation for entrance examination. It is also possible to visit the laboratory of your choice. Please also refer to the orientation for the Institute for Solid State Physics [https://www.issp.u-tokyo.ac.jp/index\\_en.html](https://www.issp.u-tokyo.ac.jp/index_en.html).

Applicants should refer to "Guidelines for Applicants to the 2025 Master's Course Graduate School of Frontier Sciences The University of Tokyo", and may make a contact with the preferred thesis advisor to discuss research content before application. However, even if you are unable to consult with the professor in advance, this does not prevent you from application.

## 6. Special Selection for Applicants with Overseas Education

Please refer to "Guidelines for Applicants to the 2025 Master's Course Graduate School of Frontier Sciences The University of Tokyo" for application eligibility. Before applying, be sure to contact the preferred thesis advisor (your 1st choice faculty member). Convenience such as English translation of the questions will be provided. Answers may be in English.

## 7. Application of October 2024 Admission

Those who meet the application requirements can apply for October 2024 Admission.

## 8. Miscellaneous

- (1) It is possible to inquire about the research content you want to do in the Master's course with the faculty member you wish to be supervised before applying. Please note that we cannot respond to inquiries after the application has been submitted.
- (2) If you have any questions about the entrance examination for this department, please contact the Department of Advanced Materials Science (E-mail: [ams-office@ams.k.u-tokyo.ac.jp](mailto:ams-office@ams.k.u-tokyo.ac.jp)).
- (3) Please carefully read "Guidelines for Applicants to the 2025 Master's Course Graduate School of Frontier Sciences The University of Tokyo", and this guideline. If you have any questions, please contact the Student Affairs Team <https://forms.office.com/r/QGh4j9VYXv>.
- (4) Past exam questions (Japanese version only) in the fields of physics, chemistry, and materials science (selective) are published on the website [https://www.k.u-tokyo.ac.jp/materials/index\\_e.html](https://www.k.u-tokyo.ac.jp/materials/index_e.html). If you wish to have the English version, please contact the above (2).
- (5) Use the List of Application Documents (Master's course) to confirm that there are no deficiencies in the application document.

## List of Application Documents (Master's course)

### Application Submission: Master's course

Documents requested from GSFS: please refer to 6. Application Submission section in "Guidelines for Applicants to the 2025 Master's Course Graduate School of Frontier Sciences The University of Tokyo", which is uploaded on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>.

Inquiry to Student Affairs Team, Graduate School of Frontier Sciences <https://forms.office.com/r/QGh4j9VYXv>

Documents requested from the Department of Advanced Materials Science.

Inquiry to the Department of Advanced Materials Science (E-mail: [ams-office@ams.k.u-tokyo.ac.jp](mailto:ams-office@ams.k.u-tokyo.ac.jp)).

	Application Submission	Applicant	Submission deadline	Submission Method
①	Inquiry Sheet (Master's course)	All	Application period June 6 - June 12, 2024	Download the PDF format from AMS website and upload it to the Online Application Site
②	Japanese language proficiency certificate	Only if you have a certificate	Application period June 6 - June 12, 2024	Upload the pdf file to the Online Application Site
③	Research/work blance plan	Those who plan to enroll while being employed by a company, government agency, or other organization	Application period June 6 - June 12, 2024	Upload the pdf file to the Online Application Site
④	TOEFL-iBT score sheet	All	noon, August 8, 2024	<ul style="list-style-type: none"> <li>● Upload the PDF file of "Test Taker Score Report" to the Online Application Site</li> <li>● "Institutional Score Report" should be directly mailed from ETS to GSFS</li> <li>● TEST Data Scores of TOEFL-iBT or TOEFLiBT Home Edition can be adopted as submitted scores (My BEST Scores are not adapted).</li> <li>● Only the scores of Reading and Listening are referred.</li> <li>● Please follow the instruction in the Guideline of GSFS</li> </ul>

Department of Advanced Materials Science (AMS website) [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html)

# Inquiry Sheet (Master's course)

Applicants should submit this Inquiry Sheet online together with the application documents.

Department of Advanced Materials Science,  
Graduate School of Frontier Sciences, The University of Tokyo

Applicant's Full Name			
Please fill in the numbers starting 1 in the order of preference in the column next to the laboratory to which you wish to be assigned. Be sure to fill in the numbers from your 1st choice to your 10th choice at least. Do not fill in the same number.			
Arima & Tokunaga	Mitarai	Yoshinobu	
Shibauchi & Hashimoto	Kita	Lippmaa	
Sugimoto	Sasaki	Matsuda	
Yoshimi	Yamashita	Miyata	
Takeya & Tamai	Takagi	Okazaki	
Watanabe	Okamoto	Harada	
Ariga	Yamaura	Masuda	
Uchida	Miwa	Mayumi	
Ito	Inoue		
Research area of interest (Please write as specifically as possible what kind of research you want to do in the Master's course)			
Check the box if you want English translation of examination questions <input type="checkbox"/>			
※Even if an English translation is desired, Japanese question booklet will be provided to all examinees			



# Doctoral course, Ordinary Examination and Special Selection for Applicants with Overseas Education, Schedule A

## Selection Method

Admission decision will be made based on the submitted documents and the results of the written/oral examinations.

### 1. Application Period From Thursday, June 6 to Wednesday June 12, 2024.

To apply, follow the procedures on the online application site. Please access the online application from the Information on Entrance Examinations page on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>.

Please read carefully "Guidelines for Applicants to the 2025 Doctoral Course, Graduate School of Frontier Sciences, The University of Tokyo", which is uploaded on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>.

### 2. Written Examinations

#### (1) Foreign languages (English)

Submit TOEFL-iBT scores. Submit your Test Data Scores to the online application site by noon Thursday, August 8, 2024. Only Reading and Listening scores are taken. Please refer to 7. English Score Report section in "Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo". The TOEFL score sheet must be submitted unless you have completed or are expected to complete a master's course at The University of Tokyo.

#### (2) Specialized Subjects

Individual questions about specialized academic subjects will be given to those who have completed or are expected to complete a master's course in Department of Advanced Materials Science. Other applicants will be qualified either by the examination subject in the field of physics, chemistry, or materials science (selective), or by individual questions about specialized academic subjects. Details of specialized subjects will be notified individually by e-mail.

### 3. Oral examination

An oral examination that tests the specialized knowledge appropriate for a Doctoral course student. Describe your research and the prospects for research in the Doctoral course. Details of the oral examination will be sent individually by e-mail. Those who complete the master's course (or are expected to complete it) before September 2024 should prepare a 20-minute presentation about the content of master's thesis (or equivalent research content), and submit your master's thesis (or a copy) together with an abstract of your research (A4, 3 pages). Those who are expected to complete the master's course after October 2024 should prepare a 20-minute presentation about your research contents so far, and submit an abstract of your research (A4, 3 pages).

### 4. Examination Schedule

Subject	Date	Venue (a)
Specialized subject	Tuesday, August 20 13 : 40 ~ 16 : 40※	Main conference room, 6F Kashiwa Research Complex
Oral examination	Friday, August 23 13 : 00 ~ 18 : 00	Online (b)

※The estimated time to leave may be around 18:00.

(a) Details of the examination venue will be notified by e-mail. For the written examination on Tuesday, August 20, please arrive with plenty of time to avoid being late.

(b) Be sure to participate the preliminary connection test. If you do not participate in the preliminary connection test and have connection problems on the day of the test, we will not take remedial measures such as retesting. Details of the time of the oral examination will be sent individually by e-mail.

## 5. Application Submission

See the List of Application Documents (Doctoral course Schedule A) on page15. Submit the Inquiry Sheet (Doctoral course Schedule A) online including the preferred thesis advisor, together with the application documents. Please download the pdf of the Inquiry Sheet (Doctoral course Schedule A) from the entrance examination information page [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html) .

### Notes

Applicants should refer to “Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo”, and must make a contact with the desired faculty member to discuss research content before application. However, even if you are unable to consult with the professor in advance, this does not prevent you from application.

## 6. Special Selection for Applicants with Overseas Education

Please refer to “Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo” for application eligibility. Convenience such as English translation of the questions will be provided. Answers may be in English.

## 7. Application of October 2024 Admission

Those who meet the application requirements can apply for October 2024 Admission.

## 8. Miscellaneous

- (1) It is possible to inquire about the research content you want to do in the doctoral course with the faculty member you wish to be supervised before applying. Please note that we cannot respond to inquiries after the application has been submitted.
- (2) If you have any questions about the entrance examination for this department, please contact the Department of Advanced Materials Science (E-mail: [ams-office@ams.k.u-tokyo.ac.jp](mailto:ams-office@ams.k.u-tokyo.ac.jp)) .
- (3) Please carefully read “Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo”, and this guideline. If you have any questions, please contact the Student Affairs Team <https://forms.office.com/r/QGh4j9VYXv>.
- (4) Past exam questions (Japanese version only) in the fields of physics, chemistry, and materials science (selective) are published on the website [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html) . If you wish to have the English version, please contact the above (2) .
- (5) Use the List of Application Documents (Doctoral course Schedule A) to confirm that there are no deficiencies in the application document.

## Doctoral course, Special Selection for Applicants with Professions (Only for Schedule A)

### Application requirements and documents to be submitted

In addition to the application qualifications listed in the application requirements, one or more peer-reviewed papers (The papers must be written in English and the applicant must be the first or co-author of the papers) must be published or accepted for publication. In addition to the documents listed in the application guidelines, submit a master's thesis or alternative, the abstract of the thesis, and a list of research achievements (a list of papers, conference presentations, patents, etc.) (see the List of Application Documents (Doctoral course Schedule A)).

### Selection Method

Admission decision will be made based on the submitted documents and the results of the written/oral examinations.

#### 1. Application Period From Thursday, June 6 to Wednesday June 12, 2024.

To apply, follow the procedures on the online application site. Please access the online application from the Information on Entrance Examinations page on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>. Please read carefully "Guidelines for Applicants to the 2025 Doctoral Course, Graduate School of Frontier Sciences, The University of Tokyo", which is uploaded on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>.

#### 2. Written Examinations

##### Foreign languages (English)

Submit TOEFL-iBT scores. Submit your Test Data Scores to the online application site by noon Thursday, August 8, 2024. Reading and Listening scores are taken. Please refer to 7. English Score Report section in "Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo". The TOEFL score sheet must be submitted unless you have completed or are expected to complete a master's course at The University of Tokyo. university.

#### 3. Oral examination

An oral examination (approximately 30 minutes per student) that tests the specialized knowledge appropriate for a doctoral course graduate student. Please prepare a 20-minute presentation on past research and future research plans. Submit an abstract of your presentation.

#### 4. Examination Schedule

Subject	Date	Venue (a)
Oral examination	Friday, August 23 13 : 00 ~ 18 : 00	Online

(a) Details of the examination will be notified by e-mail. Be sure to participate in the preliminary connection test. If you do not participate in the preliminary connection test and have connection problems on the day of the test, we will not take remedial measures such as retesting.

## 5. Application Submission

See the List of Application Documents (Doctoral course Schedule A) on page15. Submit the Inquiry Sheet (Doctoral course Schedule A) online including a desired faculty member together with the application documents. Please download the pdf of the Inquiry Sheet (Doctoral course Schedule A) from the entrance examination information page [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html) .

### Notes

Applicants should refer to “Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo”, and must make a contact with the preferred thesis advisor to discuss research content before application. However, even if you are unable to consult with the professor in advance, this does not prevent you from application.

## 6. Application of October 2024 Admission

Those who meet the application requirements can apply for October 2024 Admission.

## 7. Miscellaneous

- (1) It is possible to inquire about the research content you want to do in the doctoral course with the faculty member you wish to be supervised before applying. Please note that we cannot respond to inquiries after the application has been submitted.
- (2) If you have any questions about the entrance examination for this department, please contact the Department of Advanced Materials Science (E-mail: [ams-office@ams.k.u-tokyo.ac.jp](mailto:ams-office@ams.k.u-tokyo.ac.jp)) .
- (3) Please carefully read “Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo”, and this guideline. If you have any questions, please contact the Student Affairs Team <https://forms.office.com/r/QGh4j9VYXv>.
- (4) Use the List of Application Documents (Doctoral course Schedule A) to confirm that there are no deficiencies in the application document.

# List of Application Documents (Doctoral course Schedule A)

## Application Submission: Doctoral course Schedule A

Documents requested from GSFS: please refer to 6. Application Submission section in "Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo", which is uploaded on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>. Inquiry to Student Affairs Team, Graduate School of Frontier Sciences <https://forms.office.com/r/QGh4j9VYXv>

Documents requested from the Department of Advanced Materials Science.

Inquiry to the Department of Advanced Materials Science (E-mail: [ams-office@ams.k.u-tokyo.ac.jp](mailto:ams-office@ams.k.u-tokyo.ac.jp)).

	Application Submission	Applicant	Submission deadline	Submission Method
①	Inquiry Sheet (Doctoral course Schedule A)	All	Application period June 6 - June 12, 2024	Download the PDF format from AMS website Upload to the Online Application Site
②	Japanese language proficiency certificate	Only if you have a certificate	Application period June 6 - June 12, 2024	Upload the pdf file to the Online Application Site
③	Research/work balance plan	Those who plan to enroll while being employed by a company, government agency, or other organization	Application period June 6 - June 12, 2024	Upload the pdf file to the Online Application Site
④	List of research achievements	All applicants for Special Selection for Applicants with Professions	Application period June 6 - June 12, 2024	Upload the pdf that includes a list of papers, conference presentations, patents etc... to the Online Application Site
⑤	TOEFL-iBT score sheet	All (excluding those who have completed or are expected to complete a master's course at The University of Tokyo)	noon, August 8, 2024	<ul style="list-style-type: none"> <li>● Upload the PDF file of "Test Taker Score Report" to the Online Application Site</li> <li>● "Institutional Score Report" should be directly mailed from ETS to GSFS</li> <li>● TEST Data Scores of TOEFL-iBT or TOEFLiBT Home Edition can be adopted as submitted scores (My BEST Scores are not adopted).</li> <li>● Only the scores of Reading and Listening are referred.</li> <li>● Please follow the instruction in the Guideline of GSFS</li> </ul>
⑥	Master thesis or its equivalent	All ※	noon, August 14, 2024	Upload PDF to the Online Application Site
⑦	Abstract of presentation in oral examination (A4 paper 3 pages)	All	noon, August 14, 2024	In the abstract (A4 paper 3pages), please summarize your master course research (or other past research) and your perspectives of the research in the doctoral course after the enrollment. Upload the PDF file to the Online Application Site.
⑧	Abstract of master thesis	All applicants for Special Selection for Applicants with Professions	noon, August 14, 2024	Upload the pdf file to the Online Application Site

※Those who are expected to complete their master's course after October 2024 will be exempted from submission.

Department of Advanced Materials Science (AMS website) [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html)



# Inquiry Sheet (Doctoral course Schedule A)

Applicants should submit this Inquiry Sheet online together with the application documents.

Department of Advanced Materials Science,  
Graduate School of Frontier Sciences, The University of Tokyo

Applicant's Full Name	
Name of preferred thesis advisor	
Summary of your research topic and plan	
Check the box if you want English translation of examination questions <input type="checkbox"/> ※Even if an English translation is desired, Japanese question booklet will be provided to all examinees	

## Doctoral course, Special Selection for Applications with Overseas Education, Schedule B

### Selection Method

Please refer to "Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo" for application eligibility. Convenience such as English translation of the questions will be provided. Answers may be in English. Admission decision will be made based on the submitted documents and the results of the written/oral examinations.

#### 1. Application Period From Tuesday, November 12 to Monday, November 18, 2024.

To apply, follow the procedures on the online application site. Please access the online application from the Information on Entrance Examinations page on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>. Please read carefully "Guidelines for Applicants to the 2025 Doctoral Course, Graduate School of Frontier Sciences, The University of Tokyo", which is uploaded on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/>.

#### 2. Written Examinations

##### (1) Foreign languages (English)

Submit TOEFL-iBT scores. Submit your Test Data Scores to the online application site by noon Wednesday, January 8, 2025. Reading and Listening scores are taken.

Please refer to 7. English Score Report section in Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo.

##### (2) Specialized Subjects

Individual questions about specialized academic subjects will be given.

#### 3. Oral examination

An oral examination that tests the specialized knowledge appropriate for a Doctoral course student. Describe your research and the prospects for research in the Doctoral course. Details of the oral examination will be sent individually by e-mail. Those who complete the master's course (or are expected to complete it) before March 2025 should prepare a 20-minute presentation about the content of master's thesis (or equivalent research content), and submit your master's thesis (or a copy) together with an abstract of your research (A4, 3 pages). Those who are expected to complete the master's course after April 2025 should prepare a 20-minute presentation about your research contents so far, and submit an abstract of your research (A4, 3 pages).

#### 4. Examination Schedule

Subject	Date	Venue (a)
Specialized subject	Monday, January 20, 2025 13 : 40 ~ 16 : 40※	2F, Transdisciplinary Sciences Building, Kashiwa campus
Oral examination	Tuesday, January 28, 2025 13 : 00 ~ 18 : 00	Online (b)

※The estimated time to leave may be around 18:00.

(a) Details of the examination will be notified by e-mail. For the written examination on Monday January 20, please arrive with plenty of time to avoid being late.

(b) Be sure to participate the preliminary connection test. If you do not participate in the preliminary connection test and have connection problems on the day of the test, we will not take remedial measures such as retesting. Details of the time of the oral examination will be sent individually by e-mail.

## 5. Application Submission

See the List of Application Documents (Doctoral course Schedule B) on page 19. Submit the Inquiry Sheet (Doctoral course Schedule B) online including the preferred thesis advisor together with the application documents. Please download the pdf of the Inquiry Sheet (Doctoral course Schedule B) from the entrance examination information page [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html).

### Notes

Applicants should refer to "Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo", and must make a contact with the preferred thesis advisor to discuss research content before application. However, even if you are unable to consult with the professor in advance, this does not prevent you from application.

## 6. Application of April 2025 Admission

Those who meet the application requirements can apply for April 2025 Admission.

## 7. Miscellaneous

- (1) It is possible to inquire about the research content you want to do in the doctoral course with the faculty member you wish to be supervised before applying. Please note that we cannot respond to inquiries after the application has been submitted.
- (2) If you have any questions about the entrance examination for this department, please contact the Department of Advanced Materials Science (E-mail: [ams-office@ams.k.u-tokyo.ac.jp](mailto:ams-office@ams.k.u-tokyo.ac.jp)).
- (3) Please carefully read "Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo", and this guideline. If you have any questions, please contact the Student Affairs Team <https://forms.office.com/r/QGh4j9VYXv>.
- (4) Use the List of Application Documents (Doctoral course Schedule B) to confirm that there are no deficiencies in the application document.

## List of Application Documents (Doctoral course Schedule B)

### Application Submission: Doctoral course Schedule B

Documents requested from GSFS: please refer to 6. Application Submission section in “Guidelines for Applicants to the 2025 Doctoral Course Graduate School of Frontier Sciences The University of Tokyo”, which is uploaded on the GSFS website <https://www.k.u-tokyo.ac.jp/en/exam/info/> ..

Inquiry to Student Affairs Team, Graduate School of Frontier Sciences <https://forms.office.com/r/QGh4j9VYXv>

Documents requested from the Department of Advanced Materials Science.

Inquiry to the Department of Advanced Materials Science (email: [ams-office@ams.k.u-tokyo.ac.jp](mailto:ams-office@ams.k.u-tokyo.ac.jp)).

	Application Submission	Applicant	Submission deadline	Submission Method
①	Inquiry Sheet (Doctoral course Schedule B)	All	Application period November 12 - November 18, 2024	Download the PDF format from AMS website Upload to the Online Application Site
②	Japanese language proficiency certificate	Only if you have a certificate	Application period November 12 - November 18, 2024	Upload the pdf file to the Online Application Site
③	Research/work balance plan	Those who plan to enroll while being employed by a company, government agency, or other organization	Application period November 12 - November 18, 2024	Upload the pdf file to the Online Application Site
④	TOEFL-iBT score sheet	All	noon, January 8, 2025	<ul style="list-style-type: none"> <li>● Upload the PDF file of “Test Taker Score Report ” to the Online Application Site</li> <li>● “Institutional Score Report” should be directly mailed from ETS to GSFS</li> <li>● TEST Data Scores of TOEFL-iBT or TOEFLiBT Home Edition can be adopted as submitted scores (My BEST Scores are not adapted).</li> <li>● Only the scores of Reading and Listening are referred.</li> <li>● Please follow the instruction in the Guideline of GSFS</li> </ul>
⑤	Master thesis or its equivalent	All ※	noon, January 15, 2025	Upload the pdf file to the Online Application Site
⑥	Abstract of presentation in oral examination (A4 paper 3 pages)	All	noon, January 15, 2025	In the abstract (A4 paper 3pages), please summarize your master course research (or other past research) and your perspectives of the research in the doctoral course after the enrollment. Upload the PDF file to the online application Site

※Those who are expected to complete their master’s course after April 2025 will be exempted from submission.

Department of Advanced Materials Science (AMS website) [https://www.k.u-tokyo.ac.jp/materials/exam\\_e.html](https://www.k.u-tokyo.ac.jp/materials/exam_e.html)

## Inquiry Sheet (Doctoral course Schedule B)

Applicants should submit this Inquiry Sheet online together with the application documents.

Department of Advanced Materials Science,  
Graduate School of Frontier Sciences, The University of Tokyo

Applicant's Full Name	
Name of preferred thesis advisor	
Summary of your research topic and plan	
Check the box if you want English translation of examination questions <input type="checkbox"/> ※Even if an English translation is desired, Japanese question booklet will be provided to all examinees	



## Examination guideline

### 1. Schedule

Please refer to the Examination Schedule in this guideline

### 2. Venue (see next page)

Transdisciplinary Science, GSFS/Research Complex, The University of Tokyo,  
5-1-5 Kashiwanoha, Kashiwa, Chiba 277-8561

#### Access from Tokyo

- From "Ueno" or "Nippori" on the JR Yamanote Line to "Kashiwa" on the JR Joban Line
- From "Akihabara" on the JR Yamanote Line to "Kashiwanoha Campus" on the Tsukuba Express

#### Transportation access from the Kashiwa area

- 25 mins (3 mins by foot from "Todaimae" bus stop) from the west exit of "Kashiwa" on the JR Joban Line, take the Tobu Bus bound for Nishikashiwa 01/National Cancer Center (via Kashiwanoha Park),
- 30 mins by foot from the west exit of "Kashiwanoha Campus" on the Tsukuba Express, or 13 mins by Tobu Bus bound for "Nishikashiwa 03/Nagareyama Otakanomori Station East Exit" or "Nishikashiwa 04 or Nishikashiwa 10/Edogawadai Station East Exit" (3 mins by foot from "Todaimae" bus stop)
- 4 mins by taxi from the west exit of "Kashiwanoha Campus" on the Tsukuba Express
- 5 mins by taxi from the east exit of "Edogawadai" on the Tobu Urban Park Line

(1) Details of the written and oral examinations will be notified separately by e-mail. Please frequently check the e-mail address registered at the time of application.

(2) Examinees must enter and be seated in the designated examination room 25 minutes before the start of the examination for specialized subjects and 15 minutes before the start of the examination for other examinations. If you are late for the scheduled time, please notify the examiner of each examination room.

### 3. Items

Be sure to bring your examination admission ticket, black pencil (or black mechanical pencil, etc.), eraser, pencil sharpener (desktop type not allowed), and scientific calculator. Clocks (with clock function only) and stopwatches are also permitted. Smart watches are prohibited.

### 4. Oral examination

An oral examination will be conducted online using Cisco's Webex Meetings (hereafter, Webex). Prepare a sufficiently high-speed network environment that enables online testing using video. Install Webex on your own computer and familiarize yourself with how to operate it. Each applicant must prepare a personal computer with a camera to capture yourself, microphone, and speaker functions (camera, microphone, and speaker may be attached externally to PC). The use of headphones and earphones is prohibited.

### 5. Notes for written examinations

(1) You are not allowed to leave during the examination time even if you have completed your answers. For specialized subjects, it takes about 15 minutes to check and collect the answers after the examination time ends, but you are not allowed to leave during this time.

(2) As a general rule, using a toilet during the examination is not permitted.

(3) Turn off mobile phones, etc. during the exam (cannot be used as a clock).

(4) Keep the examination admission ticket on the desk at all times during the examination.

(5) Fill in your examinee number on each answer sheet. Do not write your name.

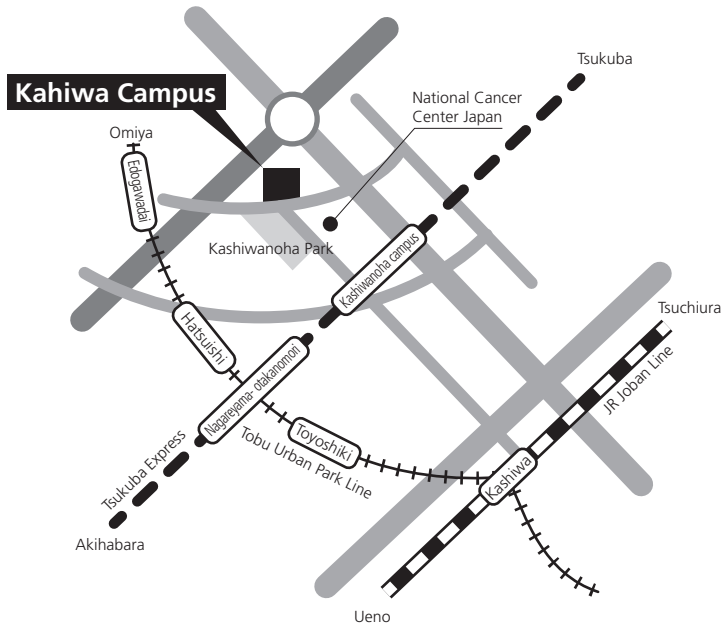
(6) Fill out the answers on the prescribed form. If it is insufficient, it may be applied to the back side.

(7) Even if you are unable to answer, you must enter your examinee number on the answer sheet and submit it.

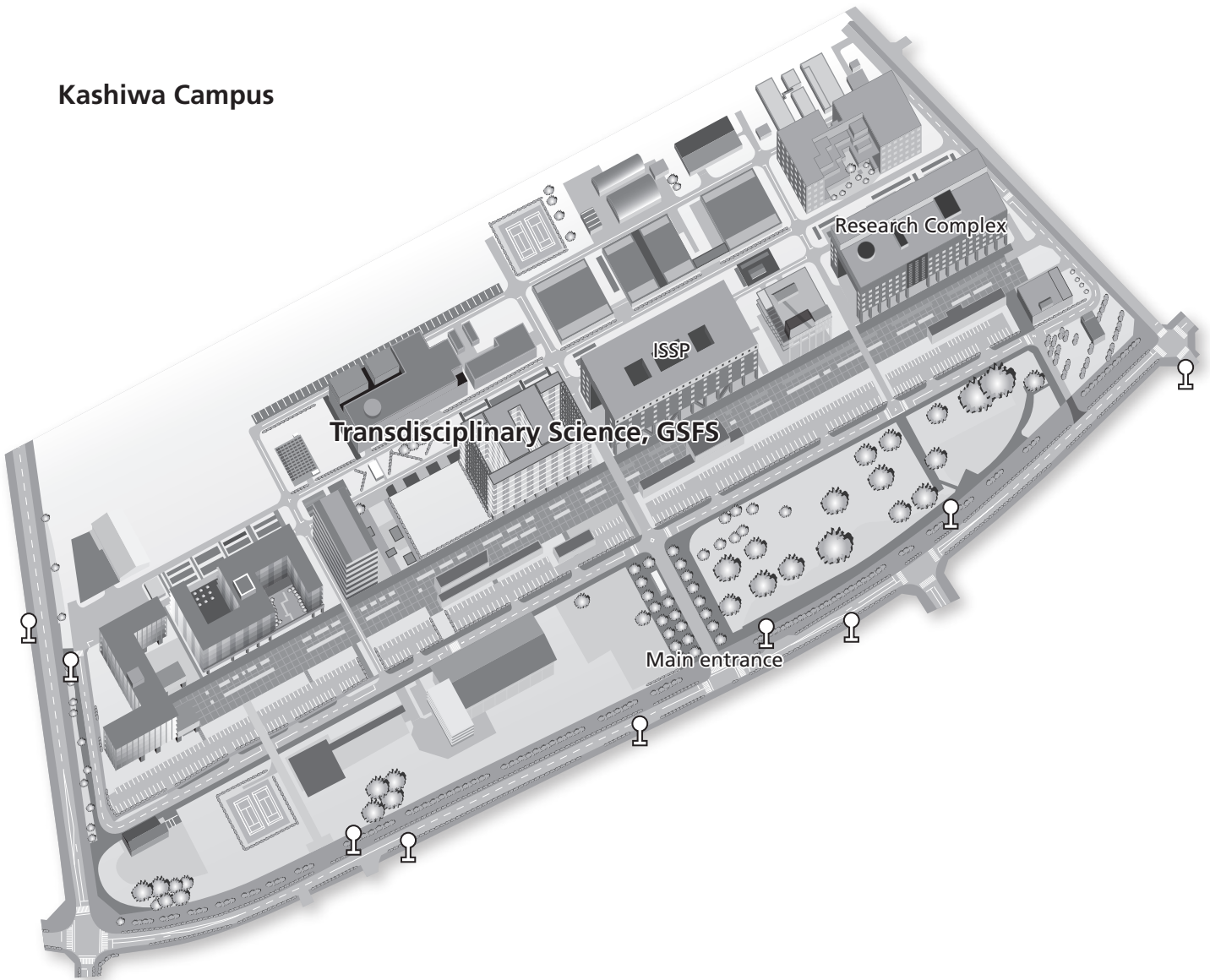
(8) As a general rule, questions about the content of the problem are not permitted. However, if there are any errors or inadequacies (such as typographical errors) in the question itself, please notify an examiner.

(9) Do not take home the answer sheets and question booklets.

— Venue —



Kashiwa Campus



**Inquiries and Contact Information**

**Student Affairs Team, Graduate School of Frontier Sciences,  
The University of Tokyo**

5-1-5 Kashiwanoha, Kashiwa City, Chiba 277-8561 Tel: 04-7136-4092  
<https://www.k.u-tokyo.ac.jp/>

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Website of Department of Advanced Materials Science:  
[https://www.k.u-tokyo.ac.jp/materials/index\\_e.html](https://www.k.u-tokyo.ac.jp/materials/index_e.html)