

* This document is a translation of necessary part of the Japanese version. In the event that any question should arise about this version, the Japanese version is the authoritative version.

Department of Advanced Energy
Graduate School of Frontier Sciences
Special Selection for International Students,
2012

Explanatory Leaflet (translation)

Incl. “Chosa Hyou” form

Examination date and time

Master course

August 23 (Tue.), 24 (Wed.), 30 (Tue.), 2011

Doctor course

August 23 (Tue.), 24 (Wed.), 2011

Guidance

June 3 (Fri.) 16:30 – 18:00

(Hongo Campus) Eng. Bldg. No.2, 10F Meeting Room 5

June 4 (Sat.) 13:00 – 15:00

(Kashiwa Campus) Kashiwa Library, Media Hall

Contact

Kashiwanoha 5-1-5, Kashiwa-shi, Chiba 277-8561

Kiban Bldg. 1F

The University of Tokyo

Graduate school of Frontier Sciences, Kyomu-kakari

TEL 04-7136-4092

Homepage

<http://www.k.u-tokyo.ac.jp/e/ae/>

[1] Preface

ENERGY is the word to describe the potential for work to be done. Any creatures, communities, systems cannot continue to exist without their own mechanism for production, absorption, conversion, transmission and utilization of energy. The mission of the Department of Advanced Energy is to do the educational and research activities on energy-related issues from a wide view point of advanced modern physics, materials, instrumentation, control, system engineering, environmental science and so on. The followings are fields in which we are going to play a leading role:

- Plasma Physics and its Applications,
- High Enthalpy (High Speed and High Temperature) Flow Physics and its Application,
- Structures and Materials for Extremely Severe Environment,
- Energy Production, Conversion and Utilization in Space,
- Advanced Electromagnetic Energy Engineering, Superconductivity Technology,
- High Efficiency Energy Conversion Technology,
- Systems Analysis for Energy Issues.

We are aiming at making a contribution to human prosperity through Advanced Energy, gathering and synthesizing knowledge and technologies that have been studied separately in each academic field. The Department of Advanced Energy will do its best to extend the envelope of existing education & research fields in Energy Technology and Science and to be a pioneer in a new innovative area.

[2] Research fields

[Energy Conversion System Laboratory]

TAKEDA Nobuo, Prof.
(Intelligent Composite Materials & Structure)
Email: takeda@smart.k.u-tokyo.ac.jp,
TEL: 81-4-7136-5521

KOMURASAKI Kimiya, Prof.
(Space Propulsion and Energy)
Email: komurasaki@k.u-tokyo.ac.jp,
TEL: 81-4-7136-3829

OKAMOTO Kouji, Assoc. Prof.
(Thermo-Fluid and Energy System Engineering)
Email: k-okamoto@k.u-tokyo.ac.jp
TEL: 81-4-7136-3824

[Transdisciplinary Design Laboratory (Education Program for Creativity in Transdisciplinary Sciences)]

SUZUKI Kojiro, Prof.
(High Enthalpy Flow Dynamics)
Email: kjsuzuki@k.u-tokyo.ac.jp,
TEL: 81-4-7136-3828

[Electromagnetic Energy System Laboratory]

HORI Yoichi, Prof.
(Electric Control System)
Email: hori@k.u-tokyo.ac.jp,
TEL: 81-4-7136-3846

YOKOYAMA Akihiko, Prof.
(Power System Engineering)
Email: yokoyama@syl.t.u-tokyo.ac.jp,
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ONO Yasushi, Prof.
(Plasma Science and Engineering)
Email: ono@ts.t.u-tokyo.ac.jp,
TEL: 81-3-5841-6686

OHSAKI Hiroyuki, Prof.
(Superconducting Energy Technology)
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BABA Junpei, Assoc. Prof.
(Power Electronics)
Email: baba@asc.t.k.u-tokyo.ac.jp,
TEL: 81-3-5841-6679/6563

FUJIMOTO Hiroshi, Assoc. Prof.
(Electric Control System)
Email: fujimoto@k.u-tokyo.ac.jp
TEL: 81-4-7136-4131

[Plasma Science Laboratory]

YOSHIDA Zensho, Prof.
(Plasma Physics, Non-Linear Science)
Email: yoshida@k.u-tokyo.ac.jp,
TEL: 81-4-7136-3991

FURUKAWA Masaru, Assoc.Prof.
(Plasma Physics, Nuclear Fusion)
Email: furukawa@k.u-tokyo.ac.jp,
TEL: 81-4-7136-3831

[Nuclear Fusion Energy Engineering Laboratory]

OGAWA Yuichi, Prof.
(Fusion Engineering)
Email: ogawa@ppl.k.u-tokyo.ac.jp,
TEL: 81-4-7136-4344

ONO Ryo, Assoc. Prof.
(Weakly Ionized Plasma Engineering)
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[Space Energy System Cooperating Laboratory (Japan Aerospace Exploration Agency, Cooperating Laboratories outside the university)]

OGASAWARA Toshio, Prof.
(Advanced Composite Technology Center)
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YOSHIDA Kenji, Prof.
(Supersonic Aerodynamics)
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FUJITA Kazuhisa, Assoc. Prof.
(Aerodynamics)
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[Advanced Electric Energy System Laboratory (Research Institute of Electric Power Industry, Cooperating Laboratories outside the university)]

Okano Kunihiro, Prof.
(Fusion Reactor System Engineering)
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TAKASAKI Masahiro, Prof.
(Power Electronics Application)
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TEL: 81-3-3480-2111

NEMOTO Koshichi, Prof.
(Electric Energy Applied Engineering)
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TEL: 81-46-856-2121

[Nuclear Fusion Research Education Program]

For information regarding the Nuclear Fusion Research Education Program, contact the prospective supervising professor first.

[3] Special Selection for Master course

1. Written Examination

- (1) General Education Subjects: TOEFL

Submit a TOEFL score sheet by August 10 to Kyomu-kakari, Graduate School of Frontier Sciences. You may also take a TOEFL-ITP on August 23.

- (2) General Education Subjects: Mathematics, Physics

- (3) Special Education Subjects (Essay)

A theme of essay and an answer sheet will be sent to applicants with an admission ticket prior to the examination. Examinees must mail their essay written on the sheet to Kyomu-kakari, Graduate School of Frontier Sciences; it must be postmarked by August 10. If the essay is not submitted, the examinee will fail. All the examinees are requested to attend the examination with a copy of the essay against a postal failure. In case you don't receive the ticket and answer sheet by July 22, make contact with Kyomu-kakari, Graduate School of Frontier Sciences.

2. Oral Examination

- (1) Primary Oral Examination

Questions about the essay which the examinee wrote, and about his/her knowledge as a graduate school student. 15 to 30 min./person. Examinees cannot bring their essay into the oral examination room.

- (2) Secondary Oral Examination

Interview regarding his/her adaptation to the research fields and motivation.

3. Examination date and time

- (1) Primary Examination

Subjects		Date and Time	Exam. Room	Bring with	Waiting Room
Written Exam	TOEFL-ITP	August 23 10:00~12:30	Kashiwa Library 1st Floor, Media Hall	Admission ticket Writing materials	Only for the person who wants
	Mathematics, Physics	August 23 13:30~16:30			
Primary Oral Exam		August 24 9:00~14:00	Kibantou Bldg. 2B6,2D5,3B1,3B 3	Admission ticket	Kibantou Bldg. 2nd Floor, Big Lecture Room

* After finishing the written exam on August 23, we conduct a questionnaire to ask any change of prospective supervising professor.

- (2) Secondary Examination*

Subjects	Date and Time	Exam. Room	Bring with	Waiting Room
Secondary Oral Exam	August 30 11:00~13:00	Kibantou Bldg. 3B1	Admission ticket	Kibantou Bldg. 2nd Floor, Big Lecture Room

*Secondary Examination will be imposed on the examinees who passed the Primary Examination.

4. Announcement of successful applicants in the primary examination

The list of successful applicants in the primary examination will be posted on a notice board in front of Kyomu-Kakari, at 5 p.m. August 26, 2011. The examinees may also check the result via web site (details including the password will be announced on the examination day).

5. Declaration of Special Selection for International Student

Declare himself/herself to be applying to the special selection in the "Chosa Hyou" form attached to the explanatory leaflet.

6. Entrance in October 2011

If applicants wish to enter the graduate school in October 2011 instead of April 2012 and have an eligible visa, declare in the "Chosa Hyou" form attached to the explanatory leaflet. Refer to the Guidelines for Applicants to Master Course (Boshu-Yoko) for the entrance procedure.

7. "Chosa Hyou"

- (1) A "Chosa Hyou" form must be submitted with the application form.
- (2) Applicants can consult the prospective supervising professor about the research theme in the master course prior to the entrance exam.
- (3) Check whether all the submitting materials are in an envelope using the check sheet on the back of "Chosa Hyou" form.

[4] Special Selection for Doctor course

1. Selection Process

The examination is composed of the primary (written exam, oral exam) and the secondary (master thesis or its equivalent) exams.

2. Written Examination (This exam is waived for those who have finished or are anticipated to finish a master course in University of Tokyo)

(1) General Education Subjects: TOEFL

Submit a TOEFL score sheet by August 10 to Kyomu-kakari, Graduate School of Frontier Sciences. You may also take a TOEFL-ITP on August 23.

(2) General Education Subjects: Mathematics, Physics

3. Oral Examination

Questions about the examinees' knowledge as a doctor candidate student.

(1) Presentation of the examinees' research in his/her master course (20 min.) and questions (approximately 20 min.)

Prepare viewgraphs with a PC and 7 copies of the viewgraphs for presentation.

Applicants wishing to enter in October 2011, also bring the master thesis or its equivalent (original or a copy) on the oral examination day.

(2) Questions about his/her study plan in the doctor course.

(3) Questions about his/her knowledge of general and special education.

4. Examination date and time

(1) Primary Examination

Subjects		Date and Time	Exam. Room	Bring with	Waiting Room
Written Exam	TOEFL-ITP	August 23 10:00~12:30	Kashiwa Library 1st Floor, Media Hall	Admission ticket Writing materials	Only for the person who wants
	Mathematics, Physics	August 23 13:30~16:30			
Oral Exam (For applicants wishing to enter in October 2011, this oral exam is also regarded as the secondary exam)		August 24 14:00~18:00	Kibantou Bldg. 3rd Floor, 3B1,3B3	Admission ticket A PC for presentation and 7 copies of the viewgraphs Applicants wishing to enter in October 2011, also bring the master thesis or its equivalent (original or a copy)	Kibantou Bldg. 2nd Floor, Big Lecture Room.

(2) Secondary Examination

The examination regarding the master thesis or its equivalent is conducted around the middle of February 2012 for the applicants wishing to enter in April 2012. Details of this exam will be announced only to the applicants successful in the primary exam. For the applicants wishing to enter in October 2011, the oral exam in the primary exam is regarded as this secondary exam.

5. Declaration of Special Selection for International Student

Declare himself/herself to be applying to the special selection in the "Chosa Hyou" form attached to the explanatory leaflet.

6. Entrance in October 2011

If applicants wish to enter the graduate school in October 2011 instead of April 2012 and have an eligible visa, declare in the "Chosa Hyou" form attached to the explanatory leaflet. Refer to the Guidelines for Applicants to Doctor Course (Boshu-Yoko) for the entrance procedure.

7. "Chosa Hyou" and Study Plan

- (1) A "Chosa Hyou" form and "Study Plan" must be submitted with the application form.
- (2) Study plan must include following issues and be written on an A4 size paper. Assume a half, a full and a half page for each issue,
 - Objectives (background, current state of art, etc.)
 - Method (show annual plan)
 - Distinctive aspects, Originality
- (3) Applicants are encouraged to consult the prospective supervising professor about the research theme in the doctor course prior to the entrance exam.
- (4) Check whether all the submitting materials are in an envelope using the check sheet on the back of "Chosa Hyou" form.

[5] Guidance for Examination

1. Examination time and date

Refer to the above information

2. Examination site

Kashiwa Campus (Kashiwanoha 5-1-5, Kashiwashi, Chiba)

Kashiwa Library 1F, Media Hall

Transdisciplinary Sci. Bldg. 2B6, 2D5, 3B1, 3B3, (Waiting: Big Lecture room)

Bus: Bound for “Kokuritu-Gan-Kenkyu-Center (National Cancer Research Center) “ via “Kashiwanoha Park“, Todai-mae“ bus stop

Applicants must come to the examination room 15 min. prior to the starting time

3. Items requested for the applicants to bring with

- (1) Admission ticket
- (2) Black pencil, eraser, pencil sharpener. A wristwatch is permitted.

4. Rules during the examination

- (1) No leaving from the examination room until one hour passes.
- (2) Going to lavatory will not be permitted during the examination in principle.
- (3) Switch off your mobile phone during the examination.
- (4) Keep the admission ticket on the desk during the examination.
- (5) Enter your ticket number on each of answer sheet. Never enter your name.
- (6) Write your answer on the directed portion of the sheet. You may use its reverse side if needed.
- (7) Ticket number must be entered on the answer sheet even if there is no answer on it.
- (8) No question is permitted regarding the problems.
- (9) Do not bring the problem booklet or answer sheets home.

Master

Year 2012

Chosa Hyou

Complete this form, cut off along the dotted line on the left, and submit with an application form.

The University of Tokyo, Graduate School of Frontier Sciences

Department of Advanced Energy

Name		Ticket number (No entry)	
University Graduated	University: Department:	Faculty: Year Mo.	(graduated/expected)
Contact Address			
Home address & Tel. No.	Tel : (Cell Phone No. if available :)		
Office address & Tel. No.	Univ.:	Faculty: (Grad. School)	Department: Lab:
Prospective Supervising Professor			
Indicate one Supervising Professor from below. Applicants who wish to be admitted in the Nuclear Fusion Research Education Program may make a check in the parenthesis following the Professor's name.			
<input type="checkbox"/> N. Takeda	<input type="checkbox"/> Y. Ogawa	()	<input type="checkbox"/> Y. Hori
<input type="checkbox"/> A. Yokoyama	<input type="checkbox"/> Z. Yoshida	()	<input type="checkbox"/> Y. Ono ()
<input type="checkbox"/> H. Ohsaki	<input type="checkbox"/> K. Suzuki		<input type="checkbox"/> K. Komurasaki
<input type="checkbox"/> R. Ono ()	<input type="checkbox"/> M. Furukawa	()	<input type="checkbox"/> J. Baba
<input type="checkbox"/> K. Okamoto	<input type="checkbox"/> H. Fujimoto		
<input type="checkbox"/> T. Ogasawara	<input type="checkbox"/> K. Yoshida		<input type="checkbox"/> K. Fujita
<input type="checkbox"/> K. Okano ()	<input type="checkbox"/> M. Takasaki		<input type="checkbox"/> K. Nemoto ()
Describe your motivation for applying to the department			
----- ----- ----- ----- ----- ----- ----- ----- ----- -----			
(For Special Selection for International Student) Applicants who want to apply to the special selection should indicate in the right box.			Special Selection √
(For entrance in October 2010) Applicants who want to enter the graduate school in October 2011 should indicate in the right box. Caution: The applicants who failed to finish the entrance procedure or failed to get a valid visa in designated period cannot enter in April 2012 instead.			Entrance in October
Select one or more options for English exam you wish to take	TOEFL and/or TOEIC score sheet [encl. in application] [submit by Aug. 10]		TOEFL-ITP []

Check list of Submitting Materials (Master Course)

Master Course

- | | |
|---|---|
| <input type="checkbox"/> University application form | |
| <input type="checkbox"/> Photo Ticket A, Photo Ticket B, Admission Ticket | |
| <input type="checkbox"/> Form to Attach Payment Certificate | Refer to the Boshu-Yoko for details including exceptions and payment method |
| <input type="checkbox"/> Transcripts of Academic Records | Scores of both special and general education |
| <input type="checkbox"/> Return envelopes | Affix with a JPY 410 stamp |
| <input type="checkbox"/> Address label | |
| <input type="checkbox"/> Inquiry Sheet (Chosa Hyou) | Complete the sheet included in the explanatory leaflet |
| <input type="checkbox"/> TOEFL score sheet | Only those who wish to submit it |
-
- | | |
|---|---|
| <input type="checkbox"/> Diploma or graduation certificate from university | Only those who have graduated from a university or a graduate school at the time of application |
| <input type="checkbox"/> Diploma, graduation certificate or a statement of anticipated graduation from university or from graduate school | Only non-Japanese applicants
(If written in a language other than Japanese or English, attach a Japanese or English translation)
No need for applicants who have graduated from University of Tokyo, including anticipated graduation by March 31, 2012 |
| <input type="checkbox"/> Japanese proficiency certificate | Only non-Japanese applicants
Prscribed form
No need for applicants who have graduated from a university in Japan, including anticipated graduation by March 31, 2012 |
| <input type="checkbox"/> Certificate of Foreign Resident Registration | Only non-Japanese applicants living in Japan |

Check list of Submitting Materials(Doctor Course)

Doctor Course

- | | |
|---|---|
| <input type="checkbox"/> University application form | |
| <input type="checkbox"/> Photo Ticket A, Photo Ticket B, Admission Ticket | |
| <input type="checkbox"/> Form to Attach Payment Certificate | Refer to the Boshu-Yoko for details including exceptions and payment method |
| <input type="checkbox"/> Transcripts of Academic Records of all universities attended | Scores of both special and general education in undergraduate and in master course of graduate school |
| <input type="checkbox"/> Return envelopes | Affix with a JPY 410 stamp |
| <input type="checkbox"/> Address label | |
| <input type="checkbox"/> Inquiry Sheet (Chosa Hyou) | Complete the sheet included in the explanatory leaflet |
| <input type="checkbox"/> TOEFL score sheet | Only those who wish to submit it |
| <input type="checkbox"/> Research plan | Prescribed in the explanatory leaflet |
-
- | | |
|--|--|
| <input type="checkbox"/> Diploma or graduation certificate from graduate school | Only those who have finished a graduate school at the time of application |
| <input type="checkbox"/> Diploma, graduation certificate or a statement of anticipated graduation from university and from graduate school | Only non-Japanese applicants
(If written in a language other than Japanese or English, attach a Japanese or English translation)
No need for applicants who have finished the graduate school in University of Tokyo, including anticipated graduation by March 31, 2012 |
| <input type="checkbox"/> Japanese proficiency certificate | Only non-Japanese applicants
Prescribed form
No need for applicants who have graduated from a university or a graduate school in Japan, including anticipated graduation by March 31, 2012 |
| <input type="checkbox"/> Certificate of Foreign Resident Registration | Only non-Japanese applicants living in Japan |