

APPLICATION GUIDE

International
Energy Science
Course

MASTER'S & DOCTORAL PROGRAM
Academic Year 2025
Admission Cycle II – October intake



Graduate School of Energy Science
Kyoto University

INTERNATIONAL ENERGY SCIENCE COURSE

MASTER'S & DOCTORAL PROGRAM

APPLICATION GUIDE 2025 - ADMISSION CYCLE II, OCTOBER INTAKE

INTRODUCTION	1
<i>Program Overview</i>	<i>1</i>
<i>Departments providing the program</i>	<i>1</i>
<i>Admission Cycles</i>	<i>2</i>
MASTER'S PROGRAM	3
M-II 1. <i>Enrollment Capacity</i>	<i>3</i>
M-II 2. <i>Enrollment Date</i>	<i>3</i>
M-II 3. <i>Eligibility Requirements for Applicants</i>	<i>3</i>
M-II 4. <i>Recommended country Language Test Score</i>	<i>3</i>
M-II 5. <i>Admission Selection Process and Interview</i>	<i>3</i>
M-II 6. <i>Laboratories/Research Groups</i>	<i>4</i>
M-II 7. <i>Official Score Report of TOEFL or IELTS Including Special Home Edition</i>	<i>4</i>
M-II 8. <i>Documents Required for Screening</i>	<i>5</i>
M-II 9. <i>Application Fee*</i>	<i>6</i>
M-II 10. <i>Application Deadlines and Timetable</i>	<i>6</i>
DOCTORAL PROGRAM	7
D-II 1. <i>Enrollment Capacity</i>	<i>7</i>
D-II 2. <i>Enrollment Date</i>	<i>7</i>
D-II 3. <i>Eligibility Requirements for Applicants</i>	<i>7</i>
D-II 4. <i>Recommended English Language Test Score</i>	<i>7</i>
D-II 5. <i>Admission Selection Process</i>	<i>7</i>
D-II 6. <i>Academic Supervisor</i>	<i>7</i>
D-II 7. <i>Official Score Report of TOEFL or IELTS Including Special Home Edition</i>	<i>8</i>
D-II 8. <i>Documents Required For Screening</i>	<i>9</i>
D-II 9. <i>Application Fee*</i>	<i>10</i>
D-II 10. <i>Application Deadlines and Timetable</i>	<i>10</i>
GENERAL INSTRUCTIONS	11
G1. <i>Method of Application</i>	<i>11</i>
G2. <i>Application Fee</i>	<i>11</i>
G3. <i>Enrollment Procedures, Admission Fee and Tuition</i>	<i>11</i>
G4. <i>General Notes</i>	<i>12</i>
G5. <i>Contact</i>	<i>12</i>

APPENDIX I: IESC LABORATORY CODE AND KEYWORDS

APPENDIX II: Forms

Please note that this is a guide to admission in 2025 and should not be used for applications for admission in subsequent years. Applicants for 2026 should contact the GSES Administration Office after October 2025 onward to obtain revised guide and forms.

INTRODUCTION

PROGRAM OVERVIEW

PROGRAM: International Energy Science Course

DEGREE TITLE: Master of Energy Science, Doctor of Energy Science

STANDARD COURSE DURATION: 2 years full time for a Master's; 3 years full time for a doctorate.

LANGUAGE OF INSTRUCTION: English

The International Energy Science Course is an offering from one of Japan's most prestigious universities.

It is specially tailored for international students and those who have been educated outside Japan. A Master's degree is awarded to those who have obtained at least 45 credits, received academic supervision by a faculty member, and successfully defended their Master's thesis in an oral examination. The Doctoral program provides international students and researchers who have a Master's degree an opportunity to further their studies toward a doctoral degree at Kyoto. A doctoral degree is awarded to those who have conducted original academic research receiving scholarly supervision by faculty members and successfully defended their doctoral thesis in an oral examination with minimum 4 credits earned from lectures/seminars.

DEPARTMENTS PROVIDING THE PROGRAM

Students will be enrolled in one of the following four departments* within the Graduate School of Energy Science, depending on their field of interest.

* Admission to the DEPARTMENT OF ENERGY SCIENCE AND TECHNOLOGY is limited to the Doctoral program.

DEPARTMENT OF SOCIO-ENVIRONMENTAL ENERGY SCIENCE

SES leads research on the effective use of energy and resources and analysis of energy systems in order to build a sustainable social system within the global environment. Core subjects include: introduction to non-carbon energy; engineering in social systems; energy economics; bioenergy; energy environmental impacts; system safety; and energy policy.

DEPARTMENT OF FUNDAMENTAL ENERGY SCIENCE

FES offers fundamental science education and research to contribute to cleaner energy solutions. Core subjects include: chemistry in energy systems; plasma physics; fusion science; and laser-matter interaction.

DEPARTMENT OF ENERGY CONVERSION SCIENCE

ECS conducts education and research on generation, conversion, control and the utilization of various kinds of energy to establish efficient and clean energy systems. Core subjects include: combustion engineering; materials science; fusion and microwave technologies; and plasma physics.

DEPARTMENT OF ENERGY SCIENCE AND TECHNOLOGY

EST conducts education and research on the development of more efficient utilization of direct and indirect energy supplies based on disciplines such as resources, metallurgical, mechanical and electrical engineering. With the aim to establish environmentally friendly process technologies. Core subjects include: materials science; mineral processing; and physics.

Please refer to the website <http://www.energy.kyoto-u.ac.jp/en/admission/admission-information//> for the prospectus of the Graduate School of Energy Science or for outlines of the respective departments.

ADMISSION CYCLES

The IESC Master's degree program commences in October only, while the doctoral program has two application cycles a year – Cycle I for April enrollment and Cycle II for October enrolment. It is important to apply to the appropriate selection cycle according to the date of your intended enrollment. Offers of admission cannot be deferred to another admission cycle.

<i>Cycles</i>	<i>Degree</i>	<i>Application deadline</i>	<i>Decision notification</i>	<i>Enrollment</i>	<i>Scheduled degree completion</i>
Cycle I	Doctoral	June 14, 2024	August 29, 2024	April 1, 2025	March 2028
Cycle II	Master's Doctoral	December 25, 2024	March 25, 2025	October 1, 2025	Master's: September 2027 Doctoral: September 2028

MASTER'S PROGRAM

M-II 1. ENROLLMENT CAPACITY

The application process is quite competitive, with around 10 students per academic year for the three departments (Department of Socio-Environmental Energy Science, Department of Fundamental Energy Science, and Department of Energy Conversion Science) for the CY II.

M-II 2. ENROLLMENT DATE

October 1, 2025

M-II 3. ELIGIBILITY REQUIREMENTS FOR APPLICANTS

Eligibility for applicants, as set forth in the General Rules for Kyoto University, is checked prior to selection process.

Applicants must have both of the following qualifications:

- (1) a. Have graduated, or be expected to graduate from a recognized higher education institution outside of Japan with a good bachelor's or higher degree by the official date of enrolment*, or alternatively,
b. Have graduated, or be expected to graduate from a university in Japan by the official date of enrolment* as an overseas student holding a legal status of residence (valid Japan visa).
- (2) Have a competitive proficiency in academic English.

**PLEASE SEE M-II 2*

M-II 4. RECOMMENDED ENGLISH LANGUAGE TEST SCORE

Applicant must supply suitable evidence of English proficiency if he/she is not a national of a majority English speaking country, or his/her first language is not English. Recommended scores are 80 or higher for TOEFL iBT, and 6.0 or higher for IELTS.

M-II 5. ADMISSION SELECTION PROCESS AND INTERVIEW

The selection of candidates for admission to the IESC will be conducted through a two-stage process. The process will be as follows:

1) First Screening Stage (documents)

The first stage of screening will be based on evaluation of the documents submitted.

The results will be informed by February 28, 2025 via email.

Candidates who pass the First Screening will be informed and invited to the second stage of screening.

2) Second Screening Stage (interview)

The second stage of screening will be based on an interview (by online).

The final admission decision will be judged on the basis of performance in both stages of screening, as well as the availability of student places within the field of proposed study in the department.

Admission results will be notified on March 25, 2025 by email.

M-II 6. LABORATORIES/RESEARCH GROUPS

Applicants should specify which laboratories/research groups interest them in terms of their research project on Form A. On acceptance, they will be affiliated with one of these groups and receive academic supervision with their research and thesis. Please note that not all laboratories have the capacity to take new Master's candidates in.

Although this degree program does not require specific bachelor's degrees (BSc, BEng, BA, etc.) for admission, some research groups expect students who will receive their academic supervision to have undergraduate-level knowledge and experience in certain academic areas. Please see *Appendix* for availability of student positions and their preferred / required existing knowledge.

M-II 7. OFFICIAL SCORE REPORT OF TOEFL OR IELTS Including Special Home Edition.

Applicants whose first language is not English must submit the official score report of TOEFL iBT (Internet Based Testing) or IELTS Academic Module including Special Home Edition. Test must have been taken within the last 24 months prior to the date of application deadline.

Test scores are to be sent from the testing agents, e.g. ETS or the British Council directly to "The Administration Office, Graduate School of Energy Science, Kyoto University" by the application deadline. (i) -

TOEFL Institution Code:

9501 KYOTO UNIVERSITY, Department Code: 69 PHYSICAL SCIENCES – ENGINEERING, OTHER

For a IELTS score holder, the address to be sent is below.

Student Affairs Section,
Administration Office Graduate School of Energy Science,
Kyoto University
Yoshida-Honmachi, Sakyo-ku, Kyoto city
JAPAN
606-8501,

Note: (i) Applicants should arrange to take the test as early as possible to ensure the timely receipt of the score report. It could take up to eight weeks for us to receive the score from the testing agent.

M-II 8. DOCUMENTS REQUIRED FOR SCREENING

Forms are available to download at website:

<http://www.energy.kyoto-u.ac.jp/en/admission/admission-documentation/>

1	Form A: Application	<ul style="list-style-type: none"> - With a passport style photo taken within 3 months must be pasted to the boxed area provided in the application form. - Please do not use a modified photograph.
2	Form B: Personal history	Educational and vocational background
3	Form C: Reference (2)	<ul style="list-style-type: none"> - Form C must be used for recommendation. - Submit two recommendation letters by directly emailing us through a referee's official email address by the application deadline. - Referees must be a person such as academic supervisors or tutors who are well acquainted with an applicant's academic ability and personality. - At the enrollment stage, successful applicants must submit the original Forms in a sealed envelope, signed across the envelope seal.
4	Graduation certificate	<ul style="list-style-type: none"> - Only original copies or officially certified duplicates are accepted. - Current students should submit a certificate detailing expected graduation and their most recent official transcripts.
5	University academic transcripts	<ul style="list-style-type: none"> - English translation must be provided for documents written in any language other than English. - At the enrollment stage, successful applicants must submit all originals of the certificates.
6	Summary of the graduation thesis/project	<ul style="list-style-type: none"> - Written in English <u>(1-2 pages, 400 - 500 words) on A4-size paper.</u> - Please ensure that your document is within the specified limits. Content that goes beyond the limits will not be evaluated. - Where no thesis was required, provide a summary of a final year project that required research and analytical skills. - Final year undergraduate students can submit a summary of their major academic assignment or project so far instead of a thesis summary, which is not completed yet.
7	Statement of purpose	<ul style="list-style-type: none"> - Submit a document describing your motivation and reasons for applying to the Graduate School of Energy Science <u>on A4-size paper in English (1-2 pages, 400 - 500 words).</u> Please ensure that your document is within the specified limits. Content that goes beyond the limits will not be evaluated.
8	Official score report of TOEFL or IELTS including Special Home Edition	<ul style="list-style-type: none"> - Submit a copy of your official score report. - Please read the M-II 7 carefully to have an original score report sent to us by the application deadline.
9	Photocopy of passport	Submit a photocopy of the applicant's valid passport showing the photograph page.
10	Official copy of certificate of residence	<ul style="list-style-type: none"> - Residents of Japan should submit a photocopy of their resident card (front and back). - Residence certificates are issued at the city/ward office of the registered domicile.
11	Disclaimer	Please read carefully and sign.

M-II 9. APPLICATION FEE

10,000 JPY*

**PLEASE SEE G2*

M-II 10. APPLICATION DEADLINES AND TIMETABLE

Application deadline:	December 25, 2024 17.00 (UTC+9)
Application fee payment:	February 5 - 12, 2025
Results notification of first screening stage	February 28, 2025
Interview period:	March 4 - 7, 2025
Announcement of final results:	March 25, 2025
Enrolment procedures:	May 9 - June 27, 2025

DOCTORAL PROGRAM

D-II 1. ENROLLMENT CAPACITY

10 students per academic year for the four departments for both cycles.

D-II 2. ENROLLMENT DATE

October 1, 2025

D-II 3. ELIGIBILITY REQUIREMENTS FOR APPLICANTS

Eligibility for applicants, as set forth in the General Rules for Kyoto University, is checked prior to selection process.

Applicants must have both of the following qualifications:

- (1) a. Have obtained, or be expected to obtain a Master's degree (or equivalent) from a recognized higher education institution outside of Japan by the official date of enrollment*, or alternatively,
 - b. Have obtained, or be expected to obtain a Master's degree (or equivalent) from a university in Japan as an overseas student holding a legal status of residence (valid Japan visa).
- (2) Have a competitive proficiency in academic English.

**PLEASE SEE D-II 2*

D-II 4. RECOMMENDED ENGLISH LANGUAGE TEST SCORE

Applicant must supply suitable evidence of English proficiency if he/she is not a national of a majority English speaking country, or his/her first language is not English. Recommended scores of 80 or higher for TOEFL iBT and 6.0 or higher for IELTS.

D-II 5. ADMISSION SELECTION PROCESS

Applicants are subject to screening based on the application documents and an interview via online, as well as availability of the field of proposed study in the department. Candidates will be contacted directly and briefed on details of the interview.

D-II 6. ACADEMIC SUPERVISOR

Applicants should specify a faculty member under whose supervision they research. Before proceeding with application, applicants MUST contact a prospective academic supervisor in any of four departments to discuss their application and potential research topic.

D-II 7. OFFICIAL SCORE REPORT OF TOEFL OR IELTS Including Special Home Edition.

Applicants whose first language is not English must submit the official score report of TOEFL iBT (Internet Based Testing) or IELTS Academic Module including Special Home Edition. Test must have been taken within the last 24 months prior to the date of application deadline.

Test scores are to be sent from the testing agents, e.g. ETS or the British Council directly to "The Administration Office, Graduate School of Energy Science, Kyoto University" by the application deadline. (i) -

TOEFL Institution Code:

9501 KYOTO UNIVERSITY, Department Code: 69 PHYSICAL SCIENCES – ENGINEERING, OTHER

For a IELTS score holder, the address to be sent is below.

Student Affairs Section,
Administration Office Graduate School of Energy Science,
Kyoto University
Yoshida-Honmachi, Sakyo-ku, Kyoto city
JAPAN
606-8501,

Note: (i) Applicants should arrange to take the test as early as possible to ensure the timely receipt of the score report. It could take up to eight weeks for us to receive the score from the testing agent.

D-II 8. DOCUMENTS REQUIRED FOR SCREENING

Forms are available to download at website:

<http://www.energy.kyoto-u.ac.jp/en/admission/admission-documentation/>

1	Form A: Application	<ul style="list-style-type: none"> - With a passport style photo taken within 3 months must be pasted to the boxed area provided in the application form. - Please do not use a modified photograph.
2	Form B: Personal history	Educational and vocational background
3	Form C: References(2)	<ul style="list-style-type: none"> - Form C must be used for recommendation. - Submit two recommendation letters by directly emailing us through a referee's official email address by the application deadline. - Referees must be a person such as academic supervisors or tutors who are well acquainted with an applicant's academic ability and personality. - At the enrollment stage, successful applicants must submit the original Forms in a sealed envelope, signed across the envelope seal.
4	Degree certificates	<ul style="list-style-type: none"> - Required for both undergraduate/bachelor's and postgraduate/Master's.
5	University academic transcripts	<ul style="list-style-type: none"> - Only original copies or officially certified duplicates are accepted. - Current students should submit a certificate detailing expected graduation and the recent transcripts available. - English translation must be provided for documents written in any language other than English. - At the enrollment stage, successful applicants must submit all originals of the certificates.
6	Summary of Master's thesis	<ul style="list-style-type: none"> - Written in English <u>(1-2 pages, 400 - 500 words) on A4-size paper</u>. Please ensure that your document is within the specified limits. Content that goes beyond the limits will not be evaluated. - Where no thesis was required in your Master's, provide a summary of a final year project that required research and analytical skills.
7	Research proposal	<ul style="list-style-type: none"> - Submit a research proposal for your doctoral degree <u>on A4-size paper in English (2-4 pages, 1000 - 1500 words)</u>. Please ensure that your document is within the specified limits. Content that goes beyond the limits will not be evaluated. - <u>Candidates must discuss their research proposal with their prospective supervisor at Kyoto before submission.</u>
8	Official score report of TOEFL or IELTS including Special Home Edition	<ul style="list-style-type: none"> - Submit a copy of official score report of EFL test. - Please read the D-II 7 carefully to have an original score report sent to us by the application deadline.
9	Photocopy of passport	Submit a photocopy of the applicant's valid passport showing the photograph page.
10	Official copy of certificate of residence	<ul style="list-style-type: none"> - Residents of Japan should submit a photocopy of their resident card (front and back). - Residence certificates are issued at the city/ward office of the registered domicile.
11	Disclaimer	Please read carefully and sign.

D-II 9. APPLICATION FEE

10,000 JPY*

**PLEASE SEE G2*

D-II 10. APPLICATION DEADLINES AND TIMETABLE

Contact to a prospective supervisor: Any time before application

Application deadline: December 25, 2024 17.00 (UTC+9)

Application fee payment: February 5 - 12, 2025

Interview period: March 4 - 7, 2025

Announcement of final results: March 25, 2025

Enrolment procedures: May 9 - June 27, 2025

GENERAL INSTRUCTIONS

G1. METHOD OF APPLICATION

Applications are accepted via the online submission system only. Applications are NOT accepted in person at the GSES Office.

The online submission system can be reached through the website: (<http://www.energy.kyoto-u.ac.jp/en/admission/admission-information/>)

Instructions are available on the website.

G2. APPLICATION FEE

Applicants must complete full payment of the application fee during the designated payment period. The application fee is non-refundable.

Please email a scanned certificate of payment from the completed application page in PDF/JPEG to the administration office (intl@energy.kyoto-u.ac.jp) when the payment has been made.

Applicants will be contacted by email in regard with application fee payment after their application documents are received.

Application fee amount: 10,000 JPY

Payment instruction: Access the website below and follow the instructions for payment.
<https://www3.univ-jp.com/kyoto-u/en/>

For Applicants Residing Outside Japan

Make a payment by credit card (VISA/ MasterCard/ JCB/ AMERICAN EXPRESS/Diners Club INTERNATIONAL).

It is acceptable to use a credit card which carries a name different from that of the applicant (e.g., applicant's parents).

For Applicants Residing in Japan

Make a payment at a designated convenience store, at a financial institution's ATM (Pay-easy), or online with one of the above credit cards or through designated internet banking. It is acceptable to use a credit card or a bank account which carries a name different from that of the applicant (e.g., applicant's parents).

G3. ENROLLMENT PROCEDURES, ADMISSION FEE AND TUITION

ENROLLMENT PROCEDURES

The "Guide to Enrollment" will be emailed to each successful applicant in April.

Those who accept the admission offer and intend to enroll in the course must make payment of the admission fee by the deadline specified in the enrollment guide and obtain a College Student Visa by the commencement of the program. If a student nominates a third party as his/her agent to make a transaction for fee payment, please notify the office.

Those who are currently employed must resign or obtain leave from their current institution/ organization before enrolling in the International Energy Science Course. Similarly, those pursuing studies in other graduate schools must take leave or terminate their graduate study before joining the course.

ADMISSION FEE AND TUITION

Admission fee*: 282,000 JPY (subject to change on admission)
Tuition per annum*: 535,800 JPY (267,900JPY per semester; subject to change during the course of study)

*MEXT scholarship recipients will have admission fee and tuition waived for the designated period of the scholarship.

G4. GENERAL NOTES

- a. Applicant should inform the Administration Office immediately if he/she wishes to withdraw their application.
- b. Changes cannot be made to submitted documents under any circumstances.
- c. Personal information such as name, gender, date of birth, contact address, etc. on the application documents is used only for purposes relevant to: (a) admission examinations; (b) admission procedures; and (c) preparations for acceptance of the student.
- d. In cases where the applicants are physically handicapped and desire special arrangements, please contact the Student Affairs Section, Graduate School of Energy Science, Kyoto University.
- e. Graduates of university from outside of Japan wishing to enroll in a Kyoto University Graduate School as a research, master's, or doctoral student are required to contact the Admissions Assistance Office (AAO) for a preliminary review before submitting application documents. Please refer to the following URL for details:

<https://www.kyoto-u.ac.jp/en/education-campus/education-and-admissions/graduate-degree-programs/how-to-apply/for-graduates-of-overseas-universities>

- f. In Kyoto University, Security Export Control for the purpose of maintaining the peace and security of Japan and the international community is conducted in accordance with "Foreign Exchange and Foreign Trade Act". International applicants who fall under any of the conditions set out in said regulations may be unable to enter their desired course or program. Please refer to the following URL for details:

<https://www.kyoto-u.ac.jp/ja/research/rule/export>

g.

G5. CONTACT

Student Affairs Section, Administration Office
Graduate School of Energy Science, Kyoto University
Yoshida-Honmachi, Sakyo-ku, Kyoto 606-8501 JAPAN
Email: intl@energy.kyoto-u.ac.jp

IESC website: <http://www.energy.kyoto-u.ac.jp/en/admission/admission-information/>

APPENDIX I: IESC LABORATORY CODE AND KEYWORDS

Code	Laboratory name	Research keywords
S-1	Energy Social Engineering (Engineering for Social Systems)	Social Engineering, Recycle, Eco-Materials, Eco-Education, Effective Use of Energy and Resource
S-2	Energy Economics	Energy Systems Studies, Minerals-Energy Nexus, Policy Studies, Sustainability
S-3	Energy Ecosystems (Biomass Energy)	Bioenergy, Biochemicals, Pyrolysis, Gasification, Supercritical Fluid, Bioethanol, Biodiesel
S-4	Energy and Information (Human Machine Interface)	Human Machine Interface, Human-Machine System, Augmented Reality, Organizational Learning, Intellectual Productivity, Pro-environmental Behavior
S-5	Energy and Environment (Energy Environmental Impact)	Aerosol, Atmospheric Environment, Atmospheric Chemistry, Hazardous Atmospheric Pollutants, Environmental Dynamics, Environmental Impact Assessment, Environmental Remediation
S-6	Energy Policy (KURNS)	Energy Policy, Nuclear Energy, Energy Security, Nuclear Security, Non-proliferation, Energy Best-Mix
S-7	Societal Energy Education (KURNS)	Materials Informatics, Materials Science, Nuclear Fuels, Thermoelectric Materials, Social Energy Education, Disaster Science, Hazard Evaluation, Earthquake Disaster Prevention Strategy
K-1	Energy Chemistry	Energy Chemistry, Electrochemistry, Fluorine Chemistry, Molten Salt, Ionic liquid, Na Secondary Battery, Li Secondary Battery
K-2	Quantum Energy Processes (Materials Chemistry and Physics)	Organic Molecular Materials, Photochemistry, Inorganic Semiconductors, Solid State Physics, Photophysics, Photovoltaics, Light-Emitting Devices, Chirality
K-3	Functional and Solid State Chemistry	Inorganic Material Chemistry, Crystal Chemistry, Electrochemistry, Solid State Chemistry, Electrochemical Materials, Bio-environment Compatible Material, Functional Material Chemistry
K-4	Plasma and Fusion Science	Magnetically Confined Fusion Plasma, Laser-Driven High Energy Density Plasma, Space Plasma, Nonlinear Physics, Large-Scale Simulation
K-5	Electromagnetic Energy	Fusion Energy, Data Analyses of Plasma Experiments, Measurements and Diagnostics, Theory and Numerical Simulation
K-6	Plasma Physics	Microwave Spherical Torus Experiment, Plasma Wave Physics, Equilibrium, Stability and Transport, Plasma Diagnostics
K-7	High-Temperature Plasma Physics (IAE)	Heliotron J, Control of High Temperature Plasma, Plasma Heating, Plasma Diagnostics, Boundary Plasma Physics and Elementary Processes, plasma turbulence, complex system, data analysis
K-8	Energy Optical Properties (IAE)	Nanoscience, Nanotechnology, Solid State Physics, Solar Cell, Quantum Electronics, Data Driven Science
K-9	Interfacial Energy Processes (IAE)	Electrochemistry, Molten Salts, Ionic Liquids, CO ₂ Conversion, Silicon Solar Cell, Li Secondary Battery, Na Secondary Battery, K Secondary Battery
K-10	Energy Nano Engineering (IAE)	Nano-science, Nano-materials, Solar Energy, Organic Photovoltaic Cells, Theoretical Biophysics, Statistical Mechanics of Liquids
K-11	Biofunctional Chemistry (IAE)	Nano-biotechnology, Protein Engineering, Chemical Biology, Synthetic Biology, Artificial photosynthesis, Bioenergy, CO ₂ utilization
K-12	Bioenergy (IAE)	Bioenergy, Biomass, Structural Biology, NMR, anti-HIV Enzyme, Prion Protein, Aptamer, Bioethanol
K-13	Fundamental Neutron Science (KURNS)	Nuclear Reactor Experiment and Analysis, Criticality Safety, Development of Radiation Detection System
K-14	Heat Transport System (KURNS)	Energy Conversion, Thermal Hydraulics, Multiphase Flow, Neutron Radiography, Computational Fluid Dynamics, Reactor Physics, Nuclear Data
H-1	Thermal Energy Conversion	Plasma Assisted Ignition, Laser Diagnostics and Image Analysis, Heat transfer in the small scale space craft, Pollutant Emission Control, Alternative Fuels
H-2	Conversion Systems	Thermo-Fluid Science, Combustion Science and Engineering, Alternative Fuels, Computational Fluid Dynamics, Internal Combustion Engine
H-3	Materials Design for Energy Systems	Nano-/micro-materials, -Strength of Materials, Fatigue, Multiphysics, Metamaterials, Fracture Mechanics
H-4	Design for Functional Systems	Mechanics of Functional Materials, Nonlinear Continuum Mechanics, Elastoplasticity, Nondestructive Evaluation by Ultrasonics, Electromagnetic Methods, and Thermography
H-5	Advanced Energy Conversion (IAE)	Plasma Science and Technology, Fusion Technology, Fusion Energy Conversion, Fusion Application, Fusion Energy System Design, Social and Environmental Sustainability Evaluation
H-6	Plasma Energy Conversion (IAE)	Plasma Physics, Fusion Science, Heating and Current Drive, Plasma Diagnostics, Microwave Technology, High power neutral beam technology
H-7	Functional Energy Conversion Materials (IAE)	Materials Science and Maintenance Technology for Energy Systems, Fusion Reactor Materials, Nuclear Materials, Computational Materials Science

0-1	Devices Physics	Crystal Alignment Techniques, Energy Materials, Thin Film Growth, Superconducting wires
0-2	Process and Energy	Thin Film Growth, Solid-State Battery, Energy Materials and Device Processing, THz spectroscopy
0-3	Materials Process Science	Materials processing, Electrochemical processing, Functional materials, Thin films, Aluminum batteries
0-4	Thermochemistry	Thermochemistry, Crystal Growth, Metallurgy, Eco-friendly Processes, Energy Materials
0-5	Resources and Energy Systems	Energy-saving materials, Multi-scaling materials, Rock engineering
0-6	Advanced Processing of Resources and Energy	Plasticity, Forming Simulation, Advanced Processing of Eco-materials, Material Modeling
0-7	Mineral Processing	Thermal Fluid Engineering, Resources Circulation, Mineral Processing
0-8	Quantum Radiation Energy Science (IAE)	Mid-Infrared and THz Laser, Nuclear Safety/Security, Renewable Energy System/Policy/Implementation
0-9	Physics of Energy Materials (IAE)	Nanomaterials, Quantum Materials, Materials Science, Energy Functional Materials, Solar Energy Utilization, Thermal/Optical Engineering
0-10	Photon Energy Science (IAE)	Laser Application, Nanomaterials, Thin Film, Laser Processing, Hydrogen Energy, Spectroscopy

IAE (Institute of Advanced Energy, Uji), KURNS(Kyoto University,Institute for Integrated Radiation and Nuclear Science)

LABORATORIES LIST FOR INTERNATIONAL ENERGY SCIENCE COURSE

2025 INTAKE

This table shows the availability of student positions for the Academic Year 2023, relevant academic background and potential fields of undergraduate study for applicants' reference. Please note that this is not an exhaustive list of research areas the faculty members cover and also that only laboratories recruiting students for AY2025 are shown on this table.

Department	Code	Research group name	Student position availability		Required background ◆ Relevant background ◇ Tertiary level, not exhaustive										NOTES BY RESEARCH GROUP Remarks, other requirements and/or desirable knowledge etc.	
			Master's program (Oct)	Doctoral program (Apr/Oct)	CIVIL/ENVIRONMENTAL ENGINEERING	MECHANICAL ENGINEERING	ELECTRICAL ENG. & ELECTRONICS	MATERIALS SCIENCE	EARTH RESOURCES	INDUSTRIAL CHEMISTRY	NUCLEAR ENGINEERING	MATHEMATICS & INFORMATION	FORESTRY	WOOD SCIENCE & TECHNOLOGY		BIO-ENVIRONMENTAL SCIENCE
Socio-Environmental Energy Science	S-1	Energy Social Engineering (Engineering for Social Systems)	✓	✓	-	◇	-	◆	◆	◇	-	-	-	-	-	Also accepting students who are interested in and able to analyze social issues - requiring proficiency in statistics.
	S-2	Energy Economics	✓	✓	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	Energy-systems analysis and design; Energy and resource supply-demand systems; Decision-making and justice.
	S-3	Energy Ecosystems (Biomass Energy)	✓	✓	◇	-	-	◇	-	◇	-	-	◇	◇	◇	Undergraduate students in any natural science be accepted, preferentially in biomass-related fields. We study bioenergy and biochemicals from various biomass materials.
	S-4	Energy and Information (Human Machine Interface)	✓	✓	◇	-	◇	-	-	-	◇	◇	-	-	-	◇ Cognitive psychology ◇ Informatics ◇ Statistics
	S-5	Energy and Environment (Energy Environmental Impact)	✓	✓	◇	-	-	◇	◇	◇	-	-	-	-	◇	◆ Environmental chemistry/physics
	S-6	Energy Policy KURNS	✓	✓	-	-	-	-	◇	-	◇	◇	-	-	-	Basic knowledge of energy policy and energy scenario study is preferred.
	S-7	Societal Energy Education KURNS	✓	✓	◇	◇	◇	◆	◇	-	◇	◇	-	-	-	
Only the research fields of natural science are included in the list above. Applicants in fields of social and human science are also accepted in the Department of Socio-environmental Energy Science. Applicants are recommended to refer to the brochure and webpage of the Graduate School of Energy Science for detailed information on the research topics in each laboratory.																
Fundamental Energy Science	K-1	Energy Chemistry	✓	✓	-	-	-	◆	-	◆	-	-	-	-	-	
	K-2	Quantum Energy Processes (Materials Chemistry and Physics)	✓	✓	-	-	◇	◆	-	◇	-	-	-	-	-	
	K-3	Functional and Solid State Chemistry	✓	✓	-	-	-	◇	-	◇	-	-	-	-	◇	
	K-4	Plasma and Fusion Science	✓	✓	-	-	◆	-	-	-	-	◆	-	-	-	It is preferable that students understand the basics of mechanics, electromagnetics, and statistical physics.
	K-5	Electromagnetic Energy	✓	✓	-	-	◆	-	-	-	-	◆	-	-	-	
	K-6	Plasma Physics	✓	✓	-	-	◇	-	-	-	-	◇	-	-	-	It is preferable that students understand the basics of mechanics, electromagnetism, and statistical physics.

IAE: Institute of Advanced Energy, Uji KURNS:Kyoto University,Institute for Integrated Radiation and Nuclear Science, Kumatori Laboratories are restricted in accepting students in the context of nuclear non-proliferation.

Department	Code	Research group name	Student position availability		Required background ◆ Relevant background ◇ Tertiary level, not exhaustive										NOTES BY RESEARCH GROUP Remarks, other requirements and/or desirable knowledge etc.	
			Master's program	Doctoral program	CIVIL/ENVIRONMENTAL ENGINEERING	MECHANICAL ENGINEERING	ELECTRICAL ENG. & ELECTRONICS	MATERIALS SCIENCE	EARTH RESOURCES	INDUSTRIAL CHEMISTRY	NUCLEAR ENGINEERING	MATHEMATICS & INFORMATION	FORESTRY	WOOD SCIENCE & TECHNOLOGY		BIO-ENVIRONMENTAL SCIENCE
Fundamental Energy Science	K-7	High-Temperature Plasma Physics IAE	✓	✓	-	◇	◇	-	-	-	◇	◇	-	-	-	Knowledge of basic physics is preferable.
	K-8	Energy Optical Properties IAE	✓	✓	-	-	◇	◇	-	◇	-	◇	-	-	-	Knowledge of quantum physics, electrical engineering and material science is preferable.
	K-9	Interfacial Energy Processes IAE	✓	✓	-	-	-	◆	-	◆	-	-	-	-	-	Knowledge of inorganic chemistry and electrochemistry is preferable.
	K-10	Energy Nano Engineering IAE	✓	✓	-	-	◆	◆	-	◆	-	-	-	-	-	
	K-11	Biofunctional Chemistry IAE	✓	✓	-	-	-	-	-	◇	-	-	-	-	◇	Knowledge of organic & inorganic chemistry and biochemistry is preferable.
	K-12	Bioenergy IAE	✓	✓	-	-	-	-	-	-	-	-	-	◇	-	◇Life Science ◇Biochemistry & Molecular Biology
	K-13	Fundamental Neutron Science KURNS	✓	✓	-	-	-	-	-	-	◆	-	-	-	-	Knowledge of reactor physics
	K-14	Heat Transport System KURNS	✓	✓	-	◇	-	-	-	-	◇	-	-	-	-	
Energy Conversion Science	H-1	Thermal Energy Conversion	✓	✓	-	◆	-	-	-	-	-	◇	-	-	-	
	H-2	Conversion Systems	✓	✓	-	◆	-	-	-	-	-	◇	-	-	-	Thermo-Fluid Dynamics, Combustion Engineering
	H-3	Materials Design for Energy Systems	✓	✓	-	◆	◇	◇	-	-	-	◇	-	-	-	Strength and Mechanics of Engineering Materials
	H-4	Design for Functional Systems	✓	✓	-	◆	◇	◇	-	-	-	◇	-	-	-	Nonlinear continuum mechanics
	H-5	Advanced Energy Conversion IAE	✓	✓	-	-	◇	◆	-	◇	◇	-	-	-	-	
	H-6	Plasma Energy Conversion IAE	✓	✓	-	-	◆	-	-	-	◇	◇	-	-	-	
	H-7	Functional Energy Conversion Materials IAE	✓	✓	-	◇	-	◆	-	-	◇	◇	-	-	-	Mechanics and Thermodynamics of Nuclear Materials

IAE: Institute of Advanced Energy, Uji KURNS:Kyoto University,Institute for Integrated Radiation and Nuclear Science, Kumatori Laboratories are restricted in accepting students in the context of nuclear non-proliferation.

Department	Code	Research group name	Student position availability		Required background ◆ Relevant background ◇ Tertiary level, not exhaustive										NOTES BY RESEARCH GROUP Remarks, other requirements and/or desirable knowledge etc.	
			Master's program	Doctoral program	CIVIL/ENVIRONMENTAL ENGINEERING	MECHANICAL ENGINEERING	ELECTRICAL ENG. & ELECTRONICS	MATERIALS SCIENCE	EARTH RESOURCES	INDUSTRIAL CHEMISTRY	NUCLEAR ENGINEERING	MATHEMATICS & INFORMATION	FORESTRY	WOOD SCIENCE & TECHNOLOGY		BIO-ENVIRONMENTAL SCIENCE
Energy Science and Technology	0-1	Devices Physics	✓		-	-	◆	◆	-	◇	-	-	-	-	-	Basic knowledge of solid state physics, inorganic chemistry, and crystal engineering is preferable.
	0-2	Process and Energy	✓		-	◇	◆	◆	-	◇	-	-	-	-	-	
	0-3	Materials Process Science	✓		-	-	◇	◆	-	◇	-	-	-	-	-	
	0-4	Thermochemistry	✓		-	-	◇	◆	-	◇	-	-	-	-	-	
	0-5	Resources and Energy Systems	✓		-	-	-	◆	◇	-	-	-	-	-	-	
	0-6	Advanced Processing of Resources and Energy	✓		-	◆	-	◆	-	-	-	◇	-	-	-	
	0-7	Mineral Processing	✓		-	◇	-	◇	◆	◇	-	-	-	-	-	
	0-8	Quantum Radiation Energy Science IAE	✓		◇	◇	◇	◇	-	◇	◇	◇	-	-	◇	Accepting students who have interests in Renewable Energy Implementation
	0-9	Physics of Energy Materials IAE	✓		-	◇	◇	◆	◇	◇	-	-	-	-	-	Basic knowledge of solid state physics is preferable.
	0-10	Photon Energy Science IAE	✓		-	◇	◇	◆	-	◆	◇	-	-	-	-	Basic knowledge of quantum mechanics or optics is preferred but not necessarily required.

MASTERS APPLICATION DOCUMENTS CHECKLIST

For documents marked with an asterisk (*), please use the designated forms (downloadable from the IESC website (www.energy.kyoto-u.ac.jp/en/admission/admission-documentation/) and print in ISO "A4" size.

✓ # List of documents

- 1 Form A Application*
- 2 Form B Personal history: EDUCATIONAL AND VOCATIONAL BACKGROUND*
- 3 Form C Reference: RECOMMENDATION FORM* by two referees
- 4 Graduation certificate or expected graduation certificate
- 5 All higher education academic transcripts, complete or latest (Bachelor's equivalent)
- 6 Summary of the graduation thesis/ undergraduate project
- 7 Statement of purpose (ISO "A4" /letter size)
- 8a Photocopy of your official score report
- 8b I have arranged direct delivery of the official score report of TOEFL or IELTS from the ETS or British Council. TOEFL iBT TOEFL PBT ELTS
- 8c I am a national of a majority English Speaking country and my first and native language is English.
- 9 Photocopy of passport
- 10 《Residents of Japan only》 Certificate of Residence 'Juminhyo' or a copy of resident card
- 11 Signed disclaimer*

International Energy Science Course Application for MASTERS PROGRAM

Graduate School of Energy Science, Kyoto University

Please type or print in blue or black ink. All sections must be filled out.

1. INTENDED DATE OF ADMISSION

October 20
year

2. NAME

family name

first name

middle name

3. DATE OF BIRTH

month

day

year

age

4.

male

female

5. NATIONALITY/CITIZENSHIP

6. COUNTRY OF BIRTH

COUNTRY OF RESIDENCE

7. HIGHER EDUCATION QUALIFICATION - BACHELORS/UNDERGRADUATE

University:

Country:

Department/
Program title:

Degree title:

Graduation:

Graduated in

month

year

Will graduate in

month

year

8. PRESENT STATUS IN DETAIL Please describe your current employment, education or relevant personal situations.

9. CONTACT INFORMATION

Please include a full postal address and active email for contact through application and selection period.

E-mail address:

Full postal address:

Address in Chinese
characters if applicable:

Telephone:

country code

local number

Fax number (if any):

10. LABORATORIES OF INTEREST

Please choose three laboratories of interest to you from the IESC laboratory list and state the codes* (S-00/K-00/H-00)

in your order of preference. *Vj ku'y knlj gr 'wu'iq'c:uiki p'f'qw'iq'c'r't qur gev:k'gecf go ke'cf xkuqt 'c'pf 'rcdqt cvqt {0*
.....*Please see Appendix.

.....1

....

2

....

.....3

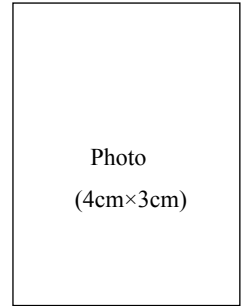
"

CANDIDATE DECLARATION

"I hereby certify that all the information given in this application and the attached documents is complete and accurate and I understand that if I give false or misleading information Kyoto University will not admit me as a graduate student."

_____ date

_____ signature



FORM B

Personal History: EDUCATIONAL AND VOCATIONAL BACKGROUND

master's doctoral

Please type or print in blue or black ink.

Name in the applicant's own language	Name in Latin alphabet	Date of birth (YYYY/MM/DD)
--------------------------------------	------------------------	----------------------------

EDUCATION

Elementary School Education	Name and address of institution			Officially required years for graduation	Date of entrance and completion (YYYY/MM)		Number of academic years	Remarks	
	Name	Location	city/province		country	From			To
Secondary Education									
I. Junior High School (Lower Secondary) Education									
II. Senior High School (Upper Secondary) Education									
Tertiary / Higher Education									
I. University Undergraduate Level									
II. University Postgraduate Level									
Total number of years of education									
								Major / Course	Degree title

EMPLOYMENT (if applicable)

Name of Organization / Institution	Job Title	Postal address	Employment Period (YYYY/MM)	
			From	To



Reference: RECOMMENDATION FORM
Graduate School of Energy Science Kyoto University

Student Affairs Section
GSES Administration Office
Sakyo-ku, Kyoto 606-8501, Japan
Tel/fax: +81-75-753-5576/4745
E-mail: intl@energy.kyoto-u.ac.jp

SECTION I

TO BE COMPLETED BY THE APPLICANT

Application for admission requires TWO recommendations from persons well acquainted with your academic ability and"
personality. Please fill in this section and give it to the person who will be recommending you.

Degree program: International Energy Science Course Master's Doctoral

Name of applicant: Family name First name Middle name

Postal address:

E-mail address: @

SECTION II

TO BE COMPLETED BY THE REFEREE

Upon completion, please return this form to the applicant in a sealed envelope, signed across the envelope seal.

Familiarity with the applicant

- 1. What is your relationship with the applicant? Tutor/Supervisor Other
2. How long have you known the applicant? years months
3. How often have you met the applicant? Daily Weekly Monthly Rarely
4. What was the nature of your interactions with the applicant?

Empty rectangular box for response to question 4.

- 5. Please provide a description of the applicant's qualifications for post-graduate study. In this regard, please include an assessment of how this applicant compares to others whom you have taught.

Empty rectangular box for response to question 5.

Continues next page

FORM C

6. Please comment on the applicant's aptitudes and/or weaknesses and any other remarks that you may feel are important and relevant to his / her post-graduate study.

Appraisal

Please make an appraisal of the applicant's abilities/qualities in comparison with other students in the same field whom you have known or taught. Please mark the appropriate classification.

	Outstanding (Top 5%)	Excellent (Top10%)	Good (Top Third)	Fair (Middle Third)	Poor (Bottom Third)	Unable to judge
Intellectual Ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analytical Ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability in Oral Expression*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability in Written Expression*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to Work with Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Persistence/ Drive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Originality/ Creativity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* Applicants will be required to undertake studies in English.

Overall Recommendation

- Strongly recommended
- Recommended
- Recommended with reservations
- Not recommended

Referee Details

Name: _____
Position/Title: _____
Institution: _____
Institution Address: _____
Telephone Number: _____
Facsimile Number: _____
E-Mail Address: _____

Date

Signature

International Energy Science Course

Application for Master's/doctoral Program

Graduate School of Energy Science, Kyoto University

DISCLAIMER

Application for admission to the IESC requires that the applicant abides by the following:

The applicant shall complete the admissions forms, and obtain the required documentation themselves.

Kyoto University does not support the use of third party agents for the completion of any admissions procedures.

Furthermore, in accordance with international academic standards, plagiarism or falsification of any of the required documents is unacceptable.

It is accepted that the applicant may seek the advice and wisdom of others, but that they must complete the application and all associated correspondence on their own.

Applicant's declaration:

I _____ hereby declare that the application enclosed is a true record and is the product of my own work, not that of others.

Date: _____

Signature: _____