APPLICATION GUIDE

International Energy Science Course

DOCTORAL PROGRAM
Academic Year 2027
Admission Cycle I – April intake

Graduate School of Energy Science
Kyoto University

INTERNATIONAL ENERGY SCIENCE COURSE

DOCTORAL PROGRAM

APPLICATION GUIDE2027 - ADMISSION CYCLE I, APRIL INTAKE

Please note that this is a guide for admission in 2027 and should not be used for applications for admission in subsequent years. Applicants for 2028 should contact the GSES Administration Office after October2027 onward to obtain a revised guide and forms.

INTRODUCTION

PROGRAM OVERVIEW

PROGRAM: International Energy Science Course
DEGREE TITLE: Doctor of Energy Science
STANDARD COURSE DURATION: 3 years full time
LANGUAGE OF INSTRUCTION: English

The International Energy Science Course is offered by one of Japan's most prestigious universities and is specially tailored for international students and individuals whose education has taken place outside of Japan. The Doctoral program provides international students and researchers who possess a Master's degree an opportunity to further their studies toward a doctoral degree at Kyoto University. The Doctoral degree is awarded to those who have conducted original academic research under the scholarly supervision of faculty members and who have successfully defended their doctoral dissertation in an oral examination while accumulating a minimum of 4 credits from designated lectures and seminars.

DEPARTMENTS PROVIDING THE PROGRAM

Students are enrolled in one of the following four departments within the Graduate School of Energy Science, based on their specific field of interest:

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 https://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 Doctoral program offers two application cycles per year: Cycle I for April enrollment and Cycle II for October enrolment. It is mandatory that applicants select and apply to the appropriate cycle corresponding to their intended enrollment date.

Please note: Admission offers cannot be deferred to a subsequent admission cycle.

Cycles	***Degree***	***Application deadline***	***Decision notification***	***Enrollment***	***Scheduled degree completion***
Cycle I	**Doctoral**	**June 15, 2026**	**September 4, 2026**	**April 1, 2027**	**March 2030**
Cycle II	Master's Doctoral	December 24, 2026	March 25, 2027	October 1, 2027	Master's: September 2029 Doctoral: September 2030

DOCTORAL PROGRAM

D-I 1. ENROLLMENT CAPACITY

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

D-I 2. ENROLLMENT DATE

April 1, 2027

D-I 3. ELIGIBILITY REQUIREMENTS FOR APPLICANTS

The eligibility of applicants, as set forth in the General Rules of Kyoto University, will be verified prior to the selection process.
Applicants must satisfy both of the following qualifications:

(1) a. Have obtained, or are 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 are expected to obtain a Master's degree (or equivalent) from a university in Japan as an overseas student who holds a legal status of residence (valid Japan visa) by the official date of enrollment*.

(2) Have a competitive proficiency in academic English.

PLEASE SEE D-I 2

D-I 4. RECOMMENDED ENGLISH LANGUAGE TEST SCORE

Applicants must provide appropriate evidence of their English proficiency. Recommended scores are 80 or higher for TOEFL iBT and 6.0 or higher for IELTS.

Applicants whose native language is English and who are from an English-speaking country may be exempt from providing their proof of English language proficiency. To claim this exemption, applicants must first contact to the GSES office and follow the instructions provided.

D-I 5. ADMISSION SELECTION PROCESS

Screening will be conducted on the basis of the submitted application documents, an online interview, and the availability of the applicant's proposed field of study within the department. Details concerning the online interview will be contacted directly to eligible applicants.

D-I 6. ACADEMIC SUPERVISOR

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

D-I 7. Official Score Report of TOEFL iBT/TOEFL iBT Home Edition or IELTS.

Applicants are required to submit their official score report of TOEFL iBT (Including Home Edition) or IELTS Academic Module. The test must have been taken within the last 24 months prior to the application deadline.

It is also essential that an applicant's official test score be sent directly from the testing agent (such as ETS or the British Council) and addressed specifically to "The Administration Office, Graduate School of Energy Science, Kyoto University. Please note that these official scores must be received by the GSES office before the application deadline in order for an applicant's application to be considered complete and processed for review. (i)

TOEFL Institution Code: 9501 KYOTO UNIVERSITY, Department Code: 69 PHYSICAL SCIENCES – ENGINEERING, OTHER
For an IELTS score holder, the address to send is below. Kyoto University Student Affairs Section, Administration Office Graduate School of Energy Science, Yoshida-Honmachi, Sakyo-ku, Kyoto city, JAPAN 606-8501,

Note: (i) Applicants are strongly advised to take the test as early as possible to ensure that we receive the official score report before the application deadline. Please be aware that it may take up to eight weeks for us to receive scores directly from a testing agent.

D-I 8. AAO Application Process

Prior to submitting their application documents online, applicants must read the information provided at the URL below and successfully complete the AAO process. The Graduate School of Energy Science requires this process for all applicants who have graduated or expect to graduate from universities outside of Japan.
Admissions guide for graduates of overseas universities | KYOTO UNIVERSITY (kyoto-u.ac.jp)
AAO application procedure (kyoto-u.ac.jp)

D-I 9. DOCUMENTS REQUIRED FOR SCREENING

The designated forms can be downloaded from the IESC website:
https://www.energy.kyoto-u.ac.jp/en/admission/admission-documentation/

1	**Form A: Application**	- With a passport-style photo taken within the last 3 months must be pasted into the box provided on the application form. - Please do not use a modified photograph.
2	**Form B:** Personal history	Educational and professional background
3	**Form C: References** (2)	- A designated form (Form C) must be used. - Submit two Forms by emailing us directly from a referee's official institutional email address before the application deadline: intl@energy.kyoto-u.ac.jp - Referees must be individuals such as academic supervisors or tutors who are well acquainted with the applicant's academic ability and personality. - At the time of enrollment, successful applicants will be required to submit the original Forms in a sealed envelope, signed over the envelope seal.
4	**Degree certificates**	- Required for both undergraduate/bachelor's and postgraduate/Master's. - Only originals or officially certified duplicates are accepted. - Current students should submit a certificate detailing their expected graduation date and their most recent official academic transcripts. - Documents written in a language other than English must be accompanied by an English translation. - At the time of enrollment, successful applicants will be required to submit all original certificates and transcripts.
5	**University academic transcripts**	
6	**Summary of Master's thesis** (on A4-size paper, 400-500 words across 1-2 pages)	- Written in English on A4-size paper, comprising with 400 - 500 words across 1-2 pages. Please ensure that your document stays within the word limit. Content that exceeds the word limit will not be evaluated. - If no thesis was required for the Master's degree, an applicant must provide a summary of a final year project that required research and analytical skills.
7	**Research proposal** (on A4-size paper, 1000-1500 words across 2-4 pages)	- Submit a research proposal for the doctoral degree, in English on A4-size paper (2-4 pages, 1000 - 1500 words). Please ensure that your document stays within the word limit. Content that exceeds this limit will not be evaluated. - Applicants must discuss their research proposal with their prospective supervisor at Kyoto University before submission.
8	**Official score report of TOEFL including Home Edition or IELTS**	- Submit a copy of your official test score report. - Please read the instructions under the "D-I 7" carefully to ensure that the GSES office can receive an original score report sent directly from a testing agent before the application deadline.
9	**Photocopy of passport**	Submit a photocopy of the applicant's valid passport showing the photo page.
10	**Official copy of a certificate of residence** (only for a resident in Japan).	- Residents of Japan should submit a photocopy of their residence card, front and back. - Residence certificates are issued by the city/ward office of the registered domicile.
11	**Disclaimer**	Please read the designated form carefully and sign it.

D-I 10. APPLICATION FEE

10,000 JPY* **PLEASE SEE **G2***

D-I 11. APPLICATION DEADLINES AND TIMETABLE

Application deadline:	June 15, 2026, 17.00 (UTC+9)
Application fee payment:	July 7 – 14, 2026
Interview period:	August 21 – 24, 2026
Announcement of results	September 4, 2026

GENERAL INSTRUCTIONS

G1. METHOD OF APPLICATION

Applications are only accepted via the online submission system. Applications can NOT be accepted in person at the GSES office.

The online submission system can be accessed via the website:
https://www.energy.kyoto-u.ac.jp/en/admission/admission-information/

G2. APPLICATION FEE

Applicants must pay the application fee in full during the designated payment period. The application fee is non-refundable.
Once the payment has been made, please email a scanned copy of a "payment certificate" downloaded from the completed application page to the administration office (intl@energy.kyoto-u.ac.jp).

Application fee amount: 10,000 JPY

Payment instruction: Go to the website below and follow the instructions for making the payment.
https://kjs3.gakusei.kyoto-u.ac.jp/iesc-d04_2026

For Applicants Residing Outside Japan
Pay by credit card (VISA, MasterCard, JCB, AMERICAN EXPRESS or Diners Club INTERNATIONAL).
It is acceptable to use a credit card in a name other than that of the applicant (e.g., the applicant's parents).

For Applicants Residing in Japan
Make a payment at a designated convenience store, a financial institution's ATM (Pay-easy), online using one of the above credit cards or via designated internet banking. It is acceptable to use a credit card or a bank account in a name other than that of the applicant (e.g., the applicant's parents).

G3. ENROLLMENT PROCEDURES, ADMISSION FEE AND TUITION

ENROLLMENT PROCEDURES

The "Guide to Enrollment" will be emailed to all successful applicants no later than October.

Those who accept the admission offer and wish to formally enroll in the course must pay the admission fee before the deadline specified in the Guide to Enrollment and obtain a College Student Visa before the start of the program. If an applicant designates a third party as their agent to process fee payment transaction, please notify the office.

Individuals who are currently employed must resign or take leave from their current institution or organization prior to enrolling in the International Energy Science Course. Similarly, those who are currently studying at other graduate schools must take leave or officially terminate their graduate studies before joining the course.

ADMISSION FEE AND TUITION

Admission fee*: 282,000 JPY (subject to change upon admission)
Tuition per annum*: 535,800 JPY (267,900 JPY per semester; subject to change during the course of study)
*MEXT scholarship recipients will have the admission fee and tuition waived for the designated scholarship period.

G4. GENERAL NOTES

a. Applicants should inform the Administration Office immediately if they decide to withdraw their application.
b. Under no circumstances can changes be made to submitted documents.
c. The personal information provided in the application documents, including an applicant's name, gender, date of birth, contact address will be used only for purposes related to: (a) admission examinations, (b) admission procedures, and (c) preparations for the acceptance of the student.
d. Applicants with a physically disabled who require special arrangements are requested to contact the Student Affairs Section, Graduate School of Energy Science, Kyoto University.
e. All graduates of universities located outside of Japan who wish to enroll in a Kyoto University Graduate School as a Research Student, Master's Student, or Doctoral Student are required to first contact the Admissions Assistance Office (AAO) for a preliminary review before proceeding to submit their 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 order to maintain the peace and security of Japan and the international community, Kyoto University conducts Security Export Control in accordance with the "Foreign Exchange and Foreign Trade Act". International applicants who fall under any of the conditions specified in these regulations may not be able to enroll in their desired course or program. Please refer to the following URL for details:

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

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: https://www.energy.kyoto-u.ac.jp/en/admission/admission-information/

LABORATORIES LIST FOR INTERNATIONAL ENERGY SCIENCE COURSE

2027 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 AY2027 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	Eneregy 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	Energy Biomolecular Organization Chemis 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-6	Plasma Energy Conversion IAE	✓	✓	-	-	◆	-	-	-	◇	◇	-	-	-	

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			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	O-1	Devices Physics		✓	-	-	◆	◆	-	◇	-	-	-	-	-	Basic knowledge of solid state physics, inorganic chemistry, and crystal engineering is preferable.
	O-2	Device Process Engineering		✓	-	-	◆	◆	-	◇	-	◇	-	-	-	Basic knowledge of solid state physics or electrochemistry is preferable.
	O-3	Materials Process Science		✓	-	-	◇	◆	-	◇	-	-	-	-	-	
	O-4	Thermochemistry		✓	-	-	◇	◆	-	◇	-	-	-	-	-	
	O-5	Resources and Energy Systems		✓	-	-	-	◆	◇	-	-	-	-	-	-	
	O-6	Advanced Processing of Resources and Energy		✓	-	◆	-	◆	-	-	-	◇	-	-	-	
	O-7	Mineral Processing		✓	-	◇	-	◇	◆	◇	-	-	-	-	-	
	O-8	Quantum Radiation Energy Science IAE		✓	◇	◇	◇	◇	-	◇	◇	◇	-	-	◇	Accepting students who have interests in Renewable Energy Implementation
	O-10	Green Catalysis and Material Conversion IAE		✓	-	◇	◇	◆	-	◆	◇	-	-	-	-	Basic knowledge of quantum mechanics or optics is preferred but not necessarily required.

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 Studies, Energy Economics, Systems Design, Microscopic and Macroscopic Viewpoints, Sustainability, Energy-X-Nexus, Resources
S-3	Energy Ecosystems (Biomass Energy)	Biomass Energy, Biochemicals, Pyrolysis, Gasification, Supercritical Fluid, Low-temperature Plasma, Organic Chemistry of Biomass
S-4	Energy and Information (Human Machine Interface)	Human Interface, Augmented Reality, Intellectual Productivity, Pro-Environmental Behavior
S-5	Energy and Environment (Energy Environmental Impact)	Atmospheric Environment, Aerosol, Hazardous Atmospheric Pollutants, Environmental Dynamics, Environemntal 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 Infomatics, Materials Science, Nucler Fuels, Thermoalectric 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, Inorganic Semiconductors, ,Photochemistry, Solid State Physics, Photophysics, Chirality, Colloid Science
K-3	Functional and Solid State Chemistry	Inorganic materials chemistry, Solid state chemistry, Electrochemistry, Secondary batteries, Fuel cells, Biomaterials science, Ceramic biomaterials
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, System control, 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
K-8	Eneregy 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, CO2 Conversion, Silicon Solar Cell, Rechargeable Battery
K-10	Energy Nano Engineering (IAE)	Nanoscience, Nanomaterials, Organic Synthesis, Solar Energy
K-11	Energy Biomolecular Organization Chemistry (IAE)	Artificial Photosynthesis, Protein Engineering, Synthetic Biology, Chemical Biology, Bioenergy, CO_2 conversion
K-12	Bioenergy (IAE)	Biomass, Bioethanol, Environment-friendly, NMR, AIDS, Cancer
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	Conversion System, Thermo-Fluid Science, Laser Image Diagnostics, Power Engineering, Computational Fluid Dynamics, Internal Combustion Engine, Alternative Fuels
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-6	Plasma Energy Conversion (IAE)	Plasma Physics, Fusion Science, Heating and Current Drive, Plasma Diagnostics, Microwave Technology, High power neutral beam technology

O-1	Devices Physics	Crystal Alignment Techniques, Energy Materials, Thin Film Growth, Superconducting wires, Wide band-gap semiconductor
O-2	Device Process Engineering	Thin Film Growth, Solid-State Battery, Energy Materials and Device Processing, THz Spectroscopy
O-3	Materials Process Science	Materials processing, Electrochemical processing, Functional materials, Thin films, Aluminum batteries
O-4	Thermochemistry	Thermochemistry, Crystal Growth, Metallurgy, Eco-friendly Processes, Energy Materials
O-5	Resources and Energy Systems	Energy-saving materials, Multi-scaling materials
O-6	Advanced Processing of Resources and Energy	Plasticity, Forming Simulation, Advanced Processing of Eco-materials, Material Modeling
O-7	Mineral Processing	Thermal Fluid Engineering, Resources Circulation, Mineral Processing, Rock engineering
O-8	Quantum Radiation Energy Science (IAE)	Mid-Infrared and THz Laser, Free Electron Laser, Electron Accelerator, Photophysics, Technologies for Nuclear Safety and Security
O-10	Green Catalysis and Material Conversion (IAE)	Resource Conversion, Catalytic Material, Catalytic Reaction, Catalyst Process, Carbon Recycling

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