

2016 APPLICATION GUIDELINES FOR VIETNAMESE INTERNATIONAL STUDENTS

IN

THE DEPARTMENT OF APPLIED QUANTUM PHYSICS AND NUCLEAR ENGINEERING
THE GRADUATE SCHOOL OF ENGINEERING, KYUSHU UNIVERSITY

The Department of Applied Quantum Physics and Nuclear Engineering in the Graduate School of Engineering, Kyushu University (hereafter called the Department) accepts international students from Vietnam based on the **JDS program for master's degree** and the **VIED-MOET scholarship programs for master's and doctoral degrees**. This document gives supplementary guidance for Vietnamese applicants, who want to enter the international programs under these programs. They should also refer to the general applicant guidelines for the international programs in the Graduate School of Engineering.

1. Offered Programs

The following programs are recommended to every Vietnamese applicant for admission to the Graduate School of Engineering:

(1) JDS program

The Department accepts Vietnamese students in the master's course under the JDS (Japanese Grant Aid for Human Resource Development Scholarship) program. This program has been started at the Department since 2014, aiming at supporting human resource development of young Vietnamese government officials, who engage in "stable supplies for energy". The program is outlined as follows:

- Sub-program target priority area: Promotion of economic growth and strengthening of international competitiveness
- Component development issues: Stable supplies for energy
- Number of students to be accepted every year: 2
- Program name: International Master's Program in Applied Quantum Energy Physics (The program will be instructed in English)
- Degrees: Master of Engineering

This program will invite potential applicants, who understand its aims and are interested in 2 year master's degree program at the Department. The detailed information on the JDS program for Vietnamese government employees is available at the following website:

URL: <http://jds-scholarship.org/country/vietnam/>

(2) VIED-MOET scholarship programs

The Department is recruiting graduate students, who will receive a scholarship from the Vietnam International Education Development (VIED) of the Ministry of Education and Training (MOET) based on the following two projects in connection with Decision No. 1558/QD-TTG approving the scheme on training and development of human resources **in**

the field of atomic energy:

- **Project 599:** Decision No. 599/QD-TTg approving the program of "Study abroad by the state's budget in the period of 2013-2020", and
- **Project 911:** Decision No. 911/QD-TTg approving the project on training PhD lecturers for universities and colleges in the period of 2010-2020.

Please contact VIED for details of the Vietnamese government scholarship programs:

URL: <http://www.vied.vn/>

The academic programs offered in the Graduate School of Engineering are as follows:

- International Master's Program in Applied Quantum Physics and Nuclear Engineering (2 year master's degree program), and
- International Doctoral Program in Applied Quantum Physics and Nuclear Engineering (3 year doctoral degree program)

These programs will be instructed in English. The number of students to be admitted is 5 including ones for another program in the Interdisciplinary Graduate School of Engineering Sciences, Kyushu University. The detailed information on the above master's and doctoral programs in the Graduate School of Engineering is available at the website of Faculty of Engineering:

URL: <http://www.eng.kyushu-u.ac.jp/e/index.html>

All applicants are requested to find their prospective academic supervisors before submitting their application documents for admission to Kyushu University.

2. Entrance Date

October 1, 2016

3. Eligibility for applicants

(1) JDS program

- Students accepted as a JDS fellow

(2) VIED-MOET scholarship programs

- MOET sponsored students from VIED

All applicants must satisfy the application qualification stated in Applicant Guidelines for the international programs in the Graduate School of Engineering.

4. Tuition and other fees

(1) JDS program

Students, who are accepted as a JDS fellow, are entitled to receive the support for full tuition fees from the program up to 2 years in their master's program. They are also exempted from the screening and admission fees.

(2) VIED-MOET scholarship programs

Kyushu University waves the screening and admission fees for students, who are admitted to enroll under the VIED-MOET scholarship programs. They are also exempted from tuition fees for up to 2 years in their master's program, and for up to 3 years in their doctoral program.

5. Application for Graduate Programs

(1) Master's program (JDS program and VIED Project 599)

- For all applicants, it is strongly recommended to apply for both the JDS program and the VIED-MOET scholarship program. The public announcement of the JDS program usually starts around September, while the application for the VIED-MOET scholarship program might be accepted in next winter or spring.
- For all applicants, it is also required to apply for the International Master's Program in the Graduate School of Engineering. Its application starts early in April.

(2) Doctoral program (VIED Project 911)

- The application for the VIED-MOET scholarship program might be accepted in winter or spring. All applicants, who are recommended by VIED-MOET, are required to apply for either the International Doctoral Program or the International Special Course on Environmental Systems Engineering in the Graduate School of Engineering. Their applications usually start early in April and early in June, respectively.

6. Admission Examination

(1) Master's program

- The Department will administer written and oral examinations as the second selection during the screening process of the JDS program around January. Applicants, who take part in these JDS examinations, might be exempted from the admission examination for the International Master's Program in the Graduate School of Engineering by the contents of their academic transcript.
- The written examination subjects are
 - Mathematics (required subjects): Two problems of "Linear Algebra" and "Calculus/Differential Equation"
 - Specialized subjects (elective subjects): Choose three subjects from "Thermodynamics/Physical Chemistry", "Mechanics", "Statistical Mechanics", "Quantum Mechanics", "Transport Phenomena", "Reactor Physics", "Solid State Physics", "Electromagnetics" and "Electric and Electronic Circuits".

After the submission of written application for the JDS program, applicants will be asked the three specialized subjects that they want to take.

(2) Doctoral Program

- Oral examination on specialized subject and master's thesis is given to applicants. The applicants should obtain details about date and place of the examination from the chairperson of the International Doctoral Program or their prospective academic supervisors.

7. Faculty members capable of guiding international students

(1) Graduate School of Engineering for JDS and VIED-MOET scholarship programs

- Radiation Physics and Measurements
 - ◇ Kenji Ishibashi, Professor (E-mail: kisibasi@kune2a.nucl.kyushu-u.ac.jp)
 - ◇ Keisuke Maehata, Associate Professor
 - ◇ Naoko Iyomoto, Associate Professor
- Nuclear Physics and Electromagnetic Instrumentation
 - ◇ Nobuo Ikeda, Professor (E-mail: nikeda@nucl.kyushu-u.ac.jp)
 - ◇ Yusuke Uozumi, Associate Professor
- Nuclear Energy Systems
 - ◇ Koji Morita, Professor (E-mail: morita@nucl.kyushu-u.ac.jp)
- Nuclear Reactor Physics and Fusion Energy Science
 - ◇ Nozomu Fujimoto, Professor (E-mail: n.fujimoto@nucl.kyushu-u.ac.jp)
 - ◇ Hideaki Matsuura, Associate Professor
- Nuclear Fuel Cycle Engineering
 - ◇ Kazuya Idemitsu, Professor (E-mail: idemitsu@nucl.kyushu-u.ac.jp)
 - ◇ Yaohiro Inagaki, Associate Professor
- Radiation Effects and Radiation Induced Phenomena in Condensed Matter
 - ◇ Syo Matsumura, Professor (E-mail: syo@nucl.kyushu-u.ac.jp)
 - ◇ Yasukazu Murakami, Professor
 - ◇ Kazuhiro Yasuda, Associate Professor
- Condensed Matter Physics
 - ◇ Tatsuya Kawae, Associate Professor (E-mail: t.kawae.122@m.kyushu-u.ac.jp)
- Surface Physics
 - ◇ Satoru Tanaka, Professor (E-mail: stanaka@nucl.kyushu-u.ac.jp)
- Applied Physics
 - ◇ Kazuhiro Hara, Professor (E-mail: khara@nucl.kyushu-u.ac.jp)
 - ◇ Hirotaka Okabe, Associate Professor

(2) Interdisciplinary Graduate School of Engineering Sciences only for VIED-MOET scholarship programs

- Materials Sciences in Extremely Severe Conditions
 - ◇ Kenichi Hashizume, Associate Professor (E-mail: hashi@nucl.kyushu-u.ac.jp)
- Energy Chemical Engineering
 - ◇ Satoshi Fukada, Professor (E-mail: sfukada@nucl.kyushu-u.ac.jp)
 - ◇ Kazunari Katayama, Associate Professor
- Nuclear and Radiation Engineering Physics
 - ◇ Yukinobu Watanabe, Professor (E-mail: watanabe@ees.kyushu-u.ac.jp)

8. Curriculums

The following is a list of subjects given in the International Master's and Doctoral Programs of the Department:

- Advanced Subjects
 - ✧ Nuclear Fuel Engineering
 - ✧ Physical Sciences and Engineering of Organic Materials
 - ✧ Radiation Physics and Measurement
- Advanced Specialized Subjects
 - ✧ Nuclear Reaction and Accelerator
 - ✧ Lattice Defects in Materials
 - ✧ Multiphase Flow Science in Energy Engineering
 - ✧ Nuclear Reactor System Engineering
 - ✧ Solid State Physics
- Professional Skill Development for Master's Program
 - ✧ Laboratory and Presentation for Nuclear and Radiation Engineering
 - ✧ Laboratory and Presentation for Materials Science
 - ✧ Laboratory and Presentation for Nuclear Energy System Engineering
 - ✧ Laboratory and Presentation for Applied Physics
- Additional Specialized Subjects for Master's Program
 - ✧ Research Project in Nuclear and Radiation Engineering
 - ✧ Research Project in Materials Science
 - ✧ Research Project in Nuclear Energy Systems
 - ✧ Research Project in Applied Physics
- Additional Specialized Subjects for Master's Program
 - ✧ Research Project in Nuclear and Radiation Engineering
 - ✧ Research Project in Materials Science
 - ✧ Research Project in Nuclear Energy Systems
 - ✧ Research Project in Applied Physics
- Subjects for Doctoral Program
 - ✧ Colloquium on Nuclear and Radiation Engineering
 - ✧ Colloquium on Nuclear Energy Systems
 - ✧ Colloquium on Materials Science for Energy Systems
 - ✧ Colloquium on Applied Physics
- Cross-disciplinary Courses (examples)
 - ✧ Introduction to Urban and Environmental Engineering
 - ✧ Energy Problems - Present and Future with Particular Reference to Coal
 - ✧ Practical Environmental Engineering
 - ✧ Earth and Environmental Systems Engineering
 - ✧ Microscopic Aspects of Energy Science and Engineering
 - ✧ Introduction to Civil and Environmental Systems Engineering
 - ✧ Naval Architecture and Marine Systems Engineering