佐賀大学大学院農学研究科
国際人材育成プログラム
修士課程（外国人留学生―在日）
学生募集要項

Post-graduate Program for Global Human-resources Development（PPGHD） in Graduate School of Agriculture, Saga University

(Master Course)

2019

Guide for the Application for the Foreign Students staying in Japan

Application Deadline: January 10, 2019.
Examinations and Interview: February 20, 2019.
Academic Year Start: April 1, 2019.

Graduate School of Agriculture
SAGA UNIVERSITY

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Post-graduate Program for Global Human-resources Development （PPGHD） in Graduate School of Agriculture, Saga University

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GUIDE FOR THE APPLICATION FOR THE FOREIGN STUDENTS OF

Post-graduate Program for Global Human-resources Development in Graduate School of Agriculture, Saga University

The Post-graduate Program for Global Human-resources Development (PPGHD) in Graduate School of Agriculture provides all lectures, seminars, and internships in English for foreign students. The PPGHD is an educational course in the Graduate School of Agriculture, Saga University, in order to bring up global researchers and/or engineers who will contribute to the agricultural sciences. This is a call for application to a two-year Master Course starting from April, 2019.

Education and research in agricultural sciences should be conducted from comprehensive and global viewpoints. Expertise on agriculture is important for the production of food and biological resources. The synthesis of agricultural expertise is indispensable for understanding and solving the problems caused by the impact of human activities on the global environment and on all living things, including humans. This special course is geared to international students, so that they will be able to acquire agricultural knowledge and enhance their ability of logical thinking, in the hope that their knowledge and ability will be useful for generating clear insights on agricultural issues from comprehensive global viewpoints after they return to home countries.

In the Master Course program of the PPGHD, education and research guidance of the fields are given by the department of Biological Resource Sciences in the Graduate School of Agriculture. Applicants should decide the research fields and choose prospective relevant supervisor(s) appearing on the list of Academic Staffs.

Students who complete the Master Course program of the PPGHD are granted the degree of Master of Agriculture. The month of entrance is April, 2019 and the applicants can enter the PPGHD course after completing their Bachelor Course program.

Qualifications

1. **Nationality:** Non-Japanese citizens staying in Japan can apply for this program.
2. **Academic carrier:** The following candidates may apply for admission.
   a. Those who have received Bachelor's Degree from Japanese University as of March 31, 2019.
   b. Those who have received Bachelor's Degree after completing 16 years course of school education in foreign country, or will receive it as of March 31, 2019.
   c. Those who have completed 16 years course of school education of foreign country in Japan through correspondence education of a foreign school, or will complete the course as of March 31, 2019.
   d. Those who have completed 16 years course of school education of foreign country at educational institutions of the foreign country in Japan, which is designated by the Minister of Education, Culture, Sports, Science and Technology of the Japanese Government, or will complete the course as of March 31, 2019.
   e. Those who have completed 15 years course of school education in foreign country, and been admitted by the Graduate School of Agriculture, Saga University to obtain sufficient credits with excellent score.
   f. Those who have successfully completed the course that Minister of Education, Culture, Sports, Science and Technology of the Japanese Government appoints particularly among a specialized course of a special vocational school (it is limited to the course whose years required for graduation are more than 4 and that satisfies the other standards that Minister of Education, Culture, Sports, Science and Technology of the Japanese Government establishes.) after the day that Minister of Education, Culture, Sports, Science and Technology of the Japanese Government establishes.
   g. Those who have been designated by the Minister of Education, Culture, Sports, Science and Technology of the Japanese Government.
   h. Those who are 22 years old or more as of March 31, 2019, and are admitted by the Graduate

School of Saga University as that their academic abilities are equivalent to or higher than Bachelor's Degree of Japanese Universities upon reviewing the submitted materials.

＊ Those who intend to apply based on the terms e, f, g, or h should submit the application form to the Entrance Examination Office of Saga University one month earlier than the application deadline.

3. **Language proficiency:** A good working level of English is required.

Tuition expenses

1. **Entrance examination fee:** 30,000 yen.
2. **Entrance fee:** 282,000 yen (scheduled).
3. **Tuition fee:** 267,900 Yen for each semester (scheduled). [535,800 Yen per academic year (scheduled).] Amount of due might be slightly revised depending on the decision of the administration council.

   Payments must be done for each semester biannually within the beginning two months of the semester.

Selection

1. Selection for admission shall be achieved by oral examination on the selected major subjects. The oral examination and interview will be conducted in English, on **February 20, 2019**.
2. The final results of selection will be noticed to the applicant by a letter. It will be dispatched on **March 9, 2019.**
3. A few number of students can be admitted.

Admission

1. Date of enrollment is April 1, 2019.
2. Date of registration for admission: March 24 to March 27, 2019. If the applicant does not register on these days, his/her admission shall be canceled.
3. Admission shall be canceled if the applicant fails to receive the Bachelor's Degree on or before March 31, 2019.

Application

1. Applicants should prepare the following documents to be forwarded to the Dean of the Graduate School of Agriculture, Saga University.
   - ① **Application Form** (Form A)
   - ② Official transcript of Bachelor's degree or certificate representing that the applicant will be conferred Bachelor's degree by March 31, 2019. The transcript or certificate must be sealed by the authority or sent directly from the college. Original diploma is also acceptable; in this case the examination office may exemplify the diploma and the original may be returned at the office.
   - ③ Transcripts of **Academic Record** issued by university authorities and its English translation.
   - ④ English summary of **Graduation Thesis** or it's equivalent if available, not exceeding four sheets of A4 size paper typed in double space. If a Graduation Thesis is not required by the University from which the applicant graduated, prepare a statement to this matter.
   - ⑤ Certificate of **Citizenship** issued by appropriate authorities.
   - ⑥ **Recommendation** and **Reference**

     a. A letter of **Recommendation** (Form B) from the head of the applicant's affiliated institution.

     b. Letter(s) of **Reference** from those who know the applicant's research/study capability should be addressed to the Dean of the Graduate School of Agriculture, Saga University.

     The letters of recommendation and reference(s) should indicate the English proficiency of the applicant. Enclose, therein, a certificate indicating the scores of TOEFL or a corresponding

English Ability Test, if any.

⑦ **Three Photographs** (hatless portrait), 4.5 cm × 3.5 cm in size, taken within six months before the date of application. Two copies should be attached to the application form. One extra copy should be enclosed therein, with the applicant's name and nationality on the reverse side of the copies.

⑧ **Entrance Examination Fee:** 30,000 yen.

2. All documents should be sent by registered mail and received by the Entrance Examination Office between **January 7 and January 10, 2019**.

Remarks

1. The above documents should be type-written in English on A4 size paper.
2. Incomplete documents are not acceptable.
3. None of the documents submitted is returned to the applicant in any case.

Notes

1. The applicant will be deprived his/her entrance under the following cases:
   a. False statements on the documents.
   b. Violation of the pledge.
2. Applicants are recommended to be well acquainted with the Japanese language, culture, customs, etc. A knowledge of the Japanese language is necessary in daily life.
3. Applicants are expected to complete their Master Course Program within two years.

Correspondence

Any correspondence relating to the application for the PPGHD should be sent by mail to the address below.

Entrance Examination Office
Saga University
1 Honjo-machi
Saga 840-8502, Japan
E-mail: contact@mail.admin.saga-u.ac.jp

Schedule for entrance examination for the PPGHD (Master Course)

Date: February 20, 2019

Place and Time: The first floor of building 1 of Faculty of Agriculture, Saga University at 9:30 with an admission ticket for examination.

Methods for examination: Oral test including interview 10:00～

ACADEMIC STAFFS ATTENDING PPGHD, AND THEIR MAJOR FIELDS AND RESEARCH INTERESTS

Biological Science Course

Improvement of Tropical Crops …….. Zheng, S.H. and Fujita, D.

1. Physiology and Eco-morphology of tropical leguminous crops.
2. Sustainable cropping system which adapted to tropical agriculture.
3. Improvement of yield-related traits in rice through genetic and breeding studies.
4. Genetic and breeding studies for resistance to planthopper and leafhopper in rice.
5. Genetic improvement for days to heading in indica rice.

Animal Production ……..……..…… Wada, Y. and Yamanaka, K.

1. Animal breeding using DNA marker.
2. Molecular genetics for domestic animal.
3. Efficient production of offspring from genetically superior individuals by reproductive technologies.
4. Application of reproductive technology to fertility treatment.
5. Recent problems in animal reproduction.

Analysis of Plant Metabolism ……..……...……...… Ishimaru, K.

1. Chemical analysis of plant secondary metabolites.
2. Biotechnology and plant metabolic regulation.
3. Development of functional food materials.

Vegetable and Ornamental Horticulture …….. Isshiki, S. and Ogura-Tsujita, Y.

1. Genetics and systematics of eggplant and its related Solanum species.
2. Cell, tissue and organ culture of vegetables and ornamentals.
3. Breeding of eggplant.
4. Seed germination experiments.
5. Molecular identification of symbiotic fungi in vitro culture of orchid seeds and fungi.
6. Survey of wild orchid habitats.

Horticultural Physiology ……. Kotoda, N.

1. Studies on genetic resources of Citrus spp. and its relatives.
2. Elucidation of involvement of phytohormones in the early development of fruit.
3. Studies on juvenility, flower induction and embryogenesis in fruit trees.
4. Functional genomics in horticultural crops such as tree fruits.

Genetics and Plant Breeding ……..…….……...… Anai, T. and Watanabe, S.

1. Molecular breeding in rice and soybean.
2. Development and utilization of breeding methods based on gene manipulation.
3. Improvement of soybean fatty acid composition by induced mutation.

Plant Virology ……..…….……...…….…...… Ohshima, K.

1. Functions of plant virus genes.
2. Genetic structure of populations of plant viruses.
3. Molecular evolution and ecology of plant viruses.
4. Interactions between host and plant virus genes.

Plant Mycology ……..…….……...…….....… Kusaba, M.

1. Classification and identification of plant pathogens.
2. Genetics of pathogenicity of plane pathogens.
3. Genetic diversity in fungal population.

Entomology …….…….……..…….....… Hayakawa, Y.

1. Physiological roles of insect cytokines.
2. Neurochemical and endocrinological regulation insect metamorphosis and diapause.
3. Defense mechanism in insect hemolymph.
4. Chemical ecology and physiology of provisioning shield bug, Parastrachia japonensis.

Nematology ……..…….……...…….……...… Yoshiga, T.

1. Biological and physiological charateristics of plant parasitic nematodes.
2. Growth regulation and pathogenicity of entomopathogenic nematodes.
3. Species diversity and ecological significance of brackish water nematodes.

Systems Ecology ……..…….……...…….……...… Tokuda, M.

1. Insect-plant interactions.
2. Mechanism and adaptive significance of host manipulation by insects.
3. Evolutionary ecology and biosystematics of gall-inducing insects.
4. Insect pest management.

Food Resource and Environmental Science Course

Agricultural and Environmental Geotechnics ……..… Kondo, F. and Miyamoto, H.

1. Solidification of soft and contaminated clay by fly ash-based geopolymer.
2. Evaluation of clay plasticity for promotion of ceramic industry.
3. Soil management and conservation for sustainable crop production.

Rural Environment …….…….. Haraguchi, T.

1. Conservation of the water environment in agricultural field.
2. Water utilization for agriculture.

Environment of Shallow Sea and Tidal Flat ……..…… Koriyama, M.

1. Conservation of tidal flat environment.
2. Environmental monitoring of shallow sea area.

Irrigation Science …….…….. Yuge, K.

1. Quantification of water consumption in agricultural field.

2. Multi-functionality in agriculture.

3.. Sustainable land use planning in Japanese rural area.

Agricultural Environmental Chemistry ……...… Ueno, D.

1. Instrumental analytical chemistry to evaluate agricultural environment.
2. Identification of odor chemicals (stinks and flavors) from field and products.
3. Development of pest control system using odor chemicals.

Water Environmental conservation in Rural Areas ……...… Anan, M.

1. Evaluation of agricultural water management in paddy field.
2. Modeling of water flow and quality in rural area.
3. Quantification of flood mitigation function in agricultural field.

Agricultural Machinery and Information Technology …….. Inaba, S.

1. Running resistance of agricultural rubber crawler.
2. Vibration analysis for agricultural vehicles.
3. Database for agricultural production.
4. Management of glassy ratio of rye with image processing technology.

Agricultural Production Engineering ……...… Tanaka,M.

1. Environmental control for hydroponic culture of vegetables.
2. Nondestructive quality evaluation of agricultural products.

Crop Science ……..……...…… Suzuki, A.

1. Effect of light on the establishment of symbioses between higher plants and microbes.
2. Effective utilization of symbioses with microbes for crop production.

Fermentation Microbiology ……..……...…….....… Kitagaki, H.

1. Breeding of yeast strains appropriate for production of bioethanol and alcohol beverages.
2. Analysis of lipids of fermentation microbes
3. Fermentation chemistry

Animal Science …… Ebara, F.

1. Animal behavior and management.

Integrated Field Science …….. Ueno, K.

1. Production methods for sustainable agriculture.

Fruit Science …….. Fukuda, S.

1. Molecular breeding in loquat and wild onion.
2. Genetics and genomics of rosaceae.

Applied Biochemistry and Food Science Course

Biochemistry …… Watanabe, K. and Tsujita, T.

1. Structure and mechanism of enzyme catalysis and regulation.
2. Protein engineering.
3. Development of functional food and cosmetic materials.
4. Discovering oxidative stress recognition/response molecular mechanisms using genetically

modified mice and cell lines.

5. Identity oxidative stress modifiers from natural and synthetic chemical compounds.

Applied Microbiology …… Kobayashi, G and Goto, M.

1. Development of acetone-butanol-ethanol fermentation from biomass.
2. Microflora analysis by PCR-DGGE.
3. Isolation and characterization of useful bacteria and fungi.
4. Molecular breeding of fungi for production of organic acids, enzymes.

Biomolecular Chemistry ……..… Ueda, T. and Soh, N.

1. Structure-activity relationship of antimicrobial peptides and amino acid derivatives.
2. Cytotoxicity of amino acid derivatives.
3. Bioanalysis based on fluorescence.
4. Biohybrid materials using artificial polymer or inorganic nanosheet.

Molecular and Cellular Biology ……..… Nagano, Y.

1. Genomics and transcriptomics of various organisms, especially of *Citrus* species.
2. Highly efficient DNA cloning method and its applications.
3. Study of insect gustatory and olfactory sense, and lipid metabolism.

Bioresource Science and Technology …… Hayashi, N., Noma, S. and Demura, M.

1. Oligosaccharide and ethanol production from biomass waste through pressurized hot water process.
2. Functional materials extraction using hot compressed solvent.
3. Development of food processing techniques using carbon dioxide.
4. Survey of microalgal diversity in Saga city.
5. Development of culturing technique and utilization of microalgae.

Bioresource Chemistry …….. Hama, Y. and Mitsutake, S.

1. Structure and function of mucus glycoproteins and algal polysaccharides.
2. Isolation and characterization of novel glycolipids from marine animals.
3. Synthesis, metabolism and cellular signaling of membrane lipid in health and disease.
4. Development of Functional food materials.

Nutrition Biochemistry ……..……...…… Nagao, K.

1. Control of lipid and lipoprotein metabolism by food ingredients and drugs.
2. Nutrition and physiology of polyunsaturated fatty acids.
3. Enzymatic and genetic regulation of glycerolipid metabolism.
4. Lipid metabolism and cytokine regulation in hepatic diseases.

Chemistry of Natural Resources …… Kawaguchi, S-i.

1. Researches on conversion methods from natural resources such as agricultural product and biomass to cosmetic material and medicinal material.

Algal Life Science ……..……...…… Kimura, K.

1. Developments of molecular breeding method for *Pyropia yezoensis* “Nori”.

2. Physiology of macro algae and its relating microbe and virus.
3. Molecular physiology of phytoplankton and its infectious virus.
4. Phytoplankton ecology in Ariake sea.

Regional Development Studies Course

Agricultural Economics & Farm Management …… Tsuji, K.

1. Agricultural economics
2. Farm management
3. Rural development in Asia

Regional Resources ……..……...…… Igarashi, T. and Nakai, S.

1. Geographical studies on landscape, communities, and land utilization of rural settlement.
2. Land improvement and sustainable developments.
3. Food culture from an anthropological perspective.

Rural Development …….…….…….…… Fujimura, M.

1. Environmental change and human survival in Asia.
2. Issues and challenges relating to land use and conservation in rural community.