

平成22年度

帯広畜産大学大学院畜産学研究科

修士課程・博士前期課程学生募集要項

(一般選抜・社会人特別選抜・外国人留学生特別選抜)

APPLICATION FOR ADMISSION TO
THE MASTER'S PROGRAM
GRADUATE SCHOOL OF AGRICULTURE
AND VETERINARY MEDICINE
OBIHIRO UNIVERSITY
FOR 2010

(General Admission, Special Selection for Mature Applicants,
Special Selection for International Students)

(Advance Notice) Reorganization of the Three Courses in the Master's Program

We are planning to reorganize the three courses (Animal Production & Agricultural Economics, Agro-Environmental Science, Bio-resource Science) in the master's program in the 2010 academic year.

This plan will be examined by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). After this we will submit our report to MEXT, and then the plan will be confirmed. The result of the review by the MEXT will be shown in and after July 2009 at the earliest.

Therefore, the selection process for admission to the master's program in the 2010 academic year will be carried out in the same way and under the same course names as at present. We will accept your application form that shows your choice of course at present. When the reorganization is confirmed, it will be understood that you are choosing the equivalent course after the reorganization, so you will not need to go through a special procedure to re-register.

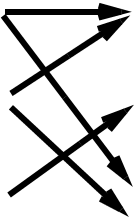
When the course reorganization plan is confirmed, we will officially announce its details on our website (<http://www.obihiro.ac.jp/english/>).

The Outline of the Reorganization

We reorganized the units and curriculum of the bachelor's course according to the educational reformation in the 2008 academic year. We will improve the master's program on the basis of the results of the questionnaire on effective education. On the basis of the curriculum structure of Animal and Food Hygiene Course, we will reorganize the three courses in the master's program in 2010 academic year.

Number of Students to be Admitted

Current		After Reorganization	
Course	Number of Students	Course	Number of Students
Animal Production & Agricultural Economics	9	Life Science & Agriculture	18
Agro-Environmental Science	24	Food Science	10
Bio-resource Science	8	Agro-Environmental Science	13
Total	41	Total	41



* Please note the course you belong to will be decided according to the current course that you choose.

The Reference:

Admission Office,
Student Affairs Section,
Obihiro University of Agriculture and Veterinary Medicine.
11, Nishi 2, Inadacho, Obihiro, Hokkaido, 080-8555 Japan
Phone: +81-155-49-5321

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1 Number of Students to be admitted

Course	Departments	Number of Students to be admitted	
		General Admission	Special Selection for Mature Applicants
Animal Production & Agricultural Economics	Animal Husbandry and Sustainable Economic Systems, Animal Genetics and Reproduction, Animal Metabolism and Physiology, Farm Management, Agricultural Policy and Food Systems	9	Limited
Agro-Environmental Science	Crop Science, Grassland Science, Preservation and Management of Ecosystems, Land Resource Science and Engineering, Engineering in Agricultural and Biological Systems	2 4	Limited
Bio-resource Science	Applied Life Science, Applied Molecular Biology, Food Science and Technology	8	Limited

Course	Departments	Number of Students to be admitted		
		General Admission	Special Selection for Mature Applicants	Special Selection for International Students
Animal and Food Hygiene	Animal Medical Science, Food Hygiene, Environmental Hygiene	1 5	Limited	Limited

2 Application Criteria

(1) General Admission (including international students)

To apply for General Admission, one must meet one of the following criteria:

- ① Those who are graduates of a university or college, or are expected to do so on or before March 31, 2010.
- ② Those who have been awarded a bachelor's degree according to Article 104, Section 4 of the School Education Law or who are expected to do so on or before March 31, 2010;
- ③ Those who have successfully completed 16 years of formal education abroad or are expected to do so on or before March 31, 2010.
- ④ Those who have taken a correspondence course from an overseas educational institution in Japan and completed 16 years of formal education or are expected to do so on or before March 31, 2010.
- ⑤ Those who have completed an undergraduate program of an overseas-based educational institute located in Japan that has been approved by the Minister of Education, Culture, Sports, Science and Technology, whose graduates are regarded as having completed 16 years of formal education, or are expected to do so on or before March 31, 2010.
- ⑥ Those who have completed a four-year or longer professional program approved by the Minister of Education, Culture, Sports, Science and Technology, conducted by a vocational school, after the date set by the Minister of Education, Culture, Sports, Science and Technology, or are expected to do so on or before March 31, 2010.
- ⑦ Those who are deemed eligible by the Minister of Education, Culture, Sports, Science and Technology (Bulletin No. 5, Ministry of Education, 1953).
- ⑧ Those who have been enrolled in a university for three years or longer, or have completed 15 years of formal education attending an overseas educational institution, taking correspondence courses in Japan conducted by an overseas educational institution, or attending an undergraduate program at an overseas-based educational institute located in Japan that has been approved by the Minister of Education, Culture, Sports, Science and Technology, and have been recognized as having earned specified credits with excellent grades by Obihiro University Graduate School.
- ⑨ Those who are 22 years old or older, and recognized in the preliminary selection by Obihiro University Graduate School as having equal to or higher academic ability than persons who are graduates of a university or college.

Note 1 : Applicants who satisfy ⑧ or ⑨ need to refer to “Authorization for Qualified Applicants” on page 8.

Note 2 : A preliminary qualification examination is given to international applicants from countries in which it takes less than 16 years to complete formal education to the university level before they apply for the program. Refer to “Authorization for Qualified Applicants” on page 8.

(2) Special Selection for Mature Applicants (including international students) :

To apply for the Special Selection for Mature Applicants, one must meet the criteria outlined in ① and at least one of the items i.~viii.:

- ① A person who has been employed in either the public or private sector or an educational institution, self-employed or a homemaker for two years or more, and is at least 24 years of age;
- i . Those who graduated university or college on or before March 31, 2008.
 - ii . Those who have been awarded a bachelor's degree according to Article 104, Section 4 of the School Education Law on or before March 31, 2008.
 - iii. Those who successfully completed 16 years of formal education abroad on or before March 31, 2008.
 - iv. Those who have taken a correspondence course from an overseas educational institution in Japan and completed 16 years of formal education on or before March 31, 2008.
 - v . Those who have completed an undergraduate program at an overseas-based educational institute located in Japan that has been approved by the Minister of Education, Culture, Sports, Science and Technology, whose graduates are regarded as having completed 16 years of formal education, on or before March 31, 2008.
 - vi. Those who have completed a four-year or longer professional program approved by the Minister of Education, Culture, Sports, Science and Technology, conducted by a vocational school, after the date set by the Minister of Education, Culture, Sports, Science and Technology, on or before March 31, 2008.
 - vii. Those who are deemed eligible by the Minister of Education, Culture, Sports, Science and Technology (Bulletin No. 5, Ministry of Education, 1953).
 - viii. Those who 24 years old or older, and recognized in the preliminary selection by Obihiro University Graduate School as having equal to or higher academic ability than persons who are graduates of a university or college.

Note 1: Applicants who satisfy viii need to refer to “Authorization for Qualified Applicants” on page 8.

Note 2: A preliminary qualification examination is given to international applicants from countries in which it takes less than 16 years to complete formal education to the university level before they apply for the program. Refer to “Authorization for Qualified Applicants” on page 8.

(3) Special Selection for International Students.

To apply for the Special Selection for International Students, one must meet all of the criteria ①~④ and at least one of the items i.~v.:

- ① Those who don't hold Japanese nationality and principally reside abroad.
- ② Those who have two years or more of work experience in food or animal hygiene abroad such as working for research, education or government institutes on or before March 31, 2010.
- ③ Those who took the TOEFL test (Paper-Based Testing or Internet-Based Testing) within two years at the time of your application time (TOEFL-ITP(Institutional Test Program) are not acceptable).
- ④ As a general rule, those who are no older than 39 years of age at the time of beginning the master's course at Obihiro University.
 - i. Those who graduated university or college before March 31, 2008.
 - ii. Those who have successfully completed 16 years of formal education abroad before March 31, 2008.
 - iii. Those who have taken a correspondence course from an overseas educational institution in Japan and completed 16 years of formal education on or before March 31, 2008.
 - iv. Those who have completed an undergraduate program at an overseas-based educational institute located in Japan approved by the Minister of Education, Culture, Sports, Science and Technology, whose graduates are regarded as having completed 16 years of formal education, on or before March 31, 2008.
 - v. Those who are 24 years old or older, and recognized in the preliminary selection by Obihiro University Graduate School as having equal to or higher academic ability than persons who are graduates of a university or college.

Note 1: Applicants who satisfy v. need to refer to (4) "Authorization for Qualified Applicants" below.

Note 2: A preliminary qualification examination is given to international applicants from countries in which it takes less than 16 years to complete formal education to the university level before they apply for the program. Refer to (4) "Authorization for Qualified Applicants" below.

Scholarship (Limited to Special Selection for International Students)

A scholarship for a 80,000 yen/month will be provided. However, this scholarship will not be given to those who are recipients of government or other scholarship. This scholarship will be available for a maximum of 2 years, but could be terminated depending on a general evaluation of grades, etc. after one year.

Entrance and tuition fee exemption (Limited to Special Selection for International Students)

Students admitted by Special Selection for International Students are exempted from the entrance and tuition fees unless a government or other organization is paying their fees. The maximum period of exemption is for 2 years. The exemption may be cancelled depending on the student's overall evaluation including course grades in the first year.

(4) Authorization for Qualified Applicants

Submit the documents in the table below by the deadline if you need to be authorized as a qualified applicant.

- Deadline for the applicants for General Admission and Special Selection for Mature Applicants is Friday, July 3, 2009.

If you send the documents by mail, use registered express mail.

Documents to submit	Application form for qualified applicant authorization (Use the prescribed form) <ul style="list-style-type: none">• Graduation/completion certificate from the last school you attended• Academic transcript• Research certificate (including period of time and contents of your research)• Materials from research results
Submit to:	Admission Office Student Affairs Section Obihiro University of Agriculture and Veterinary Medicine 11, Nishi 2, Inadacho, Obihiro, Hokkaido, 080-8555 Japan

3 Application Procedure

(1) Application documents

① Application documents (General Admission • Special Selection for mature applicants)

Application documents	General Admission	Special Selection for mature applicants	Summary
1 Application form, Exam admission card, Photograph card	○	○	<ul style="list-style-type: none"> • Fill out the prescribed form except columns marked with *. • The photo (4 cm high x 3 cm wide) must have been taken within 3 months prior to application. The portrait must be a full face, front view, without a hat, and wearing glasses if you expect to do so at the exam. Write your full name and expected major on the back of the photo and glue it to the designated spot.
2 Statement of application	○	/	<ul style="list-style-type: none"> • Fill out the prescribed form. Describe why you chose our master's course.
3 Certificate of graduation, or certificate of expected graduation	○	○	
4 Academic Transcript	○	○	<ul style="list-style-type: none"> • Must be sealed.
5 Certificate of foreign registration	○	○	<ul style="list-style-type: none"> • The applicant who is a registered foreigner must submit this certificate with visa status and period of stay noted on it.
6 Name and Address Card (the address will be used to contact successful applicants)	○	○	<ul style="list-style-type: none"> • Fill out your name, address and postal code on the prescribed form.
7 Seal for confirmation of subject examination	○	/	<ul style="list-style-type: none"> • Fill out the prescribed form.
8 Self-addressed stamped envelope for sending the exam admission card	○	○	<ul style="list-style-type: none"> • Fill out your name, address and postal code, and put postage stamps worth 350 yen on the prescribed small envelope. (The stamps are unnecessary if you choose to come to the Entrance Examination Office to pick up the card.)
9 Letter of recommendation	/	○	<ul style="list-style-type: none"> • Submit a letter of recommendation from the head of the office/company of current or previous employment, or a letter of self-recommendation.
10 Research proposal	/	○	<ul style="list-style-type: none"> • Describe your research proposal our master's course.
11 Achievement report	/	○	<ul style="list-style-type: none"> • A list that shows your achievements and duties, which may include published articles, technical reports, patents, utility models, or graduation theses.

Note 1 : Applicants who are not Japanese nationals must contact the Entrance Examination Office to receive special instructions before applying.

Note 2 : Government-financed international students do not need to submit 2-4.

② Application documents (Special Selection for International Students)

Application documents		Summary
1	Application form, Exam admission card, Photograph card	<ul style="list-style-type: none"> • Fill out the prescribed form except columns marked with *. • The photo (4 cm high x 3 cm wide) must have been taken within 3 months prior to application. The portrait must be a full face, front view, without a hat, and wearing glasses if you expect to do so at the exam. Write your full name and expected major on the back of the photo and glue it to the designated spot.
2	Statement of application	<ul style="list-style-type: none"> • Describe your reasons for applying to the graduate school and how you plan to use the knowledge learned from your graduate studies. Also include a brief personal history. Write on A4-sized paper, three pages maximum.
3	Certificate of graduation	
4	Academic Transcript	<ul style="list-style-type: none"> • Must be sealed.
5	Name and address card (the address will be used to contact successful applicants)	<ul style="list-style-type: none"> • Fill out your name, address and postal code on the prescribed form.
6	Self-addressed stamped envelope for sending the exam admission card	<ul style="list-style-type: none"> • Fill out your name, address and postal code on the prescribed small envelope.
7	Letter of recommendation	<ul style="list-style-type: none"> • Three letters of recommendation, one each from the following persons: <ul style="list-style-type: none"> ① Head or person of equivalent status of college you attended (which should describe applicant's personality, grades, extracurricular activities, English proficiency, etc.) ② Head or person of equivalent status from place of employment (which should describe applicant's personality, achievements, working conditions, English proficiency, etc.) ③ Other than the above (which should describe applicant's personality, grades/achievements, English proficiency, etc.)
8	Achievement report	<ul style="list-style-type: none"> • Describe your graduation thesis if you have one, the work you are currently engaged in, and any other notable achievements on A4-sized paper, two pages maximum.
9	Short essay	<ul style="list-style-type: none"> • Write a short essay on the theme provided by Obihiro University on A4-sized paper, two pages maximum.
10	The Examinee's TOEFL Score	<ul style="list-style-type: none"> • The original examinee's TOEFL score (Paper-Based Testing or Internet Based-Testing). The original score will be returned after it is copied by the Admission Office. • TOEFL test which was taken within 2 years from the submitted date is acceptable. • TOEFL-ITP (Institutional Test Program) are not acceptable.

Note 1 : Items 2, 7, 8 and 9 must be typed in English.

Note 2 : Contact the instructor of the research field you wish to belong to before applying.

- ③ Payment method for examination fee
Entrance examination fee: 30,000 Japanese yen.

- 1) General Admission and Special Selection for Mature Applicants (Remittance from inside Japan)
Please pay 30,000 Japanese yen for the examination fee using the prescribed form at a post office or Japan Post Bank within the designated payment period as indicated below. The receipt must be submitted with the application documents.

Government-financed international students do not have to pay the fee but must submit the “certificate of government-financed international studies” issued by your college (a copy is acceptable)

Note that post offices are normally open from 9:00 to 16:00 on weekdays and closed on Saturdays, Sundays and national holidays.

Payment Period: From Tuesday, July 7 to Friday, July 24, 2009.

- 2) Special Selection for International Students (Remittance from abroad)
The amount of 30,000 Japanese yen for the examination fee must be transferred from a financial institution following the instructions below. A photocopy of the Telegraphic Transfer Application Form must be submitted with the application documents.

- Telegraphic transfer
- Advise and pay
- Applicant pays the transaction charge
- Amount: ¥30,000(Japanese yen)
- Transfer to:

Receiving bank:

SHINKIN CENTRAL BANK
INTERNATIONAL OPERATIONS CENTER
SWIFT CODE: ZENBJPJT

Receiving bank's address:

9-1 HONMURA-CHO, ICHIGAYA, SHINJUKU-KU, TOKYO JAPAN

Beneficiary's Account No:

0340900 with OBIHIRO SHINKIN BANK INADA BRANCH

Beneficiary's name:

OBIHIRO CHIKUSAN DAIGAKU

Beneficiary's Address:

11, NISHI 2, INADACHO, OBIHIRO, HOKKAIDO, 080-8555, JAPAN

Payment Period: From Tuesday, July 7 to Friday, July 24, 2009.

***All handling fees including transaction charges are to be paid by the applicant.**

- ④ Notes for Application

- 1) The examination fee is not refundable for any reason except the following:

- The applicant has failed to submit his or her application form by the prescribed date, or his or her application form has been rejected by the University.
- The applicant has paid the examination fee twice.
A request for a refund should be made promptly.

*For further information about the refund, contact:

Admission Office

Obihiro University of Agriculture and Veterinary Medicine

Phone: +81-155-49-5321

- 2) An application will be rejected if the examination fee is not paid or the payment receipt is not dated by the post office or Japan Post Bank.

(2) Application period

General Admission • Special Selection for mature applicants • Special Selection for International Students

Applications will be accepted from Friday, July 17 to Friday, July 24, 2009.

If sent by mail, the documents must arrive by Friday, July 24, 2009.

(3) Application method

Enclose all the application documents in the prescribed envelope or an A4-sized envelope and bring it directly to the University or send it by mail.

① Direct Application: Accepted between 8:30 and 17:00, Monday through Friday.

② Mailed Application:

1) General Admission/Special Selection for Mature Applicants

The documents must be sent by registered special delivery mail, and must arrive by 17:00 on Friday, July 24, 2009. Documents arriving later than this will not be accepted. Please be sure to send them early enough to avoid postal delays.

2) Special Selection for International Students (Residents outside of Japan)

Documents must be sent by EMS or registered airmail, and must arrive by 17:00 on Friday, July 24, 2009. Documents arriving later than this will not be accepted. Please be sure to send them early enough to avoid postal delays.

(4) Where to send Application Documents

Admission Office, Student Affairs Section, Obihiro University of Agriculture and Veterinary Medicine.

11, Nishi 2, Inadacho, Obihiro, Hokkaido, 080-8555 Japan

Note: The application documents is non-refundable.

4 Method of Selection

(1) General Admission

Results from the examination of academic ability and interview, the statement of reasons for application, and the academic transcript will be examined.

(2) Special Selection for Mature Applicants

Results from the interview, the letter of recommendation, the academic transcript, the research proposal, and the achievement report will be examined.

(3) Special Selection for International Students

The statement of reasons for application, the academic transcript, the letters of recommendation, the achievement report, short essay, and the TOEFL score will be examined. No interview is conducted in this Special Selection.

5 Examination of Academic Skill (for General Admission only)

(1) MASTER'S COURSE OF ANIMAL PRODUCTION & AGRICULTURAL ECONOMICS

Departments	Research field	Specialized Subjects
Animal Husbandry and Sustainable Economic Systems	Animal husbandry	Animal husbandry (Lactation physiology is included)
	Sustainable economic systems	Non-profit enterprise management (Theory of animal farmer supporting system is included)
Animal Genetics and Reproduction	Animal breeding	Animal breeding
	Animal reproduction	Animal reproduction
Animal Metabolism and Physiology	Animal nutrition	Animal nutrition
	Animal fattening	Animal growth and physiology (Animal function is included) (Animal production and veterinary medicine is included)
Farm Management	Farm business management	Farm business management
	Agricultural statistics	Statistics
Agricultural Policy and Food Systems	Agricultural policy	Economic analysis of agricultural policy

Examination Subjects

I . Specialized Subjects

Note : Choose 2 subjects including the subjects of the desired research field.

II . English

Note : An international students will have an oral examination in Japanese.

(2) MASTER'S COURSE OF AGRO-ENVIRONMENTAL SCIENCE

Departments	Research field	Specialized Subjects
Crop Science	Crop functional development	Plant breeding
	Crop production	Crop science
Grassland Science	Grassland ecology	Grassland ecology (Green science is included)
	Grassland utilization	Grassland utilization
Preservation and Management of Ecosystems	Environmental entomology	Environmental entomology
	Environmental botany	Environmental botany
	Wildlife ecology	Wildlife ecology
Land Resource Science and Engineering	Environmental soils	Soil science
		Crop nutrition
	Soil and water engineering	Agricultural land engineering
		Agricultural hydrotechnics
Geophysics	Earth science	
Engineering in Agricultural and Biological Systems	Agricultural machinery	Field machinery
	Power and tractor engineering	Power and tractor engineering

Examination Subjects

I . Specialized Subjects

Note : Choose 2 subjects including the subjects of the desired research field.

II . English

Note : An international students will have an oral examination in Japanese.

(3) MASTER'S COURSE OF BIORESOURCE SCIENCE

Departments	Research field	Specialized Subjects
Applied Life Science	Food and functional biochemistry	Food functional chemistry
		Food nutrition
	Environmental biochemistry	Enzyme biochemistry
		Environmental biochemistry
Applied Molecular Biology	Molecular cell biology	Applied microbiology
	Bioorganic chemistry	Bioorganic chemistry
Food Science and Technology	Meat science	Meat science
	Milk science	Dairy food science
	Food engineering	Food engineering
		Quality control and assurance

Examination Subjects

I . Specialized Subjects

Note : Choose 2 subjects including the subjects of the desired research field.

II . English

Note : An international students will have an oral examination in Japanese.

(4) MASTER'S COURSE OF ANIMAL AND FOOD HYGIENE

Departments	Research field	Examination Subjects
Animal Medical Science	Animal Production Hygiene	English
	Zoonotic Protozoan Disease	
Food Hygiene	Milk and Meat Hygiene	
	Hygiene Economics	
	Pathogenic Microorganism	
Environmental Hygiene	Sanitary Zoology	
	Recycling-oriented Animal Husbandry	

6 Time, Date and Examination Location

(1) General selection

Date	Subject	Time	Location
Thursday, August 27, 2009	Foreign language or English	9:30 — 11:30	Obihiro University
	Special Subject or Short Essay	13:00 — 15:00	
Friday, August 28, 2009	Interview	9:00 —	

(2) Special Selection for mature applicants

Date	Subject	Time	Location
Friday, August 28, 2009	Interview	9:00 —	Obihiro University

(3) Special Selection for International Students

Selection based on submitted documents : Friday, August 28, 2009

Note : By 10:00am on Wednesday, August 26, 2009, the location of the examination room will be posted at the entrance of the General Research Building I. However, entry into the examination room is not allowed.

7 Advance Consultation for Applicants with Physical Disabilities

Applicants with physical disabilities are advised to consult with the Entrance Examination Office beforehand, as special consideration may be necessary for taking the examination or studying. Those who use a hearing aid, crutches, or a wheel chair are also advised to consult the Entrance Examination Office as special arrangement at the examination sites and other locations may be necessary.

(1) Deadline for the consultation : Friday, July 3, 2009

(2) For inquiries, contact : Admission Office, Student Affairs Section,
Obihiro University of Agriculture and Veterinary Medicine
11, Nishi 2, Inadacho, Obihiro, Hokkaido, 080-8555 Japan
Phone : +81-155-49-5321 (Direct line) (Mon.-Fri. 8:30-17:15)
Fax : +81-155-49-5324

8 Notification of Admission

(1) 10:00 am, Friday, September 4, 2009

The code numbers of the accepted students are displayed at the entrance of the General Research Building I and on the website (<http://www.obihiro.ac.jp>).

(2) Notification of admission and the documents necessary for enrollment procedures are sent to the accepted students.

(3) No telephone enquiries regarding admission.

9 Enrollment Procedures

(1) Enrollment Period :

① General Admission/Special Selection for Mature Applicants

From Monday, February 8 to Friday, February 12, 2010

② Special Selection for International Students

From Monday, March 8 to Friday, March 26, 2010

(2) Enrollment Fee: 282,000 yen

(3) Tuition Fee: 267,900 yen for the first term (535,800 yen for one year)

Note : If there is an increase in tuition after enrollment, the student will be required to pay the difference.

(4) Other Expenses

Fee for disaster/accident insurance for students in education/research: 2,780 yen

(Insurance for accidental injury in University activities)

10 Privacy Statement

(1) Any personal information we acquire is strictly protected under the “Law on Protection of Personal Information Held by Independent Administrative Agencies” and the “Obihiro National University of Agriculture and Veterinary Medicine Management Regulations of Personal Information”.

(2) Personal information such as your name and address that is sent during the application process is used for selection, notification of admission, enrollment procedure, survey and research on selection methods and additional procedures.

(3) Personal information such as the examination results acquired in the process of selection is used for survey and research on selection and selection methods.

(4) Among (2) and (3) personal information which is mentioned above, only as for the passer, school affairs relations (ex: study guidance etc.), student support relations (ex: scholarship application, tuition exemption application etc.) after your entrance to Obihiro University, we use these information to perform duties about those and duties to accompany those.

Prospectus for the Master's Program of the Graduate School of
Agriculture and Veterinary Medicine, Obihiro University.

Admission Policy

This Graduate School strives to train researchers, college educators and advanced specialists to an international level so that they can conduct research on and teach about livestock production, food hygiene and environmental conservation from the standpoint of "food safety" and the symbiotic relationship between humans and nature. With these ideas and goals in mind, we are looking for prospective students who are:

1. basically interested in food safety issues
2. internationally-minded and wish to play an active role in international exchanges
3. experienced in the field, but wish to improve their basic and practical skills
4. in search of a way to enhance their ability to understand and solve the problems in the field

1 Purpose

The Graduate School strives to broaden scientific knowledge through instruction and research in order to contribute to both theoretical and applied science.

2 History

- June 1, 1967 Graduate School established (Course of Veterinary Medicine, Course of Dairy Science, Course of Agricultural Chemistry)
- April 1, 1969 Course of Grassland Science and Course of Agricultural Engineering established.
- April 1, 1976 Course of Agricultural Economics established.
- April 1, 1978 Course of Agro-Environmental Science established.
- April 1, 1982 Course of Dairy Science renamed to Course of Animal Science.
- April 1, 1990 Course of Veterinary Medicine closed.
Department of Veterinary Medicine joined in the Doctor's Program at Gifu University United Graduate School of Veterinary Sciences.
- April 1, 1994 Course of Animal Science, Course of Agricultural Chemistry, Course of Grassland Science and Course of Agricultural Engineering, Course of Agricultural Economics and Course of Agro-Environmental Science reorganized to Course of Animal Production & Agricultural Economics, Course of Agro-Environmental Science and Course of Bioresource Chemistry.
Department of Agricultural Sciences joined in the Doctor's Program at Iwate University United Graduate School of Agricultural Sciences.
- April 1, 2001 Course of Bioresource Chemistry renamed to Course of Bioresource Science.
- April 1, 2004 Independent Course of Animal and Food Hygiene Tenable established.

3 Course Description

◎ Animal Production & Agricultural Economics

This course consists of two education and research divisions, animal production science division and farm management/agricultural economics division. The aim of animal production science division is to devote to the efficient livestock production and the humane care of farm animals based on study fields of statistical breeding, biological engineering, animal nutrition, productive physiology and animal behavior. The aim of farm management/agricultural economics division is the clarification and creation of sustainable animal production and agricultural systems based on the accurate perspective on the domestic and global social/economic relationship.

The main purpose of this course is, under the affinitive collaboration of both divisions, to nurture engineers and researchers who have obtained advanced expertise and technology.

Five master laboratories compose this course.

Department of Animal Husbandry and Sustainable Economic Systems

This laboratory has two research fields, one field covers the advanced education and research on animal environment, animal behavior, lactation physiology, and animal husbandry. These study fields will support the sustainable cooperative life among animals, nature and human beings.

Another research field covers the advanced education and research on sustainable economic systems for agriculture and rural area. Researches are mainly on the social technology and policies of biomass utilization and the risk communication for improving food safety from farm to table.

Department of Animal Genetics and Reproduction

This laboratory contains two research fields, one is animal breeding and the other is animal reproduction. The research topics are as follows:

- Education and research for genetic improvement of dairy cattle using the data on milk record and type traits, estimation of genetic parameter for quantitative traits on other livestock breeding.
- Education and research for theoretical and applied studies on freezing, in vitro maturation, fertilization (including micro-manipulated insemination), and culture of mammalian oocytes for in vitro embryo production. Furthermore, applicable research and education on development of new diluents for freezing mammalian spermatozoa and improvement in conception rate on the fields.

Department of Animal Metabolism and Physiology

Educational researches are done based on theories and applied sciences to control an efficient animal production system and carry out studies on animal physiology, animal nutrition, animal behavior and related environmental and dietary factors.

The main research subjects are as follows:

- Physiological information and its application
- Endocrinological approach of animal production
- Nutritional value of conserved feeds
- Metabolic regulation of nutrients in the rumen
- Feeding technology with low input of cereal feeds for beef production

Department of Farm Management

Advanced education and research concerning the theory and its application to farm management, econometrics, farm business planning, mathematical modeling, multi variable analysis, US and European business theory, are pursued.

The main research issues are the theory and application of decision making and modeling on farm management, basic theory and its application in the information collection, processing, evaluation for management, and the research on US and European business society.

Department of Agricultural Policy and Food Systems

This laboratory offers advanced research and educational opportunities to study the economic problems concerned with food, agriculture and rural area in global perspective as well as local perspective.

The main research fields are food and agricultural policy, agricultural product and input market, agricultural development and so on.

© Agro-environmental Science

This course has professional programs about the basic science and technologies for agriculture, animal husbandry and environment. The education and researches for these three fields are mainly carried out using the fundamental natural science and agricultural procedures and this course is responsible for the intense training of specialists and researchers concerned with agriculture and the environment.

Department of Crop Science

The crop science laboratory promotes the advanced study on production and improvement of field crops and forage crops. To accomplish these purposes, the laboratory conducts theoretical and applied education of plant genetics, plant breeding, plant engineering, plant genetic resources, and science of plant production. Based on plant biotechnology, analysis of tolerance to biotic and abiotic stress in crop plants is one of the main research subjects. Quantitative trait analysis, development of DNA markers for efficient marker-assisted selection and comparative genomics of cereals, especially wheat and rice, are the active research projects.

Department of Grassland Science

Grassland ecology is fundamental to this laboratory. Advanced education and research are carried out with respect to theory and application of grassland production, grassland utilization, potential feed resources and plant genetic resources,

The main research subjects of this laboratory are as follows: production and management of grassland, effective utilization of grassland, development of non-utilizable forage resources as a feed, conservation of forage resources and development of these utilization method, and ecology and control of grassland weeds.

Department of Ecosystem Conservation

This unit offers education and research concerning theories and applications of physiology, ecology and conservation of plants, animals and insects in natural and agricultural ecosystems.

The main subjects correspond to the principles concerning interaction with environment and conservation of it, such as mechanisms of regrowth of forage grasses, classification, physiology and ecology of birds, mammals and insects, application of insects, birds and animals to environmental indicators, and functions of relict forests around animal husbandry.

Department of Land Resource Science and Engineering

Advanced education and researches are conducted on the theories and applications of earth ground information, meteorological information, land-use science, soil chemistry, soil genesis and classification, agricultural land engineering, agricultural hydrology, and agricultural construction engineering, which are the basics of land-use type agriculture.

As main research topics of this laboratory, relationships between soil mineral and organic constituents and land resource environment are clarified standing on the basic knowledge of formation, characteristics, and functions of soil, which is the indispensable component of land resources. Further, earth-ground information and land surface geology as fundamentals of land, as well as the methods of integrated utilization and evaluation of lands in agriculture are being studied. Based on the theories and techniques of soil and water engineering, the ability of general understanding for improving the productive background and living environment in agricultural systems is nurtured. Especially, various problems in land improvement are studied in relation to meteorological information, irrigation, drainage, soil erosion, soil freezing, and frost heaving.

Department of Engineering in Agriculture and Biological Systems

High level education and research are conducted for the theory and its application of agricultural tractors, agricultural farm machinery and livestock production facility on the basis of mechanical, agricultural and livestock engineering. The current research fields of this research unit are mainly in soil dynamics for the interaction between agricultural vehicle tires and soil, advanced studies by the introduction of mechanical engineering for agricultural production and livestock management, and new technologies for environmentally sustainable recycling systems and natural energy conversion systems such as the use of biomass.

© Bioresource Science

The object of this course is the training of specialists who will contribute to the improvement of techniques of utilization of bio materials from dairy, meat and crop products or from natural source as bio functional stuffs and also the development of bio industrial process. From this aspect, the research fields in this course focus on cell culture, bio-reactor, fermentation technology, and brewing technology, etc, and the curriculums are constructed based on the theories of biochemistry, organic chemistry and physical chemistry etc. This course includes the following three branches.

Department of Applied Life Science

This laboratory conducts advanced education and studies in the field of applied bioscience, including food chemistry, biotic environmental chemistry, and functional genomics. Especially basic and applied research into mechanisms underlying organic activities and development, preservation, and utilization of natural products and their genetic resources will be performed using biochemical and molecular biological methods. In addition, the most advanced research and education on the function of lipids and glycobiology will be carried out by applying biotechnological methods such as recombinant DNA techniques.

Several research projects are now on-going, especially focusing on (1) chemical structures, metabolism-related genes, and functions of membrane lipids, (2) biochemistry and cell biology of glycoconjugates and its related enzymes, (3) functional chemistry of natural products, health benefits of foods, and applications to functional foods, (4) theoretical and applied aspects of nutritional biochemistry and molecular biology, and (5) physiological and molecular biological aspects underlying the mechanism of chilling injury and cold adaptation in plants and its applications.

Department of Applied Molecular Biology

The principal objective of this laboratory is the practical utilization of biotechnology with genetic engineering as a core science, followed by understanding the fundamental theory of molecular biology. Specifically, this course will focus on the establishment of breeding systems for microorganisms and agricultural products and medical techniques, which are developed into the effective utilization of food and other useful resources. The main research subjects of this course are: microbial conversion of agricultural products; bioorganic chemistry to elucidate novel methods for structure-activity relationships of bioactive compounds; biochemical and molecular biology research into psychrophiles; molecular biology and morphological research into differentiation using the somatic cell embryogenesis system of higher plants; molecular biology research into plant-microbe interactions using nitrogen-fixing microorganisms and effective and practical applications of these interactions.

Department of Food Science and Technology

The staffs of this laboratory undertake advanced education and researches based on the theories in the fields of dairy science, meat science, dairy and meat biochemistry, food technology and bio-functional food chemistry, and do applications to improve the technology of dairy, meat and crop manufacturing.

The studies in this laboratory are as follows: change of meat quality during ripening process, change of muscle protein structure after death of animals, bio-functional components produced by dairy lactic acid bacteria, analysis of oligosaccharide structures in many mammalian milk and colostrum and their biosynthetic pathway, microbiological analysis of raw milk, checking system of milk quality, physico-chemical properties of starch, and change of sugar content in potato during storage.

◎ **Animal and Food Hygiene**

In Japan as well as in many other countries in the world, safety of foods of animal origin (animals, milks, meats, etc.) has become an increasingly important issue in order to compete and survive in the international free trade. In the Master Course for “Animal and Food Hygiene”, the practical education and research are focused to train students as advanced specialists in the international level, in order to enhance the safety of foods. This master's program will become one of the best in the world in the food hygiene field, and will be supported and conducted by the research staff of the 21st Century COE program in Japan. The aim of this master course is to address all health management aspects to be considered in the production, processing and transportation of foods of animal origin. Therefore, this course has been designated to train students to be talented and complete with excellent research capability and enlightened opinions as future specialists in the field of “food safety” by providing the complementary knowledge from the viewpoint of the public health aspects in the conventional veterinary field for the graduates from the departments of agriculture and animal husbandry and by supplying the latest information on the production of foods and agricultural and animal husbandry products and “meals” for the graduates of the veterinary department.

Department of Animal Medical Science

We teach technical development and theories for raising and breeding healthy livestock and controlling diseases as well as naturally maximizing the potential of healthy animals in order to improve economic efficiency. Furthermore, we examine the interactions between host animals and parasites, such as worms and protozoa that cause infectious diseases. Based on this research, we provide a comprehensive program of animal medical science that includes the diagnoses and treatment of zoonotic protozoan diseases, and the relationship between animal health/disease prevention and the basic functions of nutrition.

a. Animal Production Hygiene

We examine the hygiene at livestock animal production sites and perform practical studies (in addition to our fundamental research) on the raising and breeding of dairy and beef cattle from the perspective of productive animal medicine and physiology. Our goal is to develop effective breeding and raising techniques that produce healthy livestock and maintain a physiological balance.

b. Zoonotic Protozoan Disease

Our studies focus on control of protozoan diseases in terms of improving livestock production. We examine the host-parasite interactions at various levels such as molecular interactions and population biology. Based on these studies, we aim to develop new diagnostic and treatment methods.

Department of Food Hygiene

We provide a comprehensive examination of the potential dangers that exist in the path that food takes from farm to dining table in order to achieve a stable and efficient supply of safe, high quality livestock food products. The instruction and research on food hygiene done by this department includes:

1. the treatment and prevention of pathogenic microbe contamination, (mainly bacteria and viruses),
2. the management and evaluation of sanitary control systems on farms and at food processing sites,
3. the economic evaluation and design of quarantine systems used in international trade,
4. the development of risk evaluation methods for livestock food products by examining food functions and
5. the pathogenic mechanism of microbes, and the analysis of health dangers related to food.

a. Milk and Meat Hygiene

We provide comprehensive instructions and conduct research on the prevention and control of potentially harmful microorganisms and artificial compounds in livestock food products that may result during the processing and due to actual in vivo reactions. Our goal is to achieve stable supply of safe, quality livestock food products for human consumption making full use of the most recent advances in bioscientific knowledge and techniques.

b. Hygiene Economics

In order to achieve food safety and consumers' trust we provide instruction and do research on economic theory and system design theory for food hygiene, the management and evaluation of sanitary control systems on farms and in food processing, the economic evaluation and design of quarantine systems used in international trade, and statistical risk analysis of food.

c. Pathogenic Microorganism

In order to improve animal hygiene and ensure food safety, we conduct research on the elucidation of the molecular interactions between foodborne/zoonotic pathogens and the hosts that are necessary for the establishment of infectious diseases, molecular recognition of self and non-self by the immune system, and modulatory mechanisms of host defense systems. Understanding the molecular bases for such processes will be applied to the development of novel approaches for preventing or controlling infectious diseases and immune disorders. Also, such information will be useful to scientifically assess the microbiological risk in foods.

Department of Environmental Hygiene

We provide comprehensive instruction in environmental hygiene including prevention of diseases by infected vector animals, an international epidemiological study of infectious diseases and the utilization of biomass. Our studies cover the prevention of emerging and re-emerging diseases transmitted by vector animals such as rats, and external parasites like insects and ticks, and epidemiological study of infectious diseases associated with livestock food product hygiene as well as consideration of these diseases from the international point of view including the economic impact and prediction of potential outbreaks. We are also studying the establishment of a recycling system in the agricultural and livestock production system based on energy recycling (carbon) and material recycling (nitrogen) in order to alter the highly energy intensive livestock production system that greatly impacts the environment by disturbing material circulation, polluting water systems and emits global-warming gases.

a. Sanitary Zoology

We study how to prevent the spread of the emerging and re-emerging diseases transmitted by vector animals such as rats and external parasites like insects and ticks, by investigating the vector animals at the genetic level.

b. Recycling-oriented Animal Husbandry

We are trying to establish an agricultural recycling system for agricultural and livestock production based on energy (carbon) and material (nitrogen) recycling in order to reform the highly energy-intensive livestock production system that has a severe impact on the environment.

4 Duration and Qualification

(1) Animal Production and Agricultural Economics • Agro-environmental Science • Bioresource Science

In the Master's Program, regular attendance of two years at the University with completion of curriculums and units decided by the Division of Research, and after receiving required research instructions, by passing thesis inspection and final examination, a Master's Degree in Agriculture is awarded.

(2) Animal and Food Hygiene

In the Master's Program, after a regular attendance at the university for 2 years and completion of required research instructions, and after passing the thesis (including results of the research about a special problem/issue) inspection and the final examination, a Master's Degree in Animal and Food Hygiene will be awarded.

Course	Degree
Animal Production and Agricultural Economics	Master (Agriculture)
Agro-environmental Science	Master (Agriculture)
Bioresource Science	Master (Agriculture)
Animal and Food Hygiene	Master (Animal and Food Hygiene)

5 Teaching Certificate

In the Master's Program, if students who have a teaching certificate for High School (Agriculture or Sciences) and attended more than one year at the University with completion of curriculums, and after acquiring required research instructions, by passing thesis inspection and final examination, Special Teaching Certificate for High School (Agriculture, Sciences) is awarded.

The graduates of the Master's Course of Animal and Food Hygiene (Tenable) cannot get a Teaching Certificate / College Teaching Certificate.

6 Application from workers in the private / public sectors

The Graduate School welcomes applications from those who are working in private / public sectors.

7 Special long term limit

This system allows students who have a job or other special reason to complete their degree within an agreed-upon time (maximum of four years) beyond the standard term limit and still pay the same fee as those students who complete their degrees in the standard amount of time.

In principle, those who want to use this system must apply for it at the time they enroll after consulting with their prospective advisor.

© Application and enquiries

1. Contact method:

Please contact us by telephone or postal mail. If you contact us by postal mail, please enclose a self-addressed stamped envelope (if you send mail from outside Japan, please enclose international reply coupons for 250-gram airmail instead of postage stamps).

2. Contact:

Admission Office,
Student Affairs Section,
Obihiro University of Agriculture and Veterinary Medicine.
11, Nishi 2, Inadacho, Obihiro, Hokkaido, 080-8555 Japan
Phone: +81-155-49-5321 (Monday-Friday, 8:30-17:15)
Fax: +81-155-49-5324

Obihiro University Website

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