

Ishikawa Prefectural Public University Corporation

ISHIKAWA PREFECTURAL UNIVERSITY



**SCHOOL
GUIDE**

LEAF

Life

Environment

Agriculture

Food


Life
and
Health

Nature
and
Environment

Agriculture

Food,
Its Security
and Safety





We protect
and nurture
LEAF of the region.

Contents

- 03 **Message from the President and Philosophy**
 - Basic Philosophy
 - Educational Objectives
 - Research Objectives

- 09 **Department of Bioproduction Science**
 - Department Head's Message
 - Curriculum
 - Teaching Staff
 - Features of the Department
 - VOICE of Current Students
 - Message from Graduates
 - Attractiveness

- 15 **Department of Environmental Science**
 - Department Head's Message
 - Curriculum
 - Teaching Staff
 - Features of the Department
 - VOICE of Current Students
 - Message from Graduates
 - Attractiveness

- 21 **Department of Food Science**
 - Department Head's Message
 - Curriculum
 - Teaching Staff
 - Features of the Department
 - VOICE of Current Students
 - Message from Graduates
 - Attractiveness

- 27 **Introduction of Researches**

- 29 **Graduate School**
 - Message from Advisor to the President
 - Curriculum
 - Message from Current Students

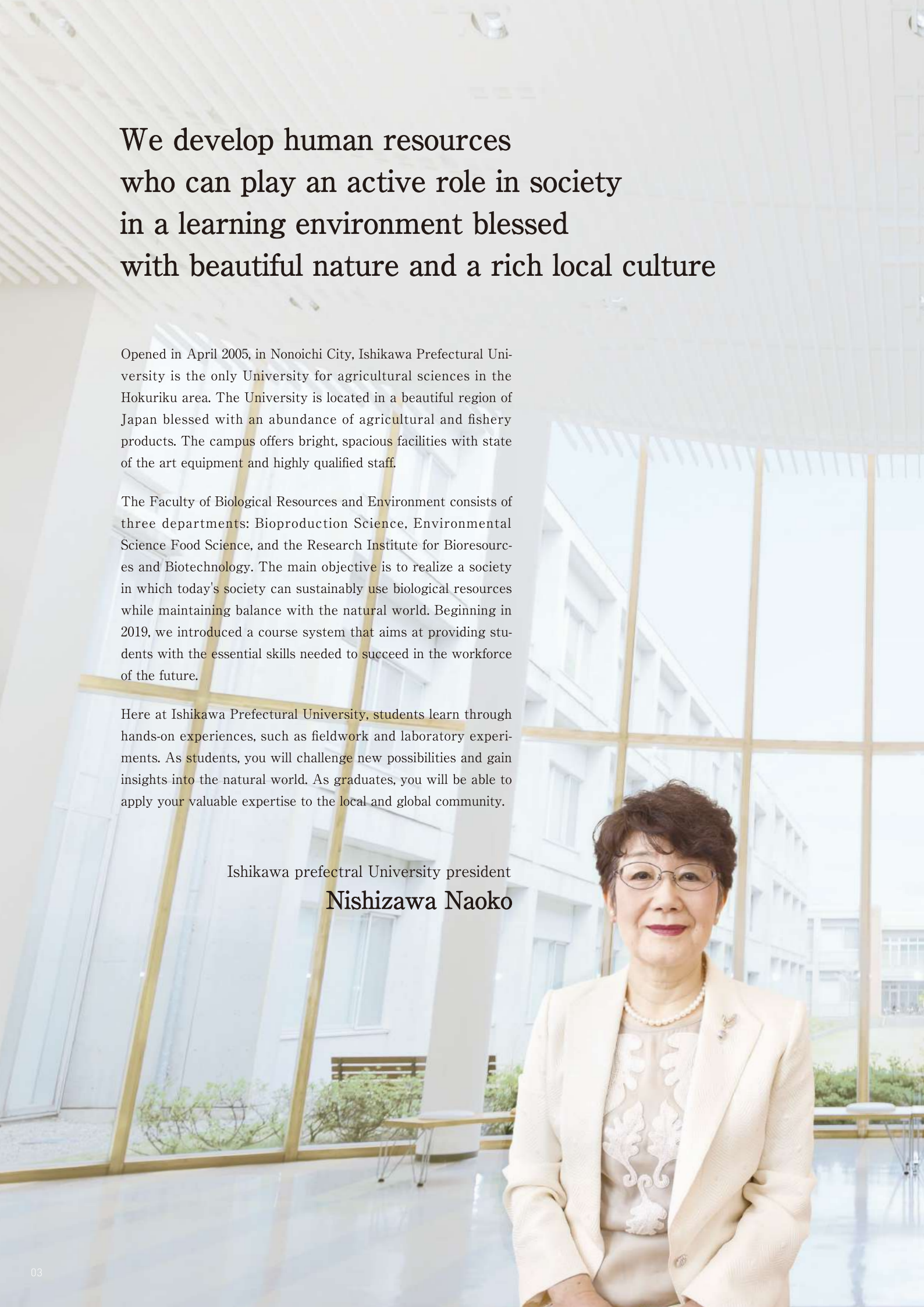
- 31 **Introduction of Facilities**
 - Liberal Arts Education Center
 - University Farm
 - Research Institute for
Bioresources and Biotechnology
 - Library & Information Center
 - Scientific Cooperation Center for Industry,
Academia and Government

- 37 **CAMPUS GUIDE**
 - Campus Guide
 - Campus Calendar
 - Student Lifestyle

- 39 **Nonoichi Guide**

- 41 **CLUB**

- 43 **Career Support/Employment Support
Admissions Information**

A woman with short dark hair, wearing glasses, a pearl necklace, and a white blazer over a patterned top, stands in a bright, modern building with large windows. The background shows a multi-story white building with a grid of windows and a bright sky.

We develop human resources who can play an active role in society in a learning environment blessed with beautiful nature and a rich local culture

Opened in April 2005, in Nonoichi City, Ishikawa Prefectural University is the only University for agricultural sciences in the Hokuriku area. The University is located in a beautiful region of Japan blessed with an abundance of agricultural and fishery products. The campus offers bright, spacious facilities with state of the art equipment and highly qualified staff.

The Faculty of Biological Resources and Environment consists of three departments: Bioproduction Science, Environmental Science Food Science, and the Research Institute for Bioresources and Biotechnology. The main objective is to realize a society in which today's society can sustainably use biological resources while maintaining balance with the natural world. Beginning in 2019, we introduced a course system that aims at providing students with the essential skills needed to succeed in the workforce of the future.

Here at Ishikawa Prefectural University, students learn through hands-on experiences, such as fieldwork and laboratory experiments. As students, you will challenge new possibilities and gain insights into the natural world. As graduates, you will be able to apply your valuable expertise to the local and global community.

Ishikawa prefectral University president
Nishizawa Naoko

Basic Philosophy of Ishikawa Prefectural University

Education and research for advancement and internationalization

At Ishikawa Prefectural University, we do not simply inherit conventional knowledge but conduct advanced and specialized education and research. For example, we develop new areas of research through making progress in unique areas of academic research. At the same time, we are always conscious of the growth of specialized areas and developments on the interdisciplinary stage.

Local development of the community and the economy, and creation of culture

Through interaction and collaborations with the local community, we both revitalize education and research, as well as reiterate the importance of local intellectual activities. Furthermore, through cooperation with local companies and the creation of innovative technologies and new industry, we contribute to the sustainable development of the local community/economy.

Educating promising individuals to open the way to the future

We attempt to educate promising individuals to open the way to the future – individuals who have the skills to identify issues and find solutions, individuals who have the foreign language skills and information processing skills to deal with an international/information society, and those who have advanced expertise, abilities and skills.

Contributions to the global society using our intellectual resources

We contribute to the global society by using the research results obtained through the active promotion of the exchange of education/research information and academic exchanges to solve global environmental problems and to create common intellectual assets for the human race.

Educational Objectives

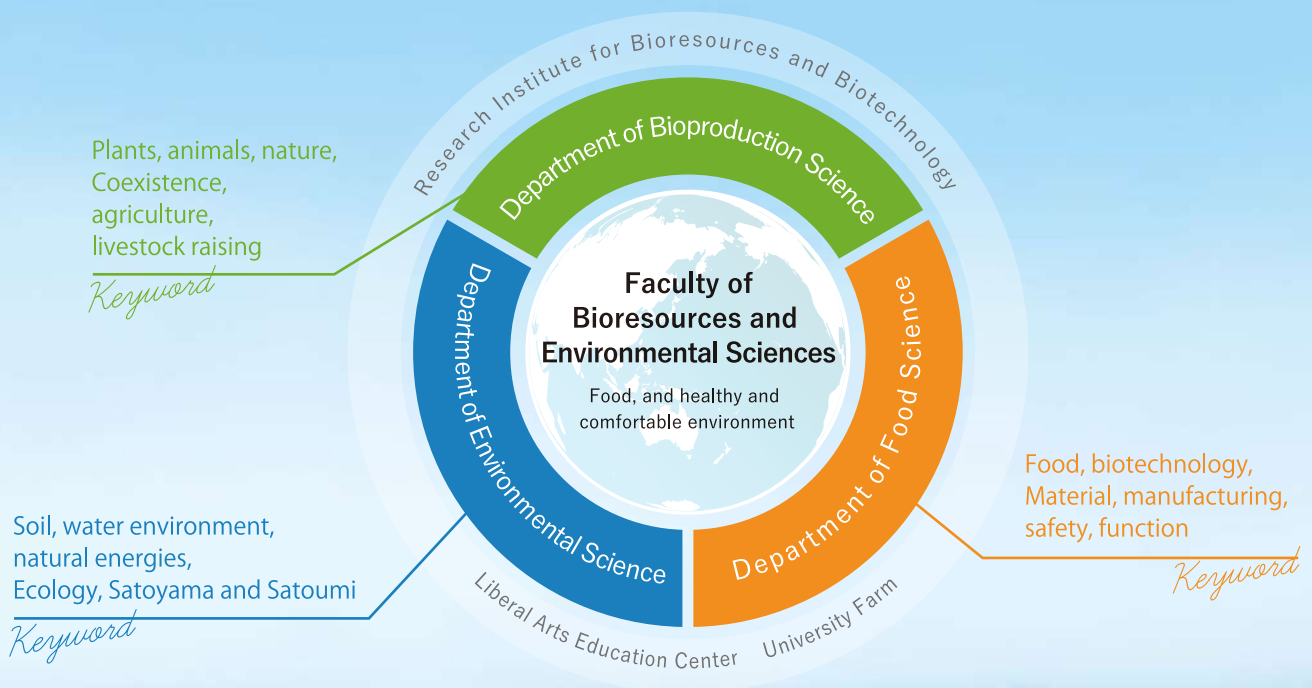
- To nurture individuals to have a sense of humanity in the rich natural environment of Ishikawa
- To nurture individuals to have a deep understanding of the workings of nature and society
- To train top level technicians in the areas of bioproduction, natural environment/environment management and food, with high levels of environmental ethics
- To nurture individuals, including adults returning to university for further study, to have a good educational base
- To enhance the teaching of English and information systems as intellectual tools

Research Objectives

- Research for the development of new technologies
- Research to contribute to local development
- Research related to the local environment
- Research into functional foods

A place of learning with hidden potential of acting in the global arena

Ishikawa Prefectural University was established in 2005.
 With an academic field of Bioresources and Environmental Sciences set up as a new development of agronomics, we are practicing education and research in the fields of agricultural production, environment, food and health, as well as bioscience and biotechnology, with the mission of exploring the principle of putting bioresources to use and developing applied technology while seeking harmony between people and the natural environment.



WHY?

Why Ishikawa Prefectural University is chosen?

Ishikawa Prefectural University in numbers



A solid support system greatly helps us find a job!

Employment rate of job-seeking students

*Academic year of 2018

99.1%

➤ P.43 Paths after graduation

The World University Rankings Japan Edition 2019

Educational Resources

Adequacy of Educational Environment

Ranked **8**th in Japan
 Among public universities

Ranked **3**rd in the Hokuriku region



Point 1

An array of unique and intriguing research!!

Faculty of Bioresources and Environmental Sciences is currently consisted of three departments—Bioproduction Science, Environmental Science and Food Science. With ample research facilities, such as university farm and laboratories, each department provides detailed, distinctive and practical learning opportunities.



TOPICS

Initiatives drawing on students' independence

Pocket Seminar

Commonly called "Poke-Zemi"



What's "Poke-Zemi"?

It's our unique research system that students gather to work on a subject they are interested in, regardless of department or academic year. You can challenge any specialized research you are interested in, even immediately after admission.

List of Pocket Seminars in FY2018

- Try plant breeding
- Vitalization of the Tomioku region by TOMITO Team
- Genome breeding with traditional cruciferous vegetables
- Study creatures on the university campus
- Join biostudy of sweet potato!
- Grow insectivorous plants by aseptic culture and tissue culture
- Let's start computer programming!
- Controlling aquatic insects with light
- Czech study
- Sheep
- Vibrio battle
- Let's try ICT!
- Ecology
- Dollarbird Project (tentative title)

Point 2

Small-group education through field work and practicum

Ishikawa Prefectural University is located in Nonoichi City. Adjacent to Kanazawa City, the prefectural capital, it lies on the Kaga Plain rich in nature. Our students conduct field works and practicums every day taking into account regional characteristics to deepen their learning. In an environment blessed with nature and under a well-developed small-group research system, our students are learning spontaneously.



Rice planting and reaping practices

Outdoor field work

Point 3

Practice of learning open to the community

We aim to vitalize education and research through exchange and cooperation with local communities and also assume a role of center for local intellectual activities. Our research outcome has actually begun to contribute to the local communities.

Rice planting and reaping practices



Number of students in charge per teaching staff
At the time of guiding graduation research

3 students or less

1 teaching staff

> P.11- Introduction of researches

Small-group
Well-developed teaching system!



Students who play in the snow

5%

*Survey by the Secretariat More interesting data are here!



Enriched learning environment!

> P.37
CAMPUS GUIDE

Site area
134,000 m²
University farm
26,000 m²



We are enjoying our activities!

Sports club **14** clubs
Cultural club **15** clubs

> P.41- Introduction of club/circle activities

Students from outside Ishikawa prefecture

Approx. **60%**

Interact with many people from inside/outside Ishikawa!

> P.44 Admissions information



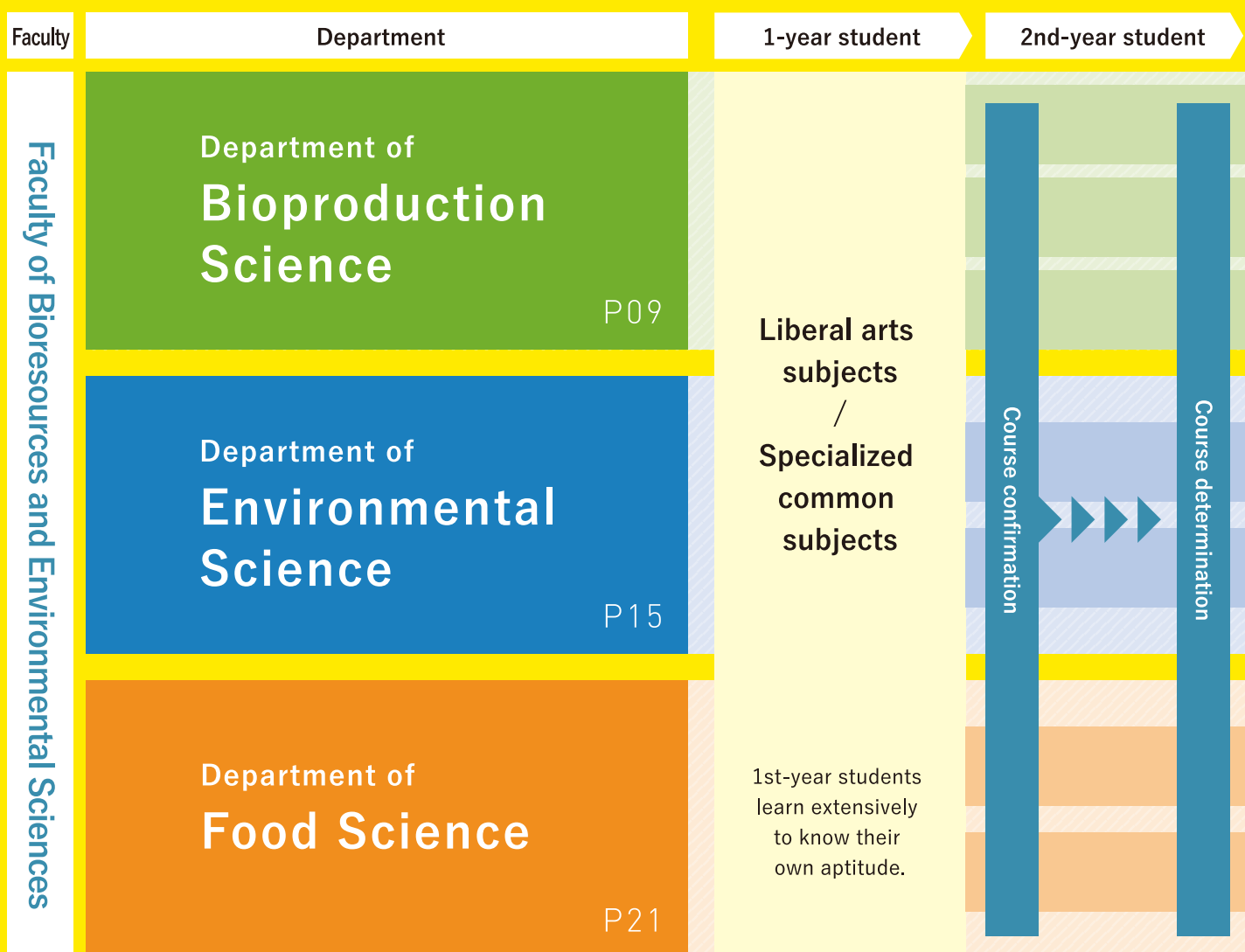
Secure the future!



Introducing the course system in 2019 academic year

To provide education that keeps the pace with changes in the environment surrounding local industries and communities, Ishikawa Prefectural University has reviewed its curriculum and decided to introduce the course system in 2019 academic year. Choose a course suited to the path you want to go on, and you can obtain knowledge you'll need systematically and effectively.

4-year learning curriculum



* Students of Environmental Science Department and Food Science Department can take contents of Advanced Biotechnology Course arranged for each department.

* Students of Bioproduction Science Department can take contents of Sixth-order Industrialization Course arranged for the department.

Learn deeper and acquire expertise
so you can hit the ground running.

7 Courses, 3 Departments, 1 Faculty

Admission test is implemented on a departmental basis as usual. Regarding course selection, when you are the 2nd-year student you'll confirm desired course (preliminary selection) and learn basic specialized subjects. When you become the 3rd-year student, you'll decide your course.

*Depending on the situation, for example, number of applicants, your desired course may be reconfirmed and adjusted.



3rd-year student

4th-year student

Major paths

Bioproduction Science Course

Bioproduction Environmental Control Course

Advanced Biotechnology Course

- Agricultural corporation, agriculture-related company
- National/local government employee
- Junior high school teacher (science), high school teacher (agriculture, science)
- Agricultural corporation engaged in protected horticulture
- Company producing crops at plant factory
- Nursery, food, pharmaceutical or chemical company utilizing biotechnology
- Proceed to graduate school

Environmental Science Course

Satoyama Revitalization Course

- Environmental facility-related company
- Environment/agriculture/civil engineering-related company
- Junior high school teacher (science), high school teacher (agriculture, science)
- Environment/development consultant
- National/local government employee
- Proceed to graduate school

Food Science Course

Sixth-order Industrialization Course

- Companies related to food production, analysis, safety, distribution, etc.
- Pharmaceutical company, cosmetics company
- National/local government employee
- Junior high school teacher (science), high school teacher (agriculture, science)
- Food-related company entering the agricultural production industry
- Agricultural corporation entering the fields of food processing or sales of processed food
- Proceed to graduate school



Unlock the future of agriculture.

Department of BIOPRODUCTION SCIENCE



Please open door to our Faculty *Message*

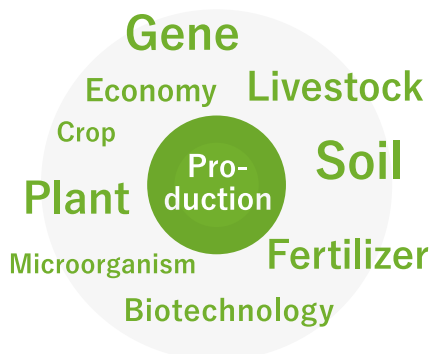
Head of the Department of Bioproduction Science, Professor **Masami SEKINE**

Agriculture is one of the key industries in order to create a sustainable future for the next generations. The Faculty of Bioproduction Science consists of research areas including Crop Science, Horticulture, Plant Breeding, Plant Physiology, Plant Pathology, Applied Entomology, Agricultural Economy, Animal Management, and Animal Reproduction. We welcome you to join us in our Faculty to learn how microbial, animal and plant resources should be used effectively for sustainable agriculture.



We aim to groom human resources who contribute to the development of new production technologies leveraged by bioresources and who lead the agricultural production field.

Subjects of learning are plants and animals deeply related to our life. Clarifying the characteristics of these bioresources in a broad range from group, individual, cell, molecule to the gene level, as well as utilizing biotechnology and other latest technologies, we provide education and conduct research to develop production technology.



Learn the relation between creatures and humans to become a production professional who develops new production technologies.

Class Pick UP!

Applied entomology



Acquire deeper understanding of behavior and ecology of insects and study the methods to control noxious insects and make use of beneficial insects as well. Students will also collect and dissect insects.

Plant production experiment



We conduct experiments on the mechanism to improve productivity of horticulture crops. You can also cultivate vegetables and irrigated rice and eat various kinds of fruits.

Acquire practical expertise in each course

Bioproduction Science Course

Individuals we aim to foster
human resources who have acquired knowledge and techniques beneficial for technological developers and producers of agriculture

This course provides you with fundamental knowledge and expertise for both plant and animal production. You will also learn about highly interdisciplinary bioproduction areas such as engineering, economics and management. We will foster human resources capable of creating new bioproduction technology using biological resources, as well as leaders of agriculture-related production.

Career Fields for Graduates

- Agricultural corporation
- Government employee (agriculture), school teacher (agriculture/science)
- Nursery and other agriculture-related companies, private biological research institute, etc.

Recommended if you...

I want to develop a new variety!
 I want to be involved in agriculture/livestock raising!



Course of environmental control in plant production

Individuals we aim to foster
To develop of management capability for environmental control of cultivating facility and the use of ICT

This course provides education about specialized subjects about basis of bioproduction science and control of various environmental factors in plant production system. The curriculum contains practical subjects involving experiments using environmental controlled greenhouse and closed growth chamber. The goal of this course is to develop of human resources with management capability for crop production in environmental controlled greenhouse and plant factory, and for high-efficiency agriculture by using ICT.

Career Fields for Graduates

- Agricultural corporation engaged in protected horticulture
- Company producing crops at plant factory

Recommended if you...

I want to learn plant production using the latest technology!
 I'm interested in cultivation at plant factory!



leading-edge bio course

Individuals we aim to foster
Persons who can utilize biotech for research and development

In addition to basic subjects for bioproduction science, students study analysis of the genome information, genetic modification and their applications. This course aims at upbringing of persons who can utilize biotechnology for development of useful cultivars and efficient production of useful bioproducts.

Career Fields for Graduates

- Company/research institute conducting development of high-quality seed, production of useful component, etc. utilizing biotechnology
- Company that embarks on an advanced bio business

Recommended if you...

I want to learn plant gene!
 I'm interested in biotechnology.
 I want to study the action of microbes!



Students of Bioproduction Science Department can take contents of Sixth-order Industrialization Course. See P.7-8 for the outline of the entire course system.

Bioproduction Science

We have teaching staff full of character, and as unique as our research subject.

Every day you will discover something new. Let's have fun and excitement together!

Biological Sciences Group

insect, behavior, pest control using light
APPLIED ENTOMOLOGY
 Associate Professor **Mantaro HIRONAKA**

Let's protect plants and animals from insect pests.

Breeding, Genetics, Next generation sequencer

PLANT BREEDING
 Associate Professor **Hiroki TAKAGI**

Identifying the attractive genes for breeding via genetic analysis using next generation sequencer.

cell cycle, floral organ, environmental stress

PLANT MOLECULAR PHYSIOLOGY
 Professor **Masami SEKINE**

Molecular analysis of floral organ mutant in rice.

Microorganisms, Plant infection, Plant immunity

PLANT PATHOLOGY
 Associate Professor **Hiroyuki TAKAHARA**

Understanding the battle between plants and pathogens.

Let's look into microbes in plant!



Animal Production Group

feed, grazing, immune function

ANIMAL NUTRITION
 Assistant Professor **Keigo ASANO**

Raising healthy animals for safety of livestock products.



We present a birth of sheep kept in our cattle shed and shear grown fleece!

animal, management, nutrition, physiology, behavior, immunity, stress

ANIMAL MANAGEMENT
 Professor **Takuji HIRAYAMA**

Animal management, feed production, animal welfare, animal behavior.

Livestock, Embryo production and transfer, Breeding regulation, Fertility improvement

ANIMAL REPRODUCTION
 Professor **Yutaka HASHIYADA**

Stabilize farm management and food supply through improvement of in vitro embryo production and reproductive efficiency.

Department features

- 1 Bioproduction Science is the only one department that covers almost all agronomic subjects in Ishikawa.
- 2 Its research is themed on agricultural products peculiar to Ishikawa prefecture.
- 3 Students are assigned to laboratory from as early as 3rd year to be involved in a research requiring expertise.
- 4 A supportive environment near paddy fields, dry-fields, greenhouses and livestock building.

We learn agriculture and stockbreeding through on-site experience!
Your student life will be fulfilling as you can practice on site what you've learned in class!

We have a lot of classes with experiments aiming for the development of new production technologies and analysis technology!



Plant Production Group

POMOLOGY
Associate Professor
Ayako KATAYAMA

Fruit maturation and accumulation of flavonoids.

Fruit science, maturation, secondary metabolites



Phytohormones, Gene, Protein, Rice, Sweet Potato

CROP PHYSIOLOGY
Associate Professor
Tomoaki SAKAMOTO

Function of brassinosteroids on agriculturally important traits.



Spinach, shishito pepper, hydroponics

VEGETABLE SCIENCE
Professor
Kenji MURAKAMI

Breeding of spinach with less oxalate and shishito pepper with less pungent.

rice, soy bean, crop

CROP SCIENCE
Associate Professor
Tadashi TSUKAGUCHI

Towards sustainable crop production tomorrow.

Bioresource Management Group

BIORESOURCE ECONOMICS
Associate Professor
Masahiro SUMIMOTO

How can Japan's food self-sufficiency rise?

Agricultural Policy, Food Consumption



Agricultural machinery, Image Processing, Physical Properties measurement, Sensor

BIOPRODUCTION SYSTEMS
Associate Professor
Masaharu OOKADO

I aim to automate the farm work by using various sensors.

Farm Management & Risk, Contract Farming, Futures Contract

BIORESOURCE MANAGEMENT
Professor
Songaku KIMU

Risk Management & Strategies in Farming.

- ⑤ Guidance is provided with a view to giving presentation at external workshops and academic meetings.
- ⑥ Approx. 20% of expected graduates proceed to a graduate school.
- ⑦ A number of students pass civil service exam and teacher recruitment exam every year.
- ⑧ Students pursue a wide range of careers after they graduate.

VOICE

The reason I study here

Fresh voices of our seniors who selected the Bioproduction Science



Here's something
AMAZING!

Attractiveness
of Bioproduction Science



Genetic analysis using next generation sequencer for the heterozygous plant, Brassica rapa.

Recent advance in next generation sequencer (NGS) have been accelerating genetic analysis mainly in the model plants such as rice and Arabidopsis. Brassica rapa is an economically important crop including Chinese cabbage, turnip and various leafy vegetables. Although there is the grate demand for identifying gene/QTL to accelerate breeding and physiological study in B. rapa, the efficient genetic analysis using NGS has not been established due to the low quality of the publicly available reference genome and genome heterozygosity. Our group modified QTL-seq, which is developed in rice as an NGS-based bulk segregant analysis technique, for optimizing to B. rapa. Adding new bioinformatics analysis the original QTL-seq pipeline succeeded in eliminating the spurious data caused by alignment and/or sequencing error and overcoming the difficulty of analysis in heterozygous genomic region in B. rapa. The modified QTL-seq developed in our group will broaden the opportunity to use NGS-based genetic analysis in not only B. rapa, but also various heterozygous plants having publicly available genome.

I'm aiming for breeding of vegetables that please everyone: "who eats them" and "who makes them!"

I'm studying breed improvement of vegetables that we usually eat!



PLANT BREEDING
Associate Professor
Hiroki TAKAGI



4th year, Department of
Environmental Science
Chisato NISHIYAMA

Experience of on-farm practice has brought me closer to agricultural producers

Ms. Haruna KUBO

JA Zen-Noh (National Federation of Agricultural Cooperative Associations) Ishikawa

Graduated from Department of Bioproduction Science in 2016/
Kanazawa High School

I want to be the one who understands producers most by accumulating knowledge and experience.

I gained employment with Zen-Noh because I wanted to use agricultural knowledge I have learned at university. Now I'm engaged in accounting job in Livestock Department and am supposed to be in charge of pig farming. I'm a little nervous as it requires professional knowledge. My graduation research was on "Pig's visual learning ability". Using this research, I would like to support pig farmers in Ishikawa from a new perspective. As we at Zen-Noh have a key role of directly encouraging improvement of productivity of the agricultural industry, I feel I have got a truly fulfilling job every day.

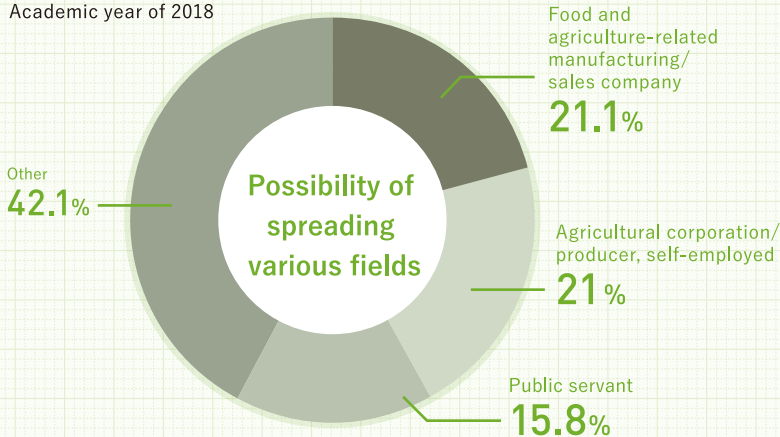


Post-graduation path

Innovation of production technology that clarifies characteristics of bioresources in view of resources and environment has been prevailing not only in agriculture but in various fields. Human resources who can lead this field are required by the whole society. Such persons are expected to play an active role of a leader in the development of production technology taking into account bioresources and environment, as well as gene- or biotechnology-applied agricultural production technology.

Track record of job placement

Academic year of 2018



Major career paths

- ▶ **Agriculture-related company**
Land improvement business organizations, enterprise-type agricultural corporations, etc.
- ▶ **Pharmaceutical/environment-related company**
Gene technology/biotechnology-required companies
- ▶ **Food-related company**
Companies involved in business using bioresources as raw material
- ▶ **General trading company**
Trading companies dealing with bioresources
- ▶ **Researcher**
Research and development of bioresources, various research institutes
- ▶ **National/local government employee**
Public offices that take the lead of national/regional agricultural policies
- ▶ **(Junior) high school teacher**
Junior high school teacher (science)
High school teacher (science/agriculture)
- ▶ **Entering graduate school**
Going on to a graduate school where professionals with further sophisticated skills are nurtured

Acquirable qualifications


Type 1 Teacher's license for junior high school – Science -

Students taking teacher-related subjects are granted these licenses by the Prefectural Board of Education upon graduation pursuant to the Education Personnel Certification Act.

Type 1 Teacher's license for high school – Science/Agriculture -

Domestic Animal Inseminator
Subjects to study/of exam are partially exempted

Qualified persons who are granted the license by prefectural governor can perform artificial insemination of cow, horse, pig and other animals, cow's embryo transfer and other operations.



Aiming for living in
harmony with nature

Department of ENVIRONMENTAL SCIENCE



Let's enjoy nature by using your six senses,
and challenge the environmental issues for our future

Message

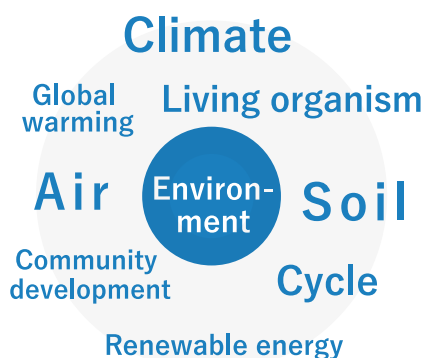
Head of the Department of Environmental Science, Professor **Toru Oi**

We have caused serious damages to the natural environment which have been fostered in a long-time history of the earth and is now sustaining our daily life. However, we could not recognize the actual conditions of the damages without scientific views and techniques. We also need science and techniques to restore the destructed natural environment. Environmental Science is a field of science that aim to understand structure and function of the natural environment and develop techniques to conserve it and make harmony between our life and the nature. Our department believes that the full use of our six senses is important to understand the nature, and that field works is our major approach to learn from the nature. We have many programs to learn knowledges and techniques to handle many types of environmental issues. The nature of Ishikawa with beautiful mountains, rivers, sea, and sky, and variety of living creatures will welcome you and those will be your main study field.



Through education and research on environment in which humans can live in harmony with nature, we nurture human resources who contribute to realize safe, pleasant and comfortable human life.

Based on the knowledge of soil, water, air and other elements, we figure out how human activities influence on environment or ecosystem, and study theories and technologies to improve production/living environment while preserving natural environment. A wide range of experiments and practicums related to environment science will help students to play an active role in environmental fields soon after graduation.



Study to realize Ishikawa's productive natural environment under which we coexist with nature Ishikawa.

Class Pick UP!

Wildlife Management



Students learn about the conflicts that sometimes occur between humans and wildlife, and the techniques used to mitigate them.

Satoyama Energy Utilization



Students learn how to vitalize Satoyama area with the use of small hydropower, geothermal heat, and other natural energies.

Acquire practical expertise in each course

Environmental Science Course

Individuals we aim to foster

Environmental engineers who have extensive views on nature.

The students can study basic knowledges on ecosystem, and theories and techniques to control and maintain the environments for agriculture and our daily life in harmony with the natural environment. We will develop human resources who contribute to realize safe and comfortable local communities blessed by the nature.

Career Fields for Graduates

- Environment-related company
- Construction/development consultant
- Public servant (environmental and civil engineering fields)

Recommended if you...

*I like nature!
Want to learn more about air, soil,
water quality and other things!*

*I want to learn
environmental conservation!*

*I will pass on a safe global
environment to future generations!*



Satoyama revitalization

Individuals we aim to foster

The satoyama revitalization course will provide high-skilled engineers who are able to contribute to an eco-friendly development and regional promotion.

This course places great value on research and education with wildlife management, forest ecosystems conservation, watershed management, farming village plan and effective use of renewable energy.

Career Fields for Graduates

- Energy-related company (renewable resources)
- Environment-related company
- Environmental/development consultant
- Public servant (environmental/forestry/regional development fields)

Recommended if you...

*I'm interested in vitalization
of Satoyama and Satoumi!*

*I'm curious about approaches
utilizing sceneries and resources.*

*I want to know about measures
against damage by animals.*



Environmental Science Department students can also learn the contents of Advanced Biotechnology Course. See P. 7-8 for the outline of the entire course system.

Environmental Science

Let's learn together with our teaching staff who always pursue various approaches to the "environment."

Experience the natural environment through our field work fully using your five senses!

Rural Resources Group

air pollution,
global warming

ATMOSPHERIC
ENVIRONMENTAL
SCIENCE
Associate Professor
Yukiya MINAMI

How can we know
about the air,
almost invisible?

soil, fertilizer, isotope,
biogeochemical cycle

SOIL ENVIRONMENT SCIENCE
Lecturer
Naoya KATSUMI

Genesis and
utilization of Soil.

We actually climb up Mt. Hakusan
for collection and measurement!



Hydropower,
Renewable energy,
Hydrology

WATER AND SOIL MANAGEMENT
Professor
Hiroshi TAKIMOTO

Development of
Small-Scale Distributed
Hydropower Systems for
Rural Electrification.

soil, heat pipe,
utilization of shallow
geothermal energy

LAND RESOURCES
MANAGEMENT
Associate Professor
Toshihiko MOMOSE

Creating cold sources in
an agricultural vinyl
house in summer
without electrical power.



Water Environment Management Group

irrigation and
drainage facilities,
function diagnosis,
repair/reinforcement
methods

RURAL FACILITIES
ENGINEERING
Professor
Takehisa MORI

Renew the aged
irrigation and drainage
facilities.

Water Utilization,
Irrigation,
Flood Control

WATER USE SYSTEMS
Lecturer
Shunsuke CHONO

Safety and sustainable
management of water
flow in regional area.

Hydrological cycle,
Hydrology,
Remote sensing

RURAL WATER ENVIRONMENTAL
ENGINEERING
Associate Professor
Yoichi FUJIHARA

Flood and drought disasters are
reduced by utilizing the water
resource storage function of
agricultural land and forest.

Fishway,
Eco-friendly facility,
Monitoring,
Evaluation

RURAL HYDRAULIC
ENGINEERING
Professor
Eiji ICHION

Creating eco-friendly
facilities for irrigation and
drainage.



Department features

- 1 We provide fieldwork that utilizes a rich natural environment from the summit of Mt. Hakusan to the Noto coast.
- 2 We aim to realize communities in which nature and human coexist.
- 3 Some of our graduates are national/local government employees who are taking the lead of national/local environmental policies.
- 4 We will discover usable natural energies that must still be there.

I like feeling the air of nature very much, so I feel great learning the environment, animals and plants in Ishikawa prefecture rich in nature with mountains and the sea!

What we can do to hand down safe and secure natural environment to the future? Let's think together!



Ecology Group

MICROBIAL ECOLOGY
Associate Professor
Eiji TANAKA

Fungi, Grass, Symbiosis

Fungi-plant symbiosis.

PLANT ECOLOGY
Associate Professor
Shumpei KITAMURA

I am interested in plant-animal interactions, particularly the role of frugivores in seed dispersal.

Plant-Animal Interaction, Seed Dispersal, Frugivory, Hornbill, Camera-trap

ANIMAL ECOLOGY
Professor
Toru OI

Living together with wildlife by scientific knowledges and management techniques.

Wildlife, Ecology, Wildlife Management

This is a book written by teachers and students of Environmental Science Department!!



Sometimes we get dirty in Practicum but it's fun because there are a lot of discoveries!



Rural invigoration, Environmental planning, Sustainable society

REGIONAL PLANNING
Associate Professor
Ryohei YAMASHITA

Let's create a future society from sustainable rural areas and natural environment.

nature conservation, biodiversity, biodiversity, sustainability

GREEN ENVIRONMENTAL SCIENCE
Associate Professor
Yusuke UENO

Aim for an affluent and sustainable society by utilizing various functions of nature and ecosystems.

watershed management, rare species, integrated sediment management, riparian forest

WATERSHED CONSERVATION AND MANAGEMENT
Professor **Seiji YANAI**

Influence of land crab on river and marine ecosystems.



Satoyama Satoumi Restoration Group

⑤ We pursue agriculture in harmony with the nature that harbour precious animals and plants, as well as the utilization of regional resources.

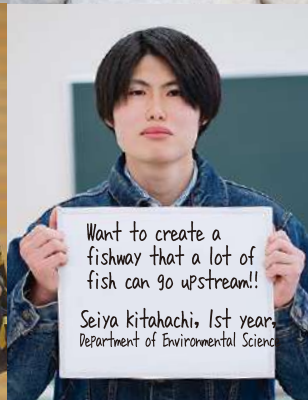
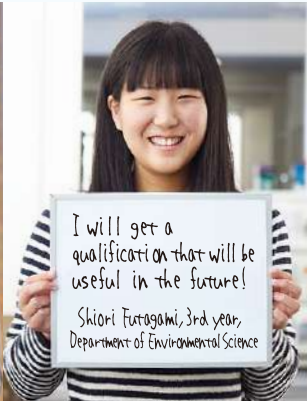
⑥ We study conservation and management of the water environment of agriculture and farming villages that support sustainable production activities.

⑦ Students can acquire teacher's license for junior high/high school to teach science and agriculture.

VOICE

The reason I study here

Fresh voices of our seniors who selected the Environmental Science



Here's something
AMAZING!
Attractiveness
of Environmental Science



New technology to change agriculture in cold regions: Use of geothermal energy to grow olives in Notojima.

Growing popularity of Italian foods leads to an increase in the market value of fresh olive oil in Japan; then, olive farming has spread as a business opportunity in rural areas. However, olive farmers in most regions face a harsh reality of low productivity. Winter in Japan might be cruel for olive trees that grow well in Mediterranean climate. We think that heating the root zone in winter can be key to improve the olive yield, focusing on the shallow geothermal energy just below the root zone as heat source and the heat-pipe technology that allows for transporting the geothermal energy to the root zone without electricity. With the cooperation of "Notojima olive group" we will insert our self-made heat-pipes into an olive farm in Notojima, Ishikawa, starting a field experiment to increase the olive yield.

I want to make Notojima an island of olives!
I'm studying heat pipe technology because it may enable this dream come true even in a cold region.

I have developed a power generation device that lights up with boiling water.
I want to utilize this for community invigoration!!



LAND RESOURCES MANAGEMENT
Associate Professor
Toshihiko MOMOSE

4th year, Department of Environmental Science
Hiyori NAMIE

Experiences acquired through interaction with community residents are used in my current job.

Natural Consultant Co., Ltd.
Takuya IWASA

Graduated in 2017, Department of Environmental Science/
Graduated from Shinonoi High School, Nagano



Want to be qualified as a Professional Engineer to make more contribution to creating a safe and secured community

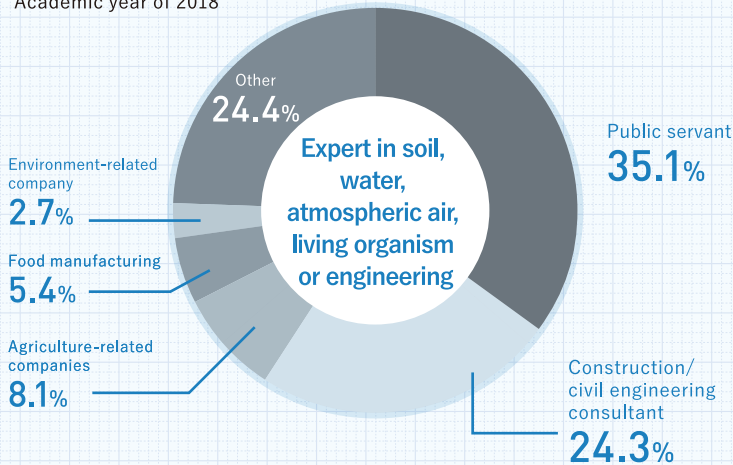
I'm engaged in design and maintenance of public structures, which makes me realize that I'm contributing to the society and community. It's a rewarding job. When I was inspecting a bridge, I was very much pleased with the words of appreciation received from people in the community and felt proud of myself. I do not only desk work but often go to the field. It's a breath-fresher to go on overnight business trip to a distance (mainly Nagano and Oku-Noto). At work, I'm involved with a lot of people inside and outside the company, and I feel it is built on my experience of interaction with various people in my student days.

Post-graduation path

Mass consumption of resources and energies have caused many environmental problems in modern societies. It is urgent that we review our wasteful lifestyle consuming a lot of disposable commodities and create a renewable society. To create a society in which the nature and humans coexist, environmental engineers and researchers with a broad perspective to deal with soil, water, atmospheric air, living organism, engineering and other fields are in demand.

Track record of job placement

Academic year of 2018



Major career paths

- ▶ **Civil engineering-related company**
Companies utilizing expertise in soil, water and engineering technologies
- ▶ **Environmental equipment-related company**
Manufacturers of environmental products/equipment, etc.
- ▶ **Construction/development consultant**
Companies committed to planning, survey or design related with regional development, environmental conservation
- ▶ **Resource development-related company**
Companies committed to survey/development of underground resources, water resources, etc.
- ▶ **Researcher**
Environment-related research institutions
- ▶ **National/local government employee**
Public offices leading national/regional environmental policies
- ▶ **(Junior) high school teacher**
Junior high school teacher (science)
High school teacher (science/agriculture)
- ▶ **Entering graduate school**
Going on to a graduate school where professionals with further sophisticated skills are nurtured

Acquirable qualifications

Type 1 Teacher's license for junior high school - Science -

Type 1 Teacher's license for high school - Science/Agriculture -

Subjects related with teacher's license must be taken.

Construction Managing Engineer
- Shorter years of work experience -

National qualification essential to engage in supervision/management of construction work, which is certified by the Minister of Land, Infrastructure and Transport and Tourism

Wildlife manager

Certification issued to wildlife management engineers dealing with regional issues related to damages caused by wildlife

Associate Natural Regeneration Professional Engineer

Qualification associated with tasks/activities for natural regeneration, which is certified by the Japan Greenery Research and Development Center

Land Surveyor/
Associate Land Surveyor

National qualification essential to engage in land survey, which is certified by the Geospatial Information Authority of Japan, Ministry of Land, Infrastructure and Transport and Tourism



Closing in on
hidden possibility

Department of
**FOOD
SCIENCE**

**Learn everything about food, from basics
to applications, to become active professionals**

Message

Head of the Department of Food Science, Professor **Toshiki ENOMOTO**

Research and education at the Department of Food Science, Ishikawa Prefectural University, cover an extremely broad range of fields specializing in food, making this department very unusual for Japan. The teaching staff consists of specialists in all kinds of food-related fields, from theory to application, including the elements and molecules constituting food, food nutrition and functionality, food production and processing, and food safety. The Department also actively conducts joint research and development with many companies, mainly within Ishikawa Prefecture, and the results have included products that have reached commercialization. The well-equipped facilities provide a perfect learning environment. I hope that our students will take an active interest, and challenge themselves, in many areas. We also provide real-world opportunities for students to learn at local food-related companies, such as through internships. I also hope that our students will become food professionals who can play active roles in various fields.



We aim to nurture human resources who will be active in the food industry in an age when the safety of our familiar food is required.

Utilizing biotechnology and other advanced technologies, we work to develop food processing, storage and distribution technologies. We also clarify food safety and functionality, and provide education and researches on supply system as well as health maintenance and enhancement. To acquire a wide range of knowledge and techniques related with food, from the molecular level, manufacturing/processing/distribution technologies and methods to nutrition and hygiene issues, students also receive on-site trainings at production worksite and food-related companies.



Elucidating the world of traditional food rooted in the area using advanced science, we will see new potential of food.

Class Pick UP!

Food chemistry



Food components such as nutrition, taste, color and flavor, and changes of the components in cooking and processing are expounded from the chemical aspect

Off-campus food-related practice



Through field trips and experiences of sixth industrialization efforts made at food companies and JA, students deepen their understanding of the food industry and learn how the knowledge they have obtained at the university are utilized.

Acquire practical expertise in each course

Food Science Course

Individuals we aim to foster

Individuals with extensive knowledge and skills required in the food industry

The subject of Food Science is that everyday item of food. The food industry increasingly attracts attention to food safety and other issues, so our objective is to nurture individuals who can be active in this industry.

For this purpose, students learn about the technologies related to food, which involves various aspects such as manufacturing, processing, and distribution technologies and methods from the molecular level as well as nutrition and hygiene problems. In addition to training at production plants and food-related companies, students are participating in lectures and experiments.

Career Fields for Graduates

- Food manufacturer, food-related company
- Pharmaceutical/cosmetics-related company
- Public servant (Food Sanitation Inspector)

Recommended if you...

- I want to study food ingredients and functions!*
- I want to learn developing cosmetics leveraging food functionality!*
- I like eating so much! I'd like to do a job associated with eating!*



Sixth sector industrialization course

Individuals we aim to foster

Persons with comprehensive knowledge and skills related to manufacturing, processing, and marketing of food

Besides food science such as food processing and food safety, students learn agricultural production and marketing in this course. The objective of this course is developing human resources with the ability to produce and develop new food items in food companies and agricultural production corporations.

Career Fields for Graduates

- Companies diversified into various forms of business from production of agricultural products, manufacturing and sales of processed food to restaurant management
- Food-related companies entering agricultural production

Recommended if you...

- I want to get involved in the development of new food products!*
- Food distribution and processing should be better!*
- I want to make use of the merits of local farm products more!*



Students of Food Science Department can take contents of Advance Biology Course. See P.7-8 for the outline of the entire course system.

Food Science

Our teaching staff's insatiable inquisitive mind about food is waiting for you.

Let's try out the elucidation of familiar yet mysterious food functions!

Basic Food Sciences Group



biochemistry, immunology, oxidative stress, functional food

FOOD BIOCHEMISTRY
Associate Professor **Yasuki HIGASHIMURA**

My mission is to clarify the mechanism of intestinal diseases, and I want to contribute to the prevention of the diseases using food.

Analysis of food ingredients, structure and function of proteins

BIOMOLECULAR FUNCTIONALITIES
Professor **Kenji OGURA**

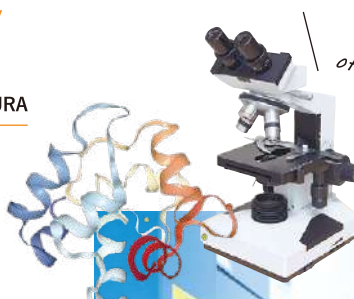
My research topics are comprehensive component analysis of food stuffs and relationship between structure and function of proteins.



dependence on prepared food and eating out, demand for processing and food services, vertical diversification of primary industry, high added value

FOOD BUSINESS
Professor **Shigenori KOBAYASHI**

How can we link "agriculture" with "food" effectively?



Let's look into the structure of food around us!



Food Function Group

obesity, diabetes, lipotoxicity, glucotoxicity

FOOD NUTRITION
Associate Professor **Yumiko YOSHIKI**

Find foods that control lipid and sugar metabolism.



Carbohydrate-active enzymes, Oligosaccharides, Starch,

BIOMATERIALS SCIENCE
Associate Professor **Yuji HONDA**

Improvement in gluten-free rice bread quality.



Ishiri and Ishiru are soy sauces made from marine products such as squid and sardine.



Food Chemistry

FOOD CHEMISTRY
Professor **Toshiki ENOMOTO**

Chemical and microbial properties of Asian fermented fish products.



Food Functionality, Lifestyle-related diseases, Diabetes, Persimmon, Resistant starch

FOOD FUNCTION
Professor **Kenji MATSUMOTO**

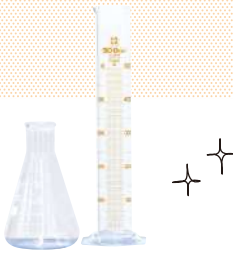
Research and development of functional foods having good taste.

Department features

- 1 Provides finely tuned support for job-hunting and going on to graduate school.
- 2 Provides an internship program in cooperation with food companies in Ishikawa prefecture.
- 3 Students can learn the manufacturing method of Ishikawa's traditional fermented food.

The food we eat every day is actually so deep!
From microbe, enzyme
through cutting-edge biotechnology,
you can learn a wide range of subjects!

Valuable utilization of bioresources'
functionality is expected in
pharmaceuticals
and cosmetics as well!



Electromagnetics,
Induction Heating cooker,
Infrared,
Radiation

Food engineering,
Rate analysis of oxidation of lipids,
Emulsifications

FOOD ENGINEERING
Associate Professor
Motohiro SHIMA

Theoretical analysis of food
engineering including oxidation
of lipids and manufacturing of
food emulsions.

Food Manufacturing Group

FOOD TECHNOLOGY
Lecturer
Hagino FUJITA

Development of easy
and convenient pan
that can radiate FIR
like charcoal grill.



fermented foods,
food microbiology,
applied microbiology

FOOD MICROBIOLOGY
Associate Professor
Takashi KOYANAGI

Investigation of the
role of microorgan-
isms contained in
fermented foods.



Food manufacturing,
dietary fiber,
atomization

FOOD MANUFACTURING
AND DEVELOPMENT
Professor
Takao NAGANO

We develop food that can
solve obesity and activate
gut microbiota.



Food allergy,
Unused resources,
Bone metabolism,
Skin moisture

FOOD HYGIENE
Associate Professor
Sogo NISHIMOTO

Our research to prevent
various troubles in the body
using unused resources.



Food Safety Group

food poisoning,
food safety and security,
foodborne pathogens,
salted food, essential oil

FOOD MANAGEMENT
Associate Professor
Yoshitsugu NAKAGUCHI

Analysis of pandemic of
foodborne pathogens and
development of new food
poisoning prevention method.



Natural products
chemistry,
protein science,
biophysical analysis

FOOD ANALYSIS
Lecturer
Mitsuhiro SEKIGUCHI

Biophysical analysis of
the protein-natural
products interactions.



We use Home Bakery bread machine, roaster and
other food-related devices in experiments!

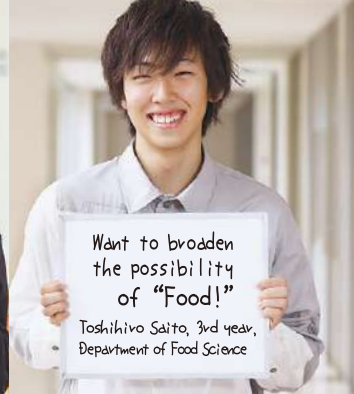
④ Students can learn Food Science, a comprehensive study that covers the sixth industrialization.

⑤ Students can study the correlations among food components, safety, processing and manufacturing, functionality and health, with the state-of-the-art research equipment.

VOICE

The reason I study here

Fresh voices of our seniors who selected the Food Science



Here's something
AMAZING!
Attractiveness
of Food Science

Research on lactic acid bacteria inhabiting traditional fermented foods.

"Traditional Fermented Foods", which is a research topic in the Food Microbiology Laboratory, is a habitat (niche) where microbes so much love it. Ishikawa Prefectural University has conducted many studies on microorganisms isolated from fermented foods, and our laboratory focuses on the potentials of "lactic acid bacteria" among them. Lactic acid bacteria produce various functional molecules including antibacterial substances and polysaccharides, and we are looking for such strains isolated from fermented foods from Ishikawa Prefecture. Since our research deals with macro subjects such as food, there are many cases where various interpretations can be established in the research results that come out, which is a difficult point. However, there are many unrevealed things, and there are many interesting issues if they could be understood scientifically. If you analyze the chemical structures and functions of useful molecules in collaboration with other researchers and companies, the scope of research will be broadened, and the power of bacteria beyond the first imagination can be understood. Food is familiar to us, which is a part of "clothing, eating and living" ("i-shoku-jyu" in Japanese, the most important three things for human being), and new findings immediately leads directly to our joy of discovering. I think this is a wonderful point of food research, and also think that being able to do research in such joy every day is with full of happiness.

I'm excited about the possibility of lactobacillus extracted from local foods!

I'm advancing community-based research while participating in joint research related with fermented food of Ishikawa prefecture.



4th year, Department of Food Science
Yudai TANAKA

FOOD MICROBIOLOGY Associate Professor
Takashi KOYANAGI

Broad-based knowledge on food helps me develop new products.

Ms. Taeko FUJII

Tombow Beverage Co., Ltd.

Graduated from Department of Food Science in 2016/
Toyama Prefectural Toyama Higashi High School



I want to develop products that please a lot of people in society.

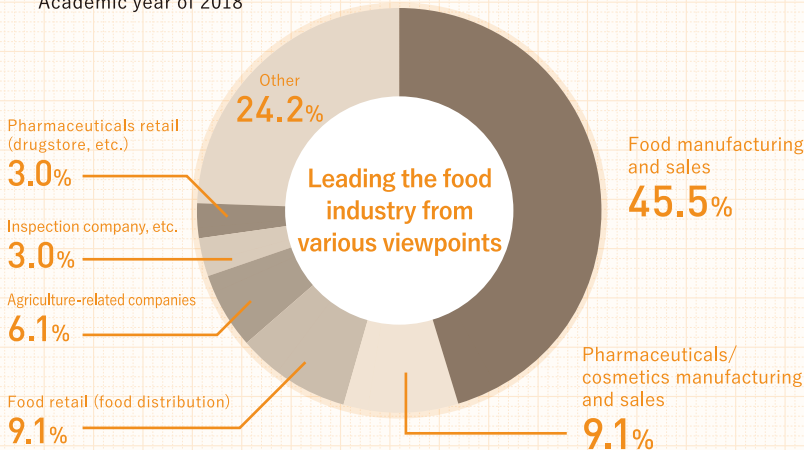
I joined a local food manufacturer because I wanted to use my knowledge on food that I have learned at university. Now I'm mainly in charge of development of beverages and jelly. Although it's difficult to make products required by customers and I often have a hard time, when I managed to make a satisfactory product, I feel pleasure and rewarding for all the troubles I had. New product development requires versatile knowledge, such as ingredients functionality, labeling act and safety, as well as making tasty food. Broad knowledge about food acquired during my university days helps me every time, and I really feel that learning is important.

Post-graduation path

The modern society is facing a great turning point, from prioritized cost, efficiency and sales to the food with ensured safety, security and functionality to nurture life. To cope with the change, persons who can immediately lead the food industry from various viewpoints in the development of new food processing, storage and distribution technologies by returning to agriproducts as the material and the origin and leveraging advanced technologies, including biotechnology.

Track record of job placement

Academic year of 2018



Major career paths

- ▶ **Food manufacturer**
Companies engaged in food production and processing
- ▶ **Food-related company**
Companies involved in ensuring food safety, distribution and information
- ▶ **Analysis/quality control-related company**
Companies engaged in analysis, quality control and other businesses of food, etc.
- ▶ **Pharmaceutical company**
Biotechnology-required companies
- ▶ **Cosmetics-related company**
Companies doing manufacturing, development and other businesses
- ▶ **Researcher**
Various research institutions related with food
- ▶ **National/local government employee**
Public agencies leading national/regional food policies
- ▶ **(Junior) high school teacher**
Junior high school teacher (science)
High school teacher (science/agriculture)
- ▶ **Entering graduate school**
Going on to a graduate school where professionals with further sophisticated skills are nurtured

Acquirable qualifications

Type 1 Teacher's license for junior high school - Science -

Type 1 Teacher's license for high school - Science/Agriculture -

Subjects related with teacher's license must be taken.

Food Hygiene Supervisor and Food Hygiene Inspector - Qualification for appointment -

These qualifications are necessary for the appointment to positions required by national/prefectural governments and autonomous bodies that have set up a healthcare center to ensure provision of guidance on food hygiene. Students should acquire credits prescribed by the Department of Food Science.

Food Specialist - Qualification for examination -

A certification exam specified in Article 6-1 of Qualification Requirements for Food Specialist of the Japan Association for Food Specialist

Producer of the sixth industrialization of food

A skill test that supports cultivation and career advancement of human resources in "the industry of the sixth industrialization of food." Certificate of Program 1 or Program 2 completion is issued depending on the credits acquired.

Laboratory Story 01

Yuukan Oohashi



Message
Department of
Bioproduction
Science

Fixing virulence gene of colletotrichum higginsianum, a plant pathogen

Microbe is a living organism too small to see, but it propagates inside a plant that is much larger than itself and withers the plant. It's very interesting that how such microbes infect plants and it's so thrilling to find it out. The objective of my research is to find out virulence gene that causes anthracnose specifically to crucifer plants, prevent and exterminate anthracnose and develop varieties of the plant that are resistant to anthracnose. Good experiment results after repeated trials bring me the greatest feeling of accomplishment.

Laboratory for
Phytopathology
Department of
Bioproduction Science



Laboratory for
Applied Entomology
Department of
Bioproduction Science

Laboratory Story 03

Hayate Tsutsui



Message
Department of
Environmental
Science

Observing behaviors of Japanese monkeys appearing in a village to prevent damage to agriculture

There are a lot of things that I have noticed only after I started to observe monkeys. For example, each monkey seems to be behaving freely, but actually they behave in a group. Additionally, different monkeys respond to the human quite differently. I think a research to know how monkeys behave is important since it can be used for taking measures against damage to agriculture. Other than monkeys, I encounter a variety of wild animals and community residents, with whom I collaborate, tell me a lot of things. It's a very fascinating and pleasant time.

Laboratory for
Animal Ecology
Department of
Environmental Science

Laboratory for
Farmland Environmentology
Department of
Environmental Science

Laboratory Story 05

Kenta Yamada



Message
Department of
Food Science

I want to establish a technology for removing heavy metal contained in fish sauce and contribute to food safety

Fish sauce is made from fermented salted fish. In Japan, Shottsuru of Akita and Ishiru (Ishiri) of Noto are famous ones of its kind. Overseas, fish sauce is used regularly in some countries and regions. In some cases, fish sauce contains arsenic, cadmium or other heavy metals that are hazardous to the human body. Deteriorating marine pollution may also increase the density of those substances. "I want to remove these heavy metals and protect people's health." My research subject is fish sauces in Asia including Japan. Given that my research will lead to the health of other countries, I get enthusiastic about doing my research.

Laboratory for
Food Chemistry
Department of
Food Science

Laboratory for
Food Management Studies
Department of
Food Science

Laboratory Story 02

Hinako Kaketaka



Exploring possibility of technological development to repel stink bug, a pest which has the characteristics of phototaxis, using intense laser beam

It has been considered that the stronger the light intensity, more easily phototactic pests are attracted to artificial light sources. However, as some vertebrates avoid intense light, I thought some insects may avoid intense light. So, I conducted a research by irradiating intense laser beam on stink bugs, a pest, to see how it reacts. The result revealed that the stink bugs avoid light when its intensity exceeds a certain limit. It can be said that a new technological possibility that prevents attraction and invasion of insects was discovered. I find the research is really intriguing because it explained a field that had been unexplained.

Laboratory Story 04

Chihiro Handa



Aiming to cultivate olives in Notojima Island and invigorate the region by establishing the manufacturing technology for ground source heat pipe

Heat pipe has an excellent property of swiftly transporting heat without using electricity or other energies because it transports heat using temperature differences at both ends as a driving force. If we make a good use of it and warm ground temperature of rhizosphere of trees with underground heat pipe, crops that can be cultivated even in a cold region like Notojima will increase and also will be of help to regional vitalization. I can further deepen my understanding and learn a lot of things since I'm involved in the development of the device from scratch. Interaction with people from the community is a good experience as well.

Laboratory Story 06

Manae Higashi



Discovery of new things by studying the past in food poisoning research: Analyzing the characteristics of food poisoning bacteria and elucidating epidemicity on a global scale

Amid the current globalization of food, ensuring safe and secured food is one of the most important issues in our dietary life. In this lab, we can deeply learn and explore food safety and security, which forms a foundation from production to consumption. I have focused on seafood-mediated food poisoning bacteria called vibrio parahaemolyticus. Now I'm working on a research that leads to securing seafood safety to protect Japan's raw food culture through analysis of vibrio parahaemolyticus strain which have been separated since the 1970s.

Community-based research, challenge to new fields. Our inquisitive mind is the driving force for creating an affluent future.

Ishikawa Prefectural University is small but has a graduate school, which offers master's courses and doctoral courses. Some students found it enjoyable to do research while they were working on their graduation research in their 4th year at university, and there's an increasing number of students hoping to go on to graduate school to pursue the truth. Their desired research subjects vary from microscopic molecule and microbe, rice, vegetable, fruit, animal to forest and air. With meticulous guidance from teaching staff, they conduct researches contributing to local communities. Furthermore, they are working hard every day to raise the level of their researches internationally through presentation at overseas academic meetings.

Messages

Graduate School

Laboratory Story 07

Haruka Kobayashi



Laboratory for Crop Production
Division of Bioproduction Science, Master's Course

Estimating growing status of rice plant with aerial images using image analysis technology

For the purpose of performing phenotypic analysis of multiple systems and growth diagnosis of a large farmland, it is required to quickly grasp growth stage and evaluate the conditions of nutrition and growth. I'm trying to estimate the growth stage, such as leaf area of rice, nitrogen nutrition condition of leaves and heading date, by analyzing aerial images shot by a drone. I'm excited doing my research every day as I can estimate how rice plants are actually growing in the farmland from the data obtained by image analysis.

Graduate School

Graduate School of Bioresources and Environmental Sciences

Creating a new sense of value for symbiosis and coexistence of humans and nature

It is our mission to build a sustainable society in which the nature and humans can live and exist harmoniously. In April 2009, with “Creating a new sense of value for symbiosis and coexistence of humans and nature” as the fundamental principle, we established Graduate School of Bioresources and Environmental Sciences, with an aim to nurture individuals who have acquired further professional and sophisticated knowledge.

To cultivate human resources capable of developing local communities and enterprises thereby contributing to the society and communities through industry-academia collaboration, we pursue bioresources and environmental sciences from a new perspective, and conduct highly specialized education and research.

Working on advanced research under ideal circumstances



Message

Assistant President (Education)
Professor **Masami SEKINE**

Do you want to contribute to solving problems related to agriculture? If so, the master's program at the Ishikawa Prefectural University has been designed as if with you in mind. This master's program aims to develop human resources who are able to engage in cultivating a problem-solving ability. This program is also equipped with the advanced research equipment needed for leading-edge research of life science. We look forward to enter you who aspire to research in the field of agriculture.

Graduate School of Bioresources and Environmental Sciences

Master's
Courses
2 years

Division of Bioproduction Science

Students acquire the ability to define problems and work on solutions on their own. We aim to produce specialists who can work in the area of bioproduction and increased food production, which is compatible with both ecosystems and socioeconomic systems as well as maintaining the existence and sustainability of living organisms.

Basic plant production
Plant production
Animal production
Bioresource management

Division of Environmental Science

To create a sustainable local community in which nature and humans can coexist, we aim to educate specialists who, through research on the relationships between the physical/biotic environments and human activities, can lead the environmental conservation and remediation.

Utilization of rural resources
Conservation of biological environments
Water environment management
Creation of satoyama/satoumi (community-based forest/sea)

Division of Food Science

Conducts research on food analysis at the molecular level, as well as food development, processing, quality maintenance, functionality and safety. We aim to nurture specialists who can contribute to the establishment of a sophisticated total food support system.

Biomolecular function
Food manufacturing
Food function
Food safety

Division of Applied Life Science

Conducts bioscience research related to the elucidation of the mechanism of life. We work on applying the research results to food and medicine, as well as new biotechnology developments. In this way, we nurture specialists who can lead the revitalization of the bioresource industry and development of the local community.

Genetic functions
Plant cell technology
Microorganism function
Environmental biology systems

Further education

Doctoral
Courses
3 years

Division of Sciences for Bioproduction and the Environment

This Division promotes fundamental research on local bioproduction, and the maintenance/conservation of local agriculture and the environment. From an international and interdisciplinary perspective, we search for solutions to suit the community. We are also active in joint research projects through industry-government-academia collaboration.

Bioproduction
Environmental science

Division of Sciences for Biofunction Development

This Division aims to be a research center for life science and food science mainly themed on bioscience and biotechnology. We work on the production of new bioresources and the latest research related to food functions.

Food science
Biofunctions

Industry-academia-government cooperation

Major places of employment

Agricultural corporation, administrative agencies related with agriculture and forestry, environment, civil engineering, agriculture/environment/food-related companies, pharmaceutical/cosmetics-related companies, private bioscience research institutions, etc.

Learning Style



University Graduate

University Graduate

Foreign student

Member of Society

Want to find something useful later in my life through research at graduate school.

Want to feel the real joy of research with more in-depth theme.

Want to more delve into research on kefir which I was doing in my mother country.

Want to face challenges in rice production and revitalize regional agriculture.

Ishikawa Prefectural Kanazawa Sakuragaoka High School

Department of Bioproduction Science, Ishikawa Prefectural University

Graduate School of Bioresources and Environmental Sciences

Masumi Tochiori

Master's Course 2nd year, Division of Bioproduction Science

I advanced to the graduate school because I felt that the research made at the university was not enough. Research on vegetable horticultural science that I'm engaged in now requires dealing with many samples and new knowledge. I feel fulfilled as my knowledge increases steadily through daily research. After graduation, I want to a job related to agricultural production.

Toyama Prefectural Takaoka-Minami High School

Department of Bioproduction Science, Ishikawa Prefectural University

Graduate School of Bioresources and Environmental Sciences

Keisuke Maeda

Doctoral Course 2nd year, Division of Applied Life Science

What attracted me to the graduate school is that I can move forward in my research more positively than when I was a university student. Although Ishikawa Prefectural University is small in size, even from a lab of such a small university we can witness dramatic development, such as the world's first discovery; that's the best part of doing research here.

National University of La Plata (Argentina)

Graduate School of Bioresources and Environmental Sciences

Gamba Raul Ricardo

Doctoral Course 2nd year, Division of Sciences for Biofunction Development

The most advanced research on fermented food is implemented at Ishikawa Prefectural University, so it's attractive for me that I can conduct in-depth research on kefir, a fermented drink, to the gene level. In the future, I want to contribute to achieving friendly relationship between Argentina and Japan as a university teaching staff through education and research.

Seiryu Senior High School

Department of Agricultural Engineering, Tokyo University of Agriculture

Graduate School of Bioresources and Environmental Sciences

Kensaku Morisawa

Doctoral Course 3rd year, Division of Sciences for Biofunction and the Environment

I'm studying the possibilities of reducing and improving costs of going rounds farm fields for rice production. I'm trying to find out what kind of effects the changes in the use or aggregation method of farmland will bring about. My goal is to establish a method to approach intuitive evaluation of these improvement effects, which will be utilized in land use adjustment in regional agriculture.

VOICE of graduates shining in society

I can draw on what I learned about food in the fields other than food.

Ms. Saki Nakamura Shinko Chemical Co., Ltd.

Finished Graduate School of Bioresources and Environmental Sciences in 2017/ Fukui Prefectural Fujishima High School

New job, new encounters and new events... let's make our best efforts without being afraid of anything!

I studied food microbiology at university. What surprised me is the fact that the microbe is closely related to our life. It's deep as it may be related to the medical and industrial fields as well as food. Currently I'm not involved with food, but the knowledge about microbe and hygiene I obtained at the university has often been connected to my current job. To keep providing safer and more secure products at a medical-related company requiring the highest level of quality, I want to make use of my knowledge and experience that I acquired at the university.

Messages from Graduates



Number of students admitted to graduate school

Master's Courses Master's degree

Division (Major)	Admission quota	Number of students admitted		
		General selection	Special selection for working students	Special selection for international students
Bioproduction Science	8 persons	Approx. 8 persons each <small>*Of which, 4 persons or less for school referral</small>	Very limited number	Very limited number
Environmental Science	8 persons			
Food Science	8 persons			
Applied Life Science	8 persons			
Total	32 persons			

Doctoral Courses Doctoral degree

Division (Major)	Admission quota	Number of students admitted		
		General selection	Special selection for working students	Special selection for international students
Sciences for Bioproduction and Environment	4 persons	Approx. 4 persons each	Very limited number	Very limited number
Sciences for Biological Function	4 persons			
Total	8 persons			

Head of the Liberal Arts Education Center
Professor Tadayuki SAWADA

The modern society is a knowledge-based and a global society. Information is constantly updated, and it is required to work with people with diverse values. In such a society, it is important to have the ability to proactively collect and sort out necessary information, analyze it from various angles, think critically and comprehensively, and make accurate decisions through discussion with various people.



We hope that you will enjoy learning the world of various and deep academic fields. We will help you improve your intelligence and communication skills through your college life. Liberal Arts Education Center will support your learning.

Liberal Arts lays the foundation for areas of expertise

Liberal Arts Education Center provides subjects in a range of fields such as humanities/social science subjects for acquiring basic skills, subjects for physical and mental health, English/English conversation and information processing subjects. In addition, so that students can improve their basic academic skills and transit smoothly to specialized subjects, we have a comprehensive selection of subjects for students to gain a foundation in biology, chemistry, physics and mathematics. Furthermore, we offer the subjects necessary to obtain a teacher's license (Type 1 teaching certificate for high school in science and agriculture, and Type 1 teaching certificate for junior high school in science).

ENGLISH EDUCATION
Associate Professor
Glen NORRIS

Supporting scientific presentations.

Reading is great for making progress in English!



ENGLISH Lecturer
Eri TAMURA

American Literature.

American Literature, gender, sexuality, race



INFORMATION SYSTEMS
Associate Professor
Hirokazu INABA

Computer simulation of quantum effects.

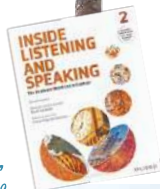
quantum effects, tunneling, resonant tunneling, computer simulation



ENGLISH EDUCATION
Professor
Tomoko SHIMMURA

How to develop English communicative skills through collaborative learning.

Teaching English, extensive reading, collaborative learning



Information-related study becomes difficult in the second half.

INFORMATION SYSTEM
Professor **Satoshi Oke**

We measure plant environment with sensor and camera and infer the moisture status of the plant interior from the measurement data.



Psychology, education, development

PSYCHOLOGY
Professor **Tadayuki SAWADA**

Development of emotional regulation and expression, career development and parental development, educational evaluation and first-year education.



PHYSICAL EDUCATION
Professor
Kazuyoshi MIYAGUCHI

Effects of wearing Japanese-style sandals on motor recovery.

training, foot function, motor abilities, floating-toe



PEDAGOGY
Associate Professor
Mizue ISHIKURA

Czech higher education reform after liberalization, Gender aspects in Czech higher education.

comparative education, higher education, Czech, gender



Fields for hands-on learning

The University Farm is an area next to the Research Institute for Bioresources and Biotechnology, consisting of fields for hands-on learning. In addition to approx. 2.6 ha of agricultural land, there are also nine greenhouses and a barn for livestock practicums. Students practice planting and harvesting a range of plants from vegetables and ornamental plants/flowers to fruit, as well as caring for livestock; these are valuable experiences they can never have if studied only in a classroom. We hope that through being involved in actual production, students can learn about a broad range of the latest agricultural technologies. These areas are open to students to grow their own fruit and vegetables.

Approx.
0.6 ha

Dry field

Students themselves sow, thin out, weed, harvest and deliver various crops to experience a series of flow.

We also cultivate Ishikawa's traditional vegetables such as kinjiso (Okinawa spinach) and gensuke radish.



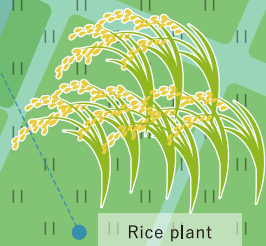
Soy, Japanese radish, carrot, eggplant, green onion, onion, Chinese cabbage, cabbage, broccoli, watermelon, sweet potato, potato, tomato, cucumber and various flowers

1st-year students of all departments transplant rice!

Approx. 1ha

Paddy field

As the first step to deepen understanding of agriculture, 1st-year students of all departments experience rice planting.



Rice plant



Pear, grape, apple, chestnut, persimmon

Approx. 1ha

Orchard

Students learn on site a series of fruit cultivation work, including artificial pollination, flower thinning and pruning. In addition, many students participate in "Pocket Seminar," a program managing a single tree throughout the year, or practicing cross breeding.

Orchard is located in a site adjacent to Suematsu Haiji Park approx. 1 km away from the University Farm's main unit.



An educational and research facility for agricultural practice

Message

Head of the University Farm
Professor Yutaka HASHIYADA

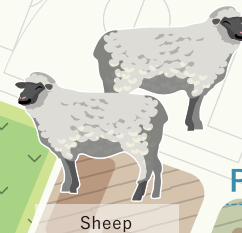
The university farm is a training facility where it can broaden the knowledge further by practicing plant cultivation and livestock management, etc., the knowledge obtained in the lecture, and acquire basic skills that can be used immediately for production sites of agricultural, livestock products, and related organizations. On the other hand, it is also a research facility on which students conduct graduation research, and teachers and researchers also connect basic or advanced research to production sites. Empirical research directly linked to the improvement of originated agricultural products in Ishikawa Prefecture and the development of special products is also vigorously promoted. Course-system and cross-disciplinary education within faculty is expected to further expand our field research and accelerate further. As the singular agricultural university in Hokuriku area, please use it as a place where you can learn and explore agriculture suitable for the local natural environment as a practical course.



We have 19 sheep in total!
8 males and 11 females.

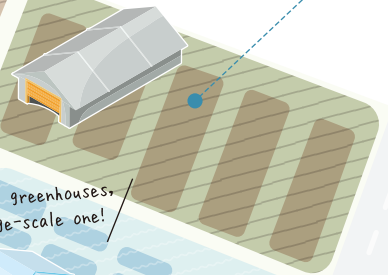
*As of academic year of 2019

Experiment and Practicum Building



Sheep

We have total 9 greenhouses,
including large-scale one!



Greenhouse

Barn

Sheep is raised here. Our sheep is widely used for farm practicum and graduation research, development of sheep-related local specialties and interaction with local people, contributing to the vitalization of the community.

Regulating Pond

POMOLOGY
Associate Professor
Mei TAKAI

Studies on the mechanism of fruit ripening.

VEGETABLE CROP SCIENCE
(EXPERIMENTAL FARM)
Professor

Nobuyuki FUKUOKA

Study on the occurrence of internal browning in tuberous roots of sweet potato (*Ipomoea batatas*).



A world-class research center taking the lead in biotechnology

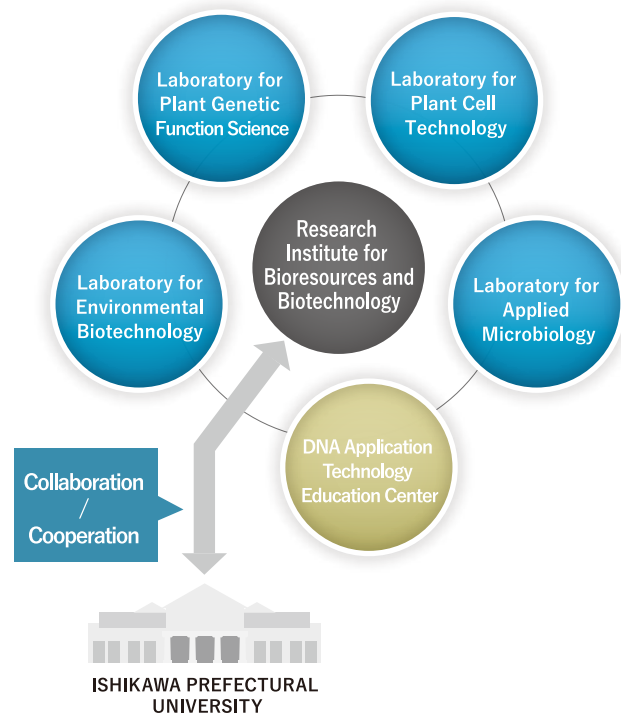
One of the features of Ishikawa Prefectural University is the existence of the Research Institute for Bioresources and Biotechnology. As the name suggests, its aim is to develop products and technologies that use bioresources to help the community. In cooperation with the three departments (Bioproduction Science, Environmental Science and Food Science), the institute functions as a center for research to support development in the local community.

What's Biotechnology?

A compound word made up of Biology and Technology. This technology is designed to utilize living organisms' different actions on the life of humans and environmental conservation.

For
example...

- ✓ Genetic modification
- ✓ Cloning technology
- ✓ Fermentation
- ✓ Breed improvement
- ✓ Genome editing
- ✓ iPS cells



Laboratory for Gene Function

Applying the analysis of diverse genetic functions of plants in the latest biotechnology

The Laboratory for Gene Function focuses its research on the latest biotechnology which enables precious natural compounds and plant proteins to be made efficiently by plants, using the diverse genetic functions of plants. At the same time, it aims to nurture top level researchers and technicians.

*genetic engineering,
carotenoids,
transgenic plants*

PLANT GENE TECHNOLOGY
Associate Professor
Miho TAKEMURA

Bioproduction of
useful carotenoids
by genetic
engineered *E. coli*
and plants.

*Plant
Genetic engineering*

PLANT GENE TECHNOLOGY
Associate Professor
Masashi MORI

Elucidation and
utilization of plant
function.

*carotenoids, isoprenoids,
synthetic biology,
pathway engineering,
Escherichia coli*

METABOLIC ENGINEERING
Professor **Norihiko MISAWA**

We construct transgenic
plants, which are beneficial for
human health, using
carotenoid biosynthesis genes
(pathway engineering).

Laboratory for Plant Cell Technology

Committed to the useful plant development using tissue culture and genetic modification technologies

At this laboratory, researchers work on the development related to sweet potatoes in which the starch composition has been changed with genetic modification techniques, or rice plants that can be grown even on infertile land. In addition, researchers use tissue culture techniques to conduct research on garden plants as part of their plant biotechnology-driven useful plant development.

*Plants,
Iron deficiency,
Problem soils*

PLANT CELL TECHNOLOGY
Professor
**Takanori
KOBAYASHI**

Understanding the
plant iron uptake to
produce improved
crops.

*Protease,
Arabidopsis thaliana,
Oryza sativa,
carnivorous plants*

PLANT PHYSIOLOGY
Associate Professor
Tatsuro HAMADA

Elucidation of
physiological functions
of secreted proteases
in plants.

*plant tissue culture,
sweet potato, ornamental plants*

PLANT CELL TECHNOLOGY
Associate Professor **Motoyasu OOTANI**

Improvement of sweet potato and
ornamental plants using plant
tissue culture.

DNA Application Technology Education Center

This center cultivates biotechnologists and DNA analysts who have the skills for genome DNA analysis of living organisms, the skills for analysis of genetic information, and the skills for genetic manipulation.

*sweet potato, starch,
gene, genome editing*

PLANT GENE TECHNOLOGY
Assistant Professor
Osamu NAKAYACHI

I believe that the sweetpotato will save the earth with biotechnology in the future.



A center for research with endless possibilities, with its roots in the community

Message

Head of the Research Institute for Bioresources and Biotechnology
Professor **Shigeyuki KAWAI**

One of the features of Ishikawa Prefectural University is the Research Institute for Bioresources and Biotechnology. It consists of four laboratories and one center, which focus on research and development on various topics such as plants, microorganisms, genes and the environment, with a number of these research topics being expected to lead to the solution of problems on a global scale. In addition, the institute is also active in creating new industries in cooperation with research institutes and local companies.



Laboratory for Applied Microbiology

Seeking possibilities of microorganisms, we develop food products from the viewpoints of health and food safety.

At this laboratory, we explore the possibilities of microorganisms – those tiny beings that have such a deep involvement in our lives in a range of areas such as the field of food. Our research focuses on making the most of microbial biotechnology to develop functional foods with health and food safety in mind, as well as the establishment of food safety management technologies.

*Biosynthetic engineering,
Plant secondary metabolite,
alkaloid,
Fermentation*

APPLIED MICROBIOLOGY
Associate Professor
Hiroichi MINAMI

*E. coli transcription,
fermentative production*

LABORATORY OF APPLIED MICROBIOLOGY
Lecturer
Akira NAKAGAWA

Interpretation of E. coli transcription by DNA sequence.

*Lactic acid bacteria,
polysaccharide*

LABORATORY OF APPLIED MICROBIOLOGY
Assistant Professor
Chiaki MATSUZAKI

A friendly relationship between lactic acid bacteria, saccharides and human.

Plant alkaloid production by microbial fermentation.

Laboratory for Environmental Biotechnology

Studying a technology enabling effective use of microorganisms toward the establishment of a renewable resource society.

From the perspective of environmental problems, a departure from a society dependent on fossil fuels and the establishment of a renewable resource society are required. At the Laboratory for Environmental Biotechnology, research is focused mainly on the production of biofuels and breakdown of persistent compounds toward the establishment of such 21st century society.

*bioenergy, methane,
cellulose, microbe,
next generation sequencer*

ENVIRONMENTAL MICROBIOLOGY
Assistant Professor
Yasunori BABA

Bioenergy production from waste by using microbe.

*waste management,
material cycle,
biomass*

ENVIRONMENTAL SYSTEM ENGINEERING
Lecturer
Takasei KUSUBE

Think about effective use of waste.

*Environmental microbiology,
Marine macroalgae, Biorefinery*

ENVIRONMENTAL MICROBIOLOGY
Professor **Shigeyuki KAWAI**

Utilization of marine macroalgae by using microorganisms.

A library filled with specialist books right through to magazines, also available for public access

The library has approximately 88,000 books and paperbacked books, and 1,400 magazine and journal titles centered on the specialist areas of nature, agriculture, food and biotechnology, as well as history, humanities and sociology. The center's computers can be used to search not only the University's collection but also the collections of libraries in Ishikawa Prefecture and other university's libraries, and thus items not on-site can be interloaned. The Library is open to the local public, so free access is also given to those who are not the student of the Ishikawa Prefectural University.

Weekdays: 9:00-19:00

9:00-17:00 during the period below.
Summer vacation
Winter vacation
Spring vacation

Saturdays: 9:00-17:00

Closed

Sundays, public holidays
Year-end and New Year holidays
Special inventory days



Encounter humanity, the world
and new aspects of yourself

Message

Head of the University Library

Professor Tomoko SHIMMURA

How you spend your time at college can change your life. At the University Library, you can read and learn about human wisdom and various lives, which will make you think how you can live your own life in this unpredictable age. By reading books, you will know the wonder of science, the diversity of our world, the pain and joy of life—which will give you power to take a big step into the new world after you graduate.



In a relaxing space with plenty of sun, you can enjoy reading!

Comfortable private study space!

At private study space by large windows, students can concentrate on studying in bright and quiet environment. Students have quality time here in their own way, writing assignments, preparation and review, or reading books or magazine they like on a sofa to unwind themselves.

Dear local residents

If you are 15 or older and living, commuting to school or work in Ishikawa prefecture, you can use our library.
If you borrow a book, please bring your ID.



I'm making progress in my study!



Approx. 88,000 books!

Besides being a well-stocked library, Ishikawa prefecture's only one agricultural university draws attention from outside the university for its large number of specialized books that cannot be found anywhere else.



Convenient for searching books!



Plentiful papers and literature!

Papers contained in various academic magazines and annals are efficiently searched out and fully used through our academic paper database, helping students as reference literature for their researches.



Coordinators that connects University, companies and research institutions

We believe that one of the major roles of our University is to cooperate with local government and related organizations as well as local companies, to promote the development of new businesses and new products. The objective of the Scientific Cooperation Center for Industry, Academia and Government is to promote industry-academia-government cooperation and to contribute to the community for greater links with the local community and local companies.



Let's revitalize local communities by everyone's ideas and plans.

Message

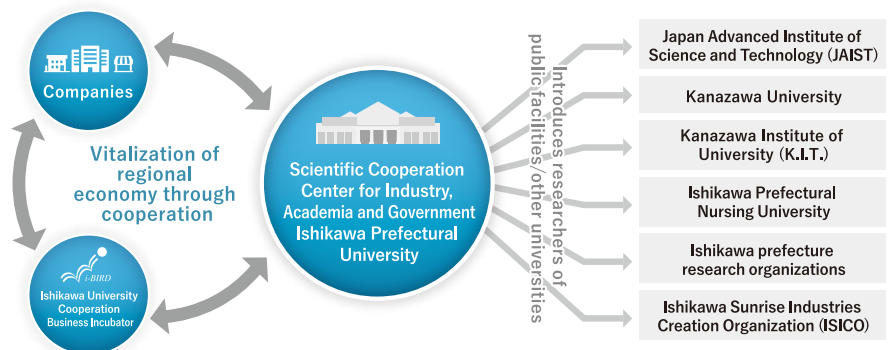
Head of the Scientific Cooperation Center for Industry, Academia and Government
Professor Toshiki ENOMOTO

Promoting local community contribution such as new business creation and new product development in collaboration with local companies, local governments and related organizations is one of the major missions of our university, which is a public university. This center was established in 2007 for the purpose of promoting the contribution. The center's specific activities are planning and coordination, consultation services, and cooperation support related to collaboration with companies, other universities, research institutes, administrative agencies, etc. The center also conducts open lectures, sending of specialists including professors, and public relations. In addition, we promote various coordination and support activities by collaborating with Ishikawa University Cooperation Business Incubator "i-BIRD".



Cooperation centering around Scientific Cooperation Center for Industry, Academia and Government

As the point of call for questions and requests from companies and other organizations, we aim to gain a clear understanding of the request and to arrange the most suited university researcher to solve the problem, or otherwise refer the client to researchers at public testing institutes or other universities. In addition, in cases where we believe local government involvement is also necessary, we coordinate this process. Through our cooperation with the neighboring Ishikawa University Cooperation Business Incubator i-BIRD, we are involved in a range of coordination and support activities.



What's i-BIRD?

It is a facility designed to utilize research outcome of Kanazawa University, Japan Advanced Institute of Science and Technology, Kanazawa Institute of University, Ishikawa Prefectural University and others, as well as to support activities of enterprises and other organizations who aim to create new businesses through joint research with the universities.



New products were born through cooperation with Scientific Cooperation Center for Industry, Academia and Government!

We developed a product using ANP71 lactic acid bacterium strain, which was found through industry-academia-government cooperation.



Useful strain was identified from lactic acid bacteria contained in "Aji no narezushi (fermented horse mackerel)," Ishikawa's specialty.

notono Frozen Yogurt

noto-cho Fureai Kosha
Ishikawa Prefectural University
Kanazawa University
Industrial Research Institute

ANP71,

a sweet fermented drink made with rice malt and lactobacillus
Fukumitsuya Sake Brewery
Ishikawa Prefectural University
Kanazawa University Industrial Research Institute
Fukumitsuya Sake Brewery



I was moved to hear a story behind the development from a professor who is actually involved in product development!



ENJOY! CAMPUS LIFE!

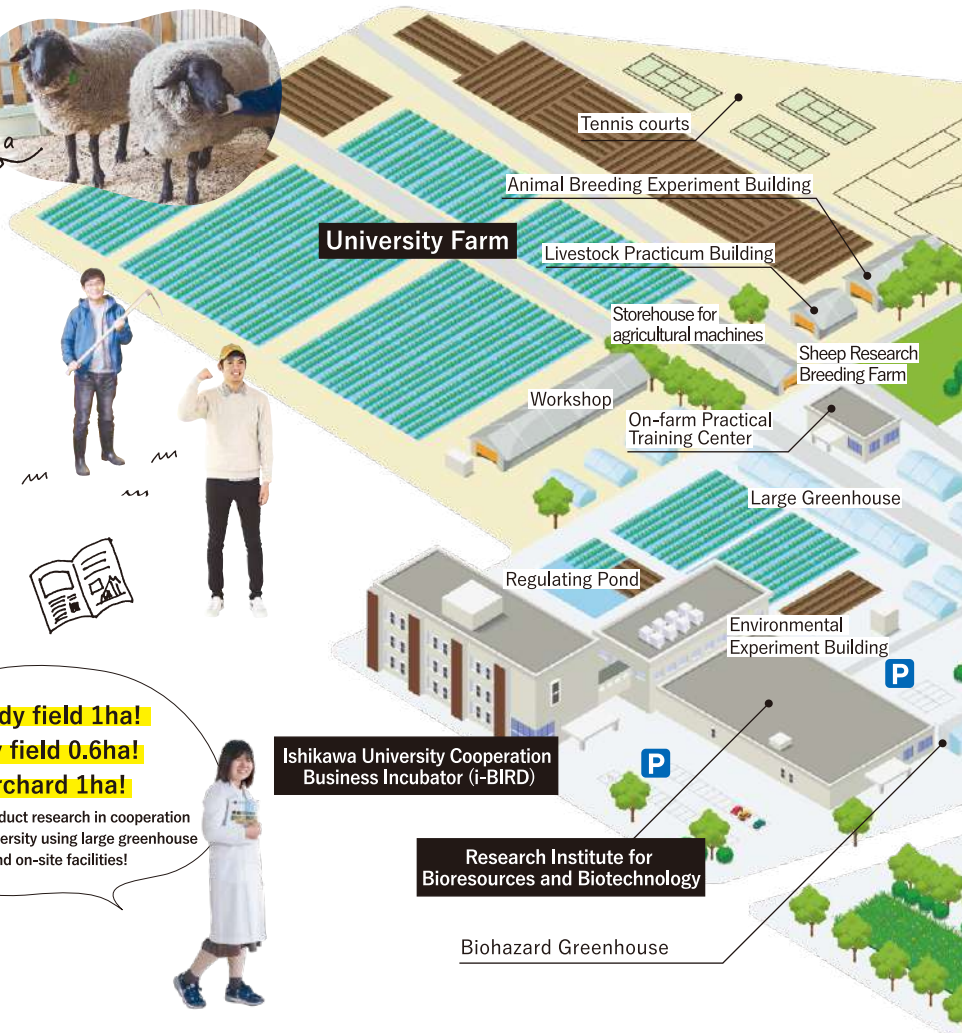
CAMPUS GUIDE

Well-equipped campus supports student learning.



Paddy field 1ha!
Dry field 0.6ha!
Orchard 1ha!

We can conduct research in cooperation with the university using large greenhouse and on-site facilities!



University Farm



Greenhouse



Research Institute for Bioresources and Biotechnology

This is the base for fundamental research of biotechnology.



Ishikawa University Cooperation Business Incubator

Researchers aiming to start a business and companies engaged in research and development in cooperation with the university carry out their activities here.



Information Processing Laboratory

This lab is used for information processing classes and, when not in use, free access is given to students until 22:00.



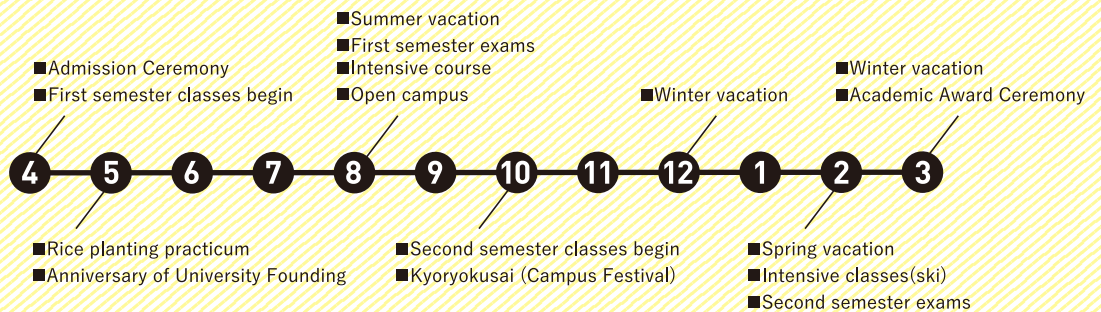
Graduate School Buildings

The base for graduate school fully equipped with the latest analysis devices, etc.

ENJOY! CAMPUS LIFE!

CAMPUS CALENDAR

Boost exchanges across departments and beyond academic years.



Softball Meet and Round-Table Talk on Food are held to deepen exchange beyond departments and whether student or teaching staff.

Campus Festival is the main event led by the students! A variety of events and research presentations are held.

We're not always doing research!

Clubs and circles are active. Besides sports clubs, maniac activities of "Ishiru Circle," "Water Tank Club," etc. are interesting and you could experience those only at Ishikawa Prefectural University!



Ground



Gym



Large Lecture Hall

Equipped with an AV system, classes may include audio and/or visual material for an even better classroom experience.



Student Cafeteria

Vegetables harvested in University Farm are sometimes included in menu.
Daily set lunch is 400 yen!



Different kinds of rice bowls are offered every day! Recommended!

Campus area is as wide as **134,000m²!**

So spacious with many facilities!! In fact, there are some places I haven't been to. haha



Student Lifestyle

We asked senior students about their apartment rent and actual living cost that you might want to know!

Living alone **65%**

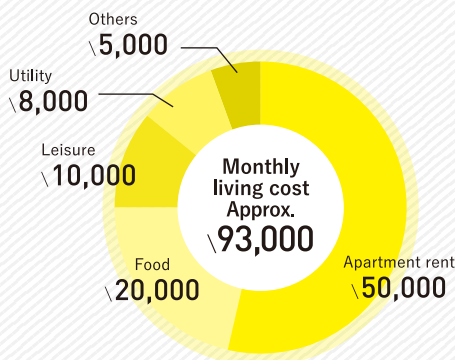
Living in parent's house **35%**

On my days off, I'm engaged in club activities, part-time job and home assignment. Sometimes I go out and once in a while I just stay home and chill out... I'm enjoying living alone going to see a movie or eat with my friends, and relaxing at hot spring!



Mayu HO
3rd year, Department of Environmental Science
Graduated from Niigata Prefectural Tsubame Secondary School

I'm having my fill of campus life blessed with fun friends and good teachers.

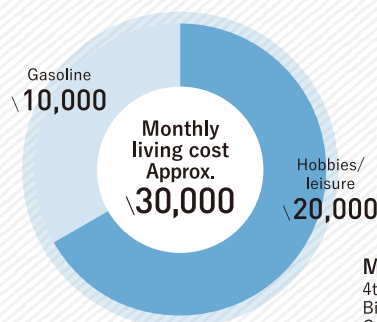


I help my parents doing agricultural work and also do part-time agricultural job at farmers I know. I'm enjoying freewheelingly beating a drum for enjoyment and visiting good restaurants in the city of Nonoichi where our campus is located!



Mitsuki MIYAMAE
4th year, Department of Bioproduction Science
Graduated from Ishikawa Prefectural Kanazawa-Nishi High School

I'm enjoying part-time job, my hobbies and studying freewheelingly.



ENJOY! CAMPUS LIFE!

NONOICHI GUIDE

Vicinity Map
Recommendations
to make your student life
pleasurable

Nonoichi City was placed
the **18th** in Japan
in "Liveability Ranking"!!
*Toyo Keizai Inc. 2018

Local stalls lined up along
the street sets the mood for
summer bon dance,
Jonkara Festival!



Photo: Nonoichi City
Nonoichi Tsubaki Matsuri
(Camelia Festival)



Photo: Nonoichi City
Nonoichi Jonkara Festival



There's a shuttle bus
Nonki's bus stop in front of
Ishikawa
Prefectural University!



Take Notti and Nonki
to move around
the city of Nonoichi!



Notti is a convenient community bus that operates on 4 routes inside the city. Nonki, a shuttle bus, is good for commuting as it goes from JR Nonoichi Station directly to the bus stop in front of the university.

Attention!



osusume spot

02

Learning Square Nonoichi Kaleido

Just opened in 2017! It's a new-type lifelong learning center, a combination of Nonoichi City Library and Citizen's Learning Center.

There are many
self-learning spaces
in Nonoichi Kaleido.
You can study
in a quiet
environment!



✨

osusume spot

03

eclatant

Inside the shop filled with sweet smell, baked goods in which Ishikawa Prefectural University was involved are sold as well as cakes!



COSTCO

It's fun just looking at clothes, detergents, general merchandise, as well as food at COSTCO. You'd better share your purchase with your friends. You can't do without it for house parties with your classmates or circle members!

JR Hokuriku Main Line

01

Route 8

Hokutetsu Driving School



Gokurakuyu

Ootoya Nonoichi Shop

02

CHEZ COUPLE



04

Nonoichi City Hall

07

STARBUCKS

TSUTAYA
Meibundo Books



03

kirindo

Hachiban Ramen

09

kusuri no Aoki

Orchard



Ishikawa Prefectural
University

AEON Nonoichi-Minami Store

10

Home Center Musashi



MOS BURGER

k's Denki

KANAZAWA GUIDE

Petit

This is the taste of Kanazawa!
First try a fresh sashimi rice bowl
at Ohmi-cho Market!



JR Kanazawa Station

Kanazawa's gateway with Tsuzumi-mon Gate built in the motif of tsuzumi, a traditional musical instrument used in Noh play.



Kenrokuen

One of the Japan's three most beautiful gardens developed by the chief retainers of the Kaga clan.



21st Century Museum of Contemporary Art, Kanazawa

A contemporary art museum which has been much talked about recently and earning plenty of attention at home and abroad.



Higashi Chaya District

The area with latticed bay windows is designated as National Preservation Districts for Important Traditional Buildings.

04 osusume spot



NiOR

An authentic bakery shop whose owner received professional training in Italy and France. Breads are baked in wood-fired oven.

05 osusume spot



Taiyaki Shop Tsuchiku

Excellent taiyaki, fish-shaped pancake with sweet bean paste filling, made by a Japanese pastry chef seasoned with Noto salt and Ohno soy sauce!

06 osusume spot



HUM&Go#

Butter chicken curry and peanut soft serve are popular in this stylish shop. You can use an outlet to write a report!

07 osusume spot



Stone oven bakery Fresh Bake

A large artisanal bakery across Nonoichi City Hall. You can buy and eat breads at a table inside the shop or on the terrace.

157

GO!GO!



Nonoichi Station

08 osusume spot



ACROSSPLAZA

You can get sundries, home electronics, bicycle and everything here in this convenient mall which includes a supermarket and a drugstore!

06

Nonoichi kodai-mae Station



I'm enjoying my university life here with a lot of cafes!



Tsuchiku's taiyaki is exquisite!
They sell daifuku
(sweet bean paste wrapped around with soft mochi)
and shaved ice as well!



Otomaru Station

09 osusume spot



Botanical Deck

The stylish and elaborate interior of this must-visit café for girls is definitely SNS worthy! Because the spatial design of seating is different from one another, you'll want to come over and over!



10 osusume spot



AEON Nonoichi-Minami Store

Food sales floor is open 24 hours! You can also find a 100-yen shop and clothes here. So convenient as it's located near the university.

Shijima Station





Track and Field Club



Fishing Circle



Flower Circle

CLUB

At our university, there are 14 sports clubs,
15 cultural clubs and a Student Council.
Why don't you join our activities and make new friends and memories?

Sports Clubs

Cultural Clubs

Let's enjoy!



Swimming Club



Biotope Study Group



Japanese Archery Club



Concert band



Futsal Club



Cycling Circle



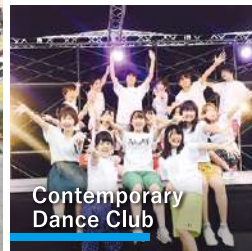
Creative Activity Circle



Gardening Club



Baseball Club



Contemporary Dance Club



Occult studies Club



Student Agriculture Support team "Aguri"

Satoumi Circle

Soccer Club

Pop Music Club

Women's Volleyball Club

Women's Basketball Club

Men's Volleyball Club

Men's Basketball Club

Tea Ceremony Club

Tennis Club

Water Tank Club

Ishiru Circle

Columbus Egg

Student Council



Let's enjoy planning and managing Kyoryokusai, the autumn university festival, open campus, "Gathering for grilled meet" and many other amusing events!

Student Council manages circles and plans and manages various events. We hold "Round-Table Talk on Food" on the Anniversary of University Founding so teaching staffs and students enjoy eating together! Furthermore, in October we set up Kyoryokusai Executive Committee to bring the festival to life under students' own power! Regardless of academic year, we are getting on well with activities in a homey atmosphere!

Takato IHARA

3th year,
Department of
Bioproduction Science



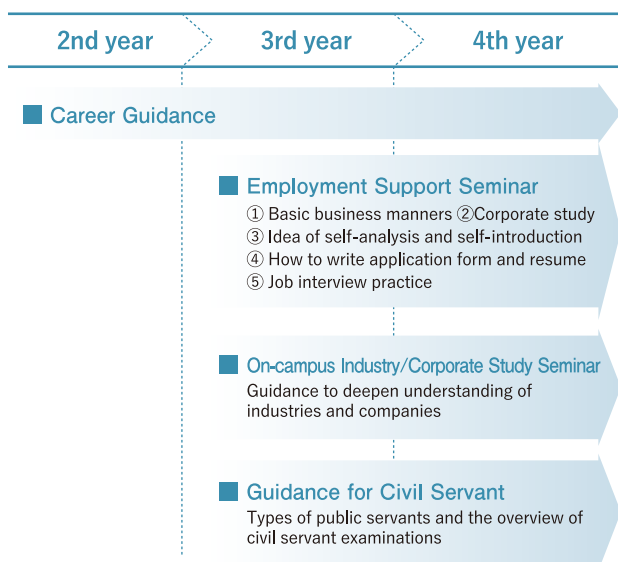
Badminton Club

Kids Volunteer

The Career Center (Employment Support Office) has a solid support system in place so individual students can follow the path they wish to pursue. Along with that, it provides “career education” for students to acquire knowledge, skills and attitude to work about the occupation as well as to foster their ability to voluntarily choose their course to take. Every year our university receives a lot of information on job openings at companies and other organizations in the agriculture, environment, food, biotechnology and other industries. Corporate research and other approaches for the early acquisition of job offer are also ongoing. Job seekers’ employment rate remains nearly 100% every year. We will further enhance the support system and continue giving full support to job seekers and all our students doing their best.

Employment Support Program

*Schedule is subject to change.

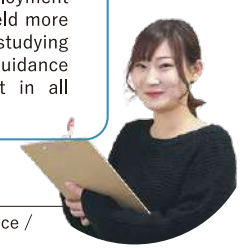


Can you tell me?

Q. I'm at a loss as to when and what I should do...

A. Don't worry! The Career Center will help you in choosing, your career path together.

Besides individual consultation, employment support seminars and guidance are held more than 20 times a year. From the way studying industries and companies to direct guidance for job interview, you'll get support in all aspects from an early stage.



Rina HIRAYAMA

Graduated in 2018, Department of Food Science / Japan Food Research Laboratories

Q. I'm worried about if I can do well with all the details, for example, how to write an application form.

A. Attentive correction, guidance and realistic practice helped me gain confidence!

In addition to practical seminars, they provide you with careful correction and guidance when actually writing it. They corrected my applications again and again; it helped me a lot. They also gave me an opportunity of hands-on practice with mock interviews tailored to the companies I was interested in, so I was able to have actual interviews with confidence.



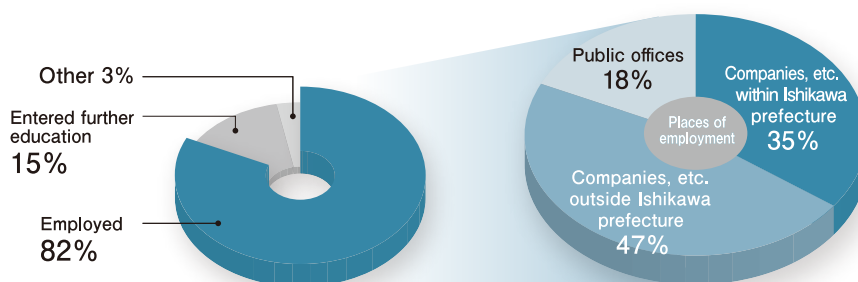
Ritsuki TAGASHIRA

Graduated in 2018, Department of Bioproduction Science / National Federation of Agricultural Cooperative Associations (ZEN-NOH) Ishikawa Prefectural Headquarter

I hope you'll do your best to spend a fulfilling student life with study, circle activities, part-time jobs, volunteer activities and the like, which become the contents you'll actually fill in your application form and resume.

Career Paths

2018 University graduates



Employment rate of job seekers

(* Academic year of 2018)

99.1%

Admissions Information

Number of students admitted

Academic year of 2020

		Admission quota	Number of students admitted			
			General entrance exam		Exam for recommended candidates	
			1st semester	2nd semester	Exam for recommended candidates A	Exam for recommended candidates B
Faculty of Bioresources and Environmental Sciences	Department of Bioproduction Science	40 persons	20 persons	12 persons	6 persons	2 persons
	Department of Environmental Science	40 persons	20 persons	12 persons	6 persons	2 persons
	Department of Food Science	40 persons	20 persons	12 persons	6 persons	2 persons
Total		120 persons	60 persons	36 persons	18 persons	6 persons

*Exam for recommended candidates A: Course taken by the candidate is not specified.
Exam for recommended candidates B: Course taken by the candidate is specified.

*Those graduated from high schools within Ishikawa prefecture are eligible for A and B.

Enrollment fee

Academic year of 2019

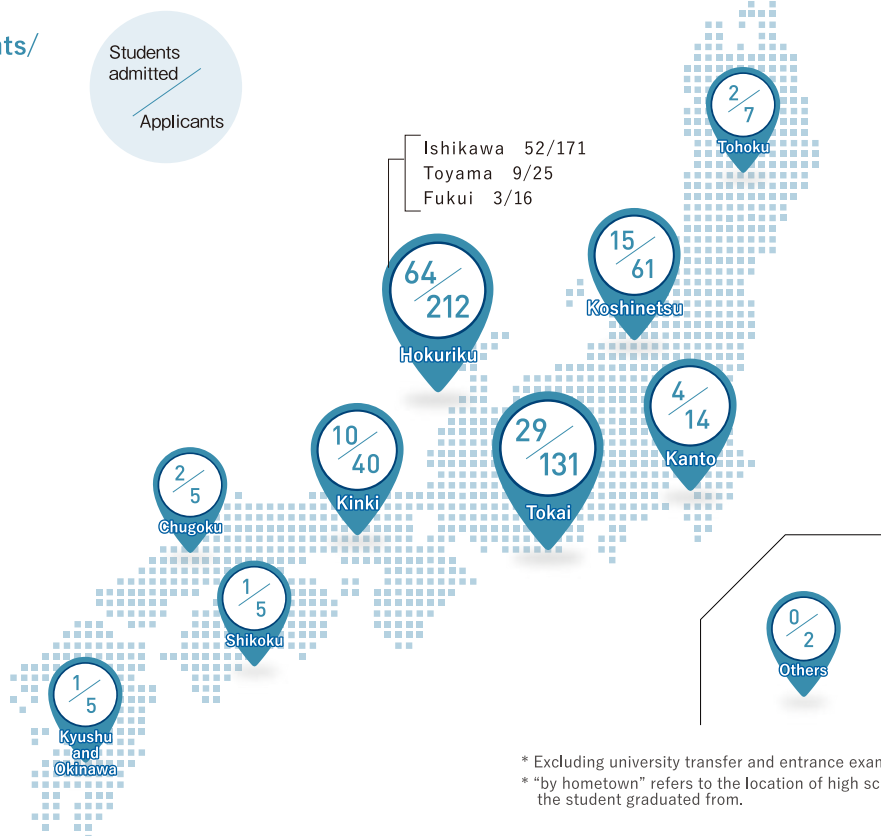
Admission fee	Those from Ishikawa prefecture: 282,000yen Other: 423,000yen
Tuition	535,800yen/year 1st semester: 267,900yen/2nd semester: 267,900yen

*In addition to the above, supporters' association fee, alumni association fee and other expenses will be required.

*Those from Ishikawa prefecture is defined as those who have been residing within Ishikawa prefecture since April 1 of the previous year of university enrollment or before.

Number of applicants/ students admitted by hometown

Academic year of 2019



* Excluding university transfer and entrance exam for graduate school

* "by hometown" refers to the location of high school, etc. the student graduated from.

Access



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