

Internship Program for Young Researchers in the Fields of Bio-industrial Sciences

University of Tsukuba

Last update: August 1, 2017

Outline of program

Participating students

will attend courses related with bio-industrial sciences offered by MSc programs in Graduate School of Life and Environmental Sciences

will earn totally 12 academic credits if students attend all classes and pass final examination.

will attend a seminar class which is opened specifically for this program and exchange knowledge and share experience regarding bio-industrial sciences with students from different countries.

Number of Participating Students: 30

Partner Universities:

U. Putra Malaysia (**UPM**), U. Teknologi Mala (**UiTM**)

Bogor Agricultural U. (**IPB**), U. Padjajaran (**UNPAD**)

Khon Kaen U. (**KKU**), Mae Far Luang Univ. (**MFU**), Kasetsart U. (**KU**), Maejo U. (**MJU**), Chiangmai U. (**CMU**),

U. of the Philippines (**UP**), Central Luzon State U. (**CLSU**), Central Bicol State U. of Agri. (**CBSUA**)

Vietnam National U. Agri. (**VNUA**), Thui Loi U. (**TLU**), Nong Lam U. (**NLU**)

National U. of Laos (**NUOL**)

Royal University of Agriculture, Cambodia (**RUA**)

Yangon U. (**YU**), Pathein U. (**PU**)

Bangladesh Agricultural University (**BAU**)

China Agri. U. (**CAU**), Jilin U. (**JU**), National Taiwan U. (**NTU**), National Pingtung U. of Sci. and Tech. (**NPUST**),


Course Schedule


Fall semester module A (5 weeks, Oct.2 – Nov.1)


	Mon	Tue	Wed	Thu	Fri
1 (0840-0955)					Introduction to Food Science
2 (1010-1125)					
3 (1215-1330)		Appropriate Use of Genetic Resources	Introduction to Sustainable Agriculture in Rural Areas	Concept of Sustainability Index	
4 (1345-1500)					
5 (1515-1630)	Debating Current Topics in Life Science and Engineering				
6 (1645-1800)					

Fall semester module B (5 weeks, Nov.2 - Dec. 25)

	Mon	Tue	Wed	Thu	Fri
1 (0840-0955)		Food Functionality			Introduction of Bio- Resource
2 (1010-1125)					
3 (1215-1330)		Appropriate Use of Genetic Resources	Introduction to Sustainable Agriculture in Rural Areas	Concept of Sustainability Index	
4 (1345-1500)					
5 (1515-1630)	Debating Current Topics in Life Science and Engineering				
6 (1645-1800)					

 Courses offered in Master's program in Professional Training in International Agricultural Research

 Courses offered in Master's program in Life Science Innovation

 Courses offered in Master's program in Bio-system Studies

Course information

Appropriate Use of Genetic Resources <2 credits>

<Course outline> In order to develop a sustainable farming system, the knowledge on appropriate use of the plant/animal genetic resources are essential. Based on the modern genetics and breeding theory, the present lecture covers following topics: 1) The methodology to explore, preserve and utilize local genetic resources, 2) The methodology to introduce suitable crops or new varieties to the local environment.

<Instructors> Yoichi Yamaoka, Ryo Osawa, Hitoshi Miyazaki, Atsushi Asano, Atsushi Tajima, Junichi P. Abe, Yasuhiro Ishiga, Yasunori Fujita, Makoto Kawase

Introduction to Sustainable Agriculture in Rural Areas <2 credits>

<Course outline> This graduate course provides concepts and practices of sustainable agriculture in rural areas covering soil structure and fertility, sustainable water management, chemical application systems, site-specific management and decision support systems. The participatory rural appraisal for sustainable agricultural practices, supply and value chain analysis in agribusiness, and ICT planning in agriculture are core discussion topics. In addition, an innovative research project is also included for sustainable agricultural practices.

<Instructor> Ahamed Tofael

Concept of Sustainability Index <2 credits>

<Course outline> This graduate course focuses on sustainability indicators covering maximum sustainable yield, ecosystems and development of sustainability indicators. The core topics include problem solving approaches, sustainability indicators in practices, project scenarios, logical frame works, concept diagrams, stakeholder's participation and coalition, and systematic sustainability analysis. A project is included to develop the indices to demonstrate contemporary regional issues: Environmental Sustainability Index (ESI), Food Security Index, Vulnerability and Copping Strategy Index. Furthermore, graduate students will be assigned to develop a logical frame work for their research as an exercise of system approaches.

<Instructor> Ahamed Tofael

Introduction to Food Science <2 credits>

<Course outline> In this course, students will learn about food science, based on physical, chemical, biochemical, biological and engineering approach from fundamental level to cutting-edge applied science technology.

<Instructor> Mitsutoshi Nakajima, Hiroko Isoda, Kazuichi Sakamoto, Marcos Antonio das Neves, Sosaku Ichikawa

Introduction to BioResources <2 credits>

<Course outline> Students are expected to deeply understand the importance of bioresources and roles of resource centers in promoting life science innovation. In order to achieve the aim, professors who are responsible for experimental animal, experimental plant, cell bank and microorganisms in RIKEN BRC will give lectures on their resources including technologies and related information.

<Instructor> Masatomo Kobayashi, Yukio Nakamura, Moriya Ohkuma, Kuniya Abe, Tadayoshi Hayata

Food Functionality <2 credits>

<Course outline> Functional Foods are foods that have, in addition to their nutritive value, beneficial effect on health. This course discusses functional foods and their effect on cancer, regulation of metabolism including the mechanism of their effects.

<Instructor> Hiroko Isoda, Mari Yamamoto, Michel Larroque, Myra Orlina Villareal

Debating Current Topics in Life Science and Engineering <2 credits>

<Course outline> This course provides students opportunity to conduct oral presentation and debate regarding issues related with bio-industries such as food production, farm management, conservation of soil and water resources. Through the oral presentations and debate focusing on bio-industrial issues in each countries, students are expected to deepen knowledge about situation of global bio-industry and come up with some ideas to contribute for solutions.

<Instructor> Nakao Nomura

Overall Program Schedules

Date	
– September 10	1. Preparation for departure 2. Application for VISA (VISA category: short-term) at Japan Embassy
September 25 – 28 September 29, October 1	Arrival at Tsukuba
September 29 October 2	Program orientation
October 2 – December 25	Participation in courses offered by Graduate School of Life and Environmental Sciences (see ‘Course Schedule’ and ‘Course Information’)
December 26	Wrap-up meeting
December 27 -	Departure from Tsukuba

Scholarship entitlements:

1. Tuition fee at University of Tsukuba as special study students
2. Monthly stipend (80,000 JPY/month) for 3 months.

Application documents:

1. Application form ([PDF](#), [MSword](#))
2. Academic transcript issued by home university
 - MSc students, Researcher: transcript of bachelor degree
 - PhD students: transcript of both Master's and bachelor degree

Scanned copies of application form and academic transcript have to be submitted via email to **Dr. Gwen M. Anuevo** (anuevo.manero.ke@un.tsukuba.ac.jp)

Students support in University of Tsukuba

Program provides

- an internet account to use university WiFi for every students
- a student status as 'SPECIAL STUDY STUDENT' "Tsukuba Short-term Study Program Student (TSSP student)" with student ID card which can be used to access to university library, ~~computer room and many other university facilities.~~
- a single room at student dormitory (approximately 36,000 JPY/month, students has to cover the room rent using the scholarship.)

Conditions for Qualification:

Participating students;

- must be a graduate student at a partner university in the period from October, 2017 until December 31, 2017.
- are not receiving any other scholarship from Japanese government from October, 2017 until December 31, 2017.
- must enroll into University of Tsukuba as a special study student at Graduate School of Life and Environmental Sciences.
- must attend all the courses offered in this program (see 'Course Schedule' and 'Course Information').
- must arrive at University of Tsukuba between ~~September 25th and September 28th~~; **September 30 and October 2**, must leave University of Tsukuba ~~between~~ **after** December 27th. **Duration of stay in Japan must not exceed 90-day including arrival and departure day.**

Program does not

- **make arrangement for participating students to conduct specific research studies or experiments in any laboratories in University of Tsukuba.**

- provide opportunity for participating students to attend any other courses (aside from those in the course schedule) in University of Tsukuba.

Contact

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