

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

University of Tsukuba

Last update: December 23, 2017

Number of Participating Students: 15

Course Schedule

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

	Mon	Tue	Wed	Thu	Fri
1 (0840-0955)					Introduction to Food Science (Innovation Medical Research Institute 5F511)
2 (1010-1125)					
3 (1215-1330)		Appropriate Use of Genetic Resources (F106)	Introduction to Sustainable Agriculture in Rural Areas (F106)	Concept of Sustainability Index (F106)	
4 (1345-1500)					
5 (1515-1630)	Debating Current Topics in Life Science and Engineering (G501)				
6 (1645-1800)					

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

	Mon	Tue	Wed	Thu	Fri
1 (0840-0955)		Food Functionality (Innovation Medical Research Institute 5F511) Nov. 14, 21, Dec. 5, 6, 12 *Dec-6:1345-1630			Introduction of Bio-Resource (Innovation Medical Research Institute 5F511) Nov. 17, 24, Dec. 1, 8, 15, 22
2 (1010-1125)					
3 (1215-1330)		Appropriate Use of Genetic Resources (F106)	Introduction to Sustainable Agriculture in Rural Areas (F106) *Dec-6: no class	Concept of Sustainability Index (F106)	
4 (1345-1500)					
5 (1515-1630)	Debating Current Topics in Life Science and Engineering (G501)				
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

[Local map](#)

[Detail information about University Loop Bus \(Route C10 Bus\)](#)

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 plan/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 Coping 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 and 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 29 - October 1	Arrival at Tsukuba
October 2, 10:30	Program orientation (PDF file of presentation slides) G501
October 2 – December 25	<p>✓Oct-10, 15:15 – 18:00, G501 1st class for Debating Current Topics in Life Science and Engineering <guideline and instruction for preparation> Country report (Bangladesh, Cambodia, Indonesia, Malaysia, Philippines, Thailand, Vietnam)</p> <p>✓Oct-12, 16:00 – 17:00, G501 1st scholarship delivery</p> <p>✓Oct-13, after ‘Introduction to Food Science’, Tsukuba Center Payment for dorm fee (cash deposit and room rent for October)</p> <p>✓Oct-16, 18:00 – 20:00 G401 Reception dinner</p> <p>✓Oct-18, 11:30 – 12:15 Laboratory of Advance Research A -107 Cultural Performance by Students Group from Universiti Putra Malaysia (check the Local map for location of the building with green icon)</p> <p>✓Oct-23, 15:15 – 18:00, G501 Debating Current Topics in Life Science and Engineering <Vietnam> <guideline, schedule and presentation files></p> <p>✓Oct-30, 14:00 – 17:00 Debating Current Topics in Life Science and Engineering <Thailand> <guideline, schedule and presentation files></p> <p>✓Nov-1, 15:30 – 16:00, G501 2nd scholarship delivery</p> <p>✓Nov-13, 15:15 – 18:00 Debating Current Topics in Life Science and Engineering <The Philippines> <guideline, schedule and presentation files></p> <p>✓Nov-20, 12:00 – 15:00 Debating Current Topics in Life Science and Engineering <Malaysia> <guideline, schedule and presentation files></p> <p>✓Nov-28, 29, 30 No classes due to university entrance exam</p> <p>✓Dec-1, 08:40 – 11:25 Cancellation of ‘Introduction of Bio-Resource’ → Make-up class on Dec-8, 08:40 – 11:25</p> <p>✓Dec-1, 15:30 – 16:00, G501 3rd scholarship delivery</p> <p>✓Dec-4, 15:15 – 18:00 Debating Current Topics in Life Science and Engineering <Indonesia> <guideline, schedule and presentation files> (After the debate class, there will be a guidance about study tour on Dec-9 (about 15-min))</p> <p>✓Dec-9, 10 Study tour on Bio-industries in Japan, schedule Rice wine brewery (Nikko), Silk mill (Tomioka)</p> <p>✓Dec-11 15:15 – 18:00 Debating Current Topics in Life Science and Engineering <Cambodia> <guideline, schedule and presentation files></p>

	<p>✓Dec-18 15:15 – 18:00 Debating Current Topics in Life Science and Engineering <Bangladesh> <guideline, schedule and presentation files></p> <p>Dec-25, 17:00 – 20:00 Wrap-up meeting <Lounge at 4-F in G building></p> <p>Dec-26 – 31 Departures (schedules)</p>
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 “Tsukuba Short-term Study Program Student (TSSP student)”
- 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 attend all the courses offered in this program (see ‘Course Schedule’ and ‘Course Information’).
- must arrive at University of Tsukuba between September 28 and October 2, must leave University of Tsukuba 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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