

International Veterinary and Conservation Medicine Education Program (IVCMEP)

to foster the next generation of human resources to bridge between Africa and Japan

Syllabus 2024 for ONLINE students

Introduction

This program is a student exchange program among Hokkaido University (HU), the University of Zambia (UNZA) and other African universities with following features.

1) Promotion of Conservation Medicine

This program is based on the concept of One Health, which considers environmental changes caused by human activities and associated health problems as issues not only for humans but also for animals, ecosystems, and the entire planet.

2) Open for all fields of students

The practice of conservation medicine requires collaboration among diverse specialties as well as international perspectives. We offer a curriculum that allows students from many academic fields to participate.

3) Advanced learning of conservation medicine

Japan has experienced rapid economic growth followed by environmental and health crises and has subsequently overcome most of them with social countermeasures, science, and technology. Training and lectures to learn from the history and current advancing technologies regarding health and environmental management are offered in this programme.

4) Promoting cross-cultural understanding and collaboration

We will also strive to foster an understanding of African and Japanese culture, with the aim of developing human resources who will contribute to building friendly international partnerships between Zambia and Japan, and ultimately between Africa and Japan.

Detailed instruction about the course

- ☐ With completion of no less than three classes listed below, certificate for IVCMEP2023 will be given by Hokkaido University (HU). This will certify the student's competency while giving priority to participate in the proceeding IVCMEP conducted on-site at Hokkaido and other parts of Japan.

1) One class for "Interdisciplinary and Intercultural Studies"

- Watching lecture video series of "Interdisciplinary and Intercultural Studies"
- Participating online interactive sessions with students and professors at Hokkaido University

[Tentative schedule]

- July: Travel Report by UNZA students
 - September: Interactive discussion session with professors at HU
 - September : Travel Report by HU students
- 2) No less than two classes for “Conservation Medicine I&II”
- Select no less than two classes from the list below
 - Each class consists of 8 subjects (or less, yet equivalent to 8 subjects).

☐ The program starts from 1st July 2024 and ends on 31st October 2024.

☐ Outline of each class

1) Interdisciplinary and Intercultural Studies

NOTE: All IVCMEP students are required to watch following lectures

Lectures are given by researchers in Hokkaido Universities and other partner institutions in Japan and African countries.

Class	Subject
1. Interdisciplinary and Intercultural Studies	1) Japanese Language and Culture
	2) One-Health and SDGs
	3) Sustainable Development in Japan and African countries
	4) Recent Topics in Veterinary and Conservation Medicine in Japan
	5) Training on Team Working
	6) Ethics in Interdisciplinary Research
	7) Medical Anthropology
	8) Human Resources for Sustainable Development

2) Conservation Medicine I&II [two credits]

NOTE: Select no less than two classes from the list below .

Each class consists of 8 subjects (or less, yet equivalent to 8 subjects).

**	: Equivalent to 2 subjects
***	: Equivalent to 3 subjects
****	: Equivalent to 4 subjects

Class	Subject
1.	1) Guidance for Chemical Hazard
	2) Environmental Toxicology-1 Trace Elements

Class	Subject
CHCE-I: Field Toxicology & Risk Analysis	3) Environmental Toxicology-2 Food Safety
	4) Veterinary Forensics**
	5) Risk Analysis***
2. CHCE-II: Chemical Analyses	1) Introduction on environmental chemical analysis**
	2) Heavy Metal (including Mercury) Poisoning
	3) Pesticide Pollution and Health
	4) Endocrine Disrupting Chemicals in Wildlife and Human
	5) Lecture on environmental health and environmental monitoring
	6) Lecture on data analysis of LC-MS/MS**
3. CHCE III: Basic Conservation Medicine	1) Pharmacology **
	2) Wildlife Toxicology / Ecotoxicology**
	3) Toxicologic Pathology**
	4) Immunotoxicology **
4. CHCE-IV: Environmental Remediation and Diagnostic Techniques	1) Remote sensing-1 **
	2) Remote sensing-2 **
	3) Environmental Remediation**
	4) Environmental Remediation in Marine Environment**
5. CHCE-V: GIS and satellite remote sensing	1) Basic and practices of GIS -1**
	2) Basic and practices of GIS -2***
	3) Basic and practices of GIS -3***
6. CHCE-VI: Bioinformatics	1) Basic and Multivariate Analysis: Basics and Practices ****
	2) Computational Toxicology Basic of Molecular Docking ****
7. Mechanism, Assessment and Remediation of Environmental Pollution	1) Understanding Plants and Soils - in relation to environmental pollutions **
	2) Impact Evaluation of Development Program **
	3) Environmental Radioactivity and health hazard
	4) Health Science
	5) Remediation of abandoned mine sites **
8.	1) Overview from animal side (host defense)

Class	Subject
Advanced and Comprehensive Studies on Zoonosis Control	2) Medical Entomology
	3) Control of CSF/ASF (Classical swine fever/African swine fever)
	4) Filovirus infection
	5) Control of Brucellosis in Uganda/ Tanzania
	6) Tuberculosis
	7) Toxoplasmosis
	8) African trypanosomiasis
9. Advanced Seminar on Conservation Medicine	1) Principle of biobank and its application**
	2) Zoonosis studies in Zambia: practical use of the biorepository
	3) Relational database
	4) Usage of Next Generation Sequencer****
10. IVCMEP: Conservation Medicine	<p>A free-designed class selected from any 16 subjects from above.</p> <p><u>Notice: On completing this class, 2 credits will be given.</u></p>

Details of each class are subject to change.

Application

Register for the application via the link below.

<https://forms.gle/DnVLtxVBzCTgKVhi7>

Contact

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The latest information is available from our website.

<https://africa.vetmed.hokudai.ac.jp/en/>