

## FOLENS Syllabus

<b>Subject Title:</b> 生物資源循環利用学 [Utilization of Sustainable Biological Resources]							
<b>Subject Category:</b>	Soil Environment	<b>Department</b>	MI	<b>Credit</b>	2	<b>Code</b>	059123
<b>Semester</b>	First/Spring	<b>Day(s)/Period(s)</b>	Mon.4				
<b>Class Format</b>	Lecture			<b>Location</b>			
<b>Instructor</b>	木村 園子ドロテア [KIMURA Sonokodorotea]						
<b>Office</b>				<b>Email</b>	skimura@cc.tuat.ac.jp		

### ■Outline & Target

The main focus of this lecture lies on the nitrogen and carbon flow in the agroecosystem. The environmental impact as well as benefit of agriculture concerning various nutrient flows will be introduced from different aspects. Basic knowledge of soil science and the newest findings concerning carbon and nitrogen flows in agroecosystems will be provided.

### ■Standard

Understand the environmental problems in agricultural production and have an idea how sustainability can be achieved.

### ■Course description

The course consists of three parts: class 1-4 deals with the different methodologies to assess environmental impacts in agroecosystem, class 5-9 discusses the use of different kinds of biological resources as energy and fertilizer, class 10-13 introduces the production and utilization of organic materials in different agroecosystems.

### ■Prerequisites

Basic knowledge on soil science

Basic knowledge on global environmental problems concerning agriculture

### ■Textbook(s)

hand outs at each class

### ■Reference publication(s)

1. Soil science simplified (Neal S. Eash et al. 2008)

Introduction: The soil around us (available at the library)

2. Global Environment Outlook (GEO-4)

(online available)

### ■Evaluation standards

50% attendance, 50% report

### ■Message from instructor(s)

In this lecture, we will understand the principle of sustainable Agriculture from the view point of nutrient cycle.

■ **Course keywords**

Nutrient cycle, Green house gas emission, Life Cycle Assessment, Organic agriculture

■ **Office hours**

After contact

■ **Related URL**

[http://www.tuat.ac.jp/~dorothea/index\\_eng.html](http://www.tuat.ac.jp/~dorothea/index_eng.html)

■ **Language**

English

■ **Last update**

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