

Course number	Name of the Course			Japanese Name	
HE33091	Hygienic Chemistry			衛生化学概論	
Class	Unit	Module	Week	Time	Room
3,4 year	1 unit	Spring A,B	Friday	2 hour	4E Building Lecture Room-1 (606)
Instructors (Office · Tel · email · Office hour)					
Yoshito Kumagai (Environmental Biology · Ext 5133、yk-em-tu@md.tsukuba.ac.jp · Mon~Fri 9:30~17:00)					
安孫子ユミ (Environmental Biology · Ext 3297、yumi.abiko@md.tsukuba.ac.jp · Mon~Fri 9:30~17:00)					
Objectives					
We are exposed a variety of xenobiotics (e.g., drug, environmental chemicals, food components etc.), resulting in increased health risk at higher concentrations. In general, xenobiotics are known to be extensively metabolized to their detoxicated metabolites in the body, whereas some of them undergo metabolic activation by numerous enzymes to yield reactive species involved in tissue injury and development of cancer. In this class, you will understand merit and demerit of xenobiotic metabolisms and cellular adaptive response systems to xenobiotics.					
Language: <input checked="" type="checkbox"/> / <input type="checkbox"/> Japanese、 <input type="checkbox"/> English、 <input checked="" type="checkbox"/> Bilingual					
	Date	Name of instructor	Lecture outline		
1	4/13	Yoshito Kumagai	Understanding outline of Hygienic Chemistry		
2	4/20	Yumi Abiko	Understanding ADME of xenobiotics		
3	4/27	Yoshito Kumagai	Understanding detoxification/excretion of xenobiotics (1)		
4	5/11	Yumi Abiko	Understanding detoxification/excretion of xenobiotics (2)		
5	5/18	Yoshito Kumagai	Understanding metabolic activation of xenobiotics (1)		
6	5/25	Yumi Abiko	Understanding metabolic activation of xenobiotics (2)		
7	6/1	Yoshito Kumagai	Understanding cellular adaptive response to xenobiotics (1)		
8	6/8	Yumi Abiko	Understanding cellular adaptive response to xenobiotics (2)		
9	6/15	Yoshito Kumagai Yumi Abiko	Free discussion		
10	6/22	Yumi Abiko	Free discussion		
Levels for credit needed	We evaluate attendance of the class and the test.				
Text and materials	毒性の科学 (東京大学出版会)、衛生薬学新論 (南山堂) We will prepare a handout for the class.				
Grade evaluation	A+, 90-100; A, 89-80; B, 79-70; C, 69-60.				
Remarks :					