

Course number	Name of the Course			Japanese Name	
HE20053	Practice of Biochemistry			生化学実習	
Class	Unit	Module	Day of Week	Time	Room
1st year	1 unit	Fall B, C	Friday	3 rd , 4 th and/or 5 th periods	4B211
Instructors (Office • Tel • email • Office hour)					
HISATAKE, Koji (Innovation building 402-3 • x3929 • kojihisa@md.tsukuba.ac.jp • please contact by e-mail before office visit) FUKUDA, Aya (Innovation building 402-3 • x3929 • fukudaa@md.tsukuba.ac.jp • please contact by e-mail before office visit) NISHIMURA, Ken (Innovation building 402-3 • x3929 • ken-nishimura@md.tsukuba.ac.jp • please contact by e-mail before office visit)					
Objectives					
Students are expected to learn the methods for separating biological materials and analyzing them in a qualitative as well as quantitative manner. They also learn the basic knowledge and techniques to analyze biological phenomena at the molecular level, and to present their results.					
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	11/9	Hisatake, Fukuda, Nishimura	Nucleic acids I		
2	11/15 Thu.	Hisatake, Fukuda, Nishimura	Nucleic acids II		
3	11/16	Hisatake, Fukuda, Nishimura	Sugar I		
4	12/ 6 Thu.	Hisatake, Fukuda, Nishimura	Sugar II		
5	12/ 7	Hisatake, Fukuda, Nishimura	Proteins I		
6	12/14	Hisatake, Fukuda, Nishimura	Proteins II		
7	1/11	Hisatake, Fukuda, Nishimura	Enzymes I		
8	1/25	Hisatake, Fukuda, Nishimura	Enzymes II		
9	2/ 1	Hisatake, Fukuda, Nishimura	Presentation		
10	2/ 8	Hisatake, Fukuda, Nishimura	Presentation		
Levels for credit needed	Understanding of the basic knowledge and techniques to isolate and analyze the biological materials.				
Text and materials	Experimental manuals will be handed out in advance. Voet's Fundamentals of Biochemistry is used a reference.				
Grade evaluation	Class attendance, term paper and presentation				
Remarks : Students should read each manual before experiments, and active participation in the experiments are essential. Bring the writing tools and A4 sheets of paper to write part of the term paper during the experiments.					