

Syllabus of Special Course on “Food Science and Technology”

[Organized by Food Science and Technology Study Program, Jenderal Soedirman University
(UNSOED)]

Course (3)

Course title	Indonesian Food Fermentation Technology		
Instructor	Karseno, PhD; Dr. Isti Handayani; Dr. Ike Sitoresmi Mulyo Purbowati		
Class number	1	Semester	Odd
Credit(s)	2	Day/period	Intensive (√)
Student year	3		
Remarks	The course is delivered in English. It is offered for foreign students and students of Unsoed		
Outline (overview)	This course provides comprehensive understanding about the principle of fermentation technology, medium, microbial strains and equipment that used in fermentation process. The type of food fermentation in general and Indonesian food fermentation product in detail including tempe, tauco, soy sauce (soybean fermentation); oncom (red bean fermentation); tape (rice fermentation), peuyeum (casava fermentation); brem; bekasam/pakasam, terasi (fish fermentation); dadih, dangke (milk cow/goat/sheep fermentation); tempoyak (fruit fermentation are discussed). Properties, nutrition composition, function of the product and serving in food menu are also presented.		
Keywords	Fermentation technology, food fermentation, microbial fermentation, Indonesian food fermentation, flavour and nutrition of fermentation product		
Goals	Students are expected to understand the principle of food fermentation technology, the type and the process of Indonesian food fermentation technology, the important of material preparation and fermentation condition, the role and function of the product related to nutrition and health, the packaging and serving menu of the product.		
Course plan (schedule)	<ol style="list-style-type: none"> 1. Review of course content 2. The principle of fermentation technology 3. Food fermentation technology 4. Overview of Indonesian food fermentation product 5. Tempe and oncom fermentation technology 6. Soy sauce fermentation technology 7. Tape and peyeum fermentation technology 8. Middle-semester examination 9. Brem fermentation technology 10. Pekasam and terasi fermentation technology 11. Dadih and dangke fermentation technology 12. Indonesian fruit based fermentation technology 13. Indonesian vegetable based fermentation technology 14. Presentation of the assignment (1) 15. Presentation of the assignment (2) 16. Final-semester examination 		
Advice for preview and review	This lecture is held as an Intensive (√) course.		
Prerequisite	No prerequisite		
Grading philosophy (percentage, criteria, methodology)	<p>Learning results are evaluated by a report on the assigned subjects and examination.</p> <p>Percentage of grading:</p> <ol style="list-style-type: none"> 1. Middle-semester examination = 40% 2. Final-semester examination = 40% 		



	<p>3. Report of assignment = 10%</p> <p>4. Presentation of assignment = 10%</p>
Texts/References	<ul style="list-style-type: none">• Jay, J.M., 1986. Modern Food Microbiology. Van Nostrand Reinhold.• Stanbury, PF and Whitaker, A. 1984. Principle of Fermentation Technology. Pergamon Press• Robert W. Hutkins (ed.). 2007. Microbiology and Technology of Fermented Foods. Blackwell Publishing.• Related journals