Departemen
Ilmu danTeknologiPangan
Fakultas Teknologi Pertanian – Institut Pertanian Bogor

Kampus IPB Darmaga, PO Box 220 Bogor 16002
E-mail: foodtech@indo.net.id
Website: http://fst.ipb.ac.id
Telp/Faks: (0251) 8626725

COURSE CONTRACT

INSTRUCTION

1. The course contract is delivered by the teaching lecturer in the first week of lecture/practice activities.
2. The agreed course contract is signed at the latest in the 2nd week by the course coordinator or other lecturers who teach and student representatives in the 1st or 2nd week.
3. The course contract is included together in the minute of Lecture and List of Attendance folders for the relevant courses.

Study Program	:	Food Technology (Undergraduate)
Course Name	:	Food Analysis
Course Code	:	TPN1301
Credit	:	3 (3-0)
Course Coordinator _	:	Prof. Dr. Nancy Dewi Yuliana STP., M.Sc.
Lecturer subject	:	1. Prof.Dr. _ Ir. Hanifah Nuryani Lioe , M.Si (HNL, K1) 2. Prof. Dr. Didah Nur Faridah , STP, M.Si (DNF, K2) 3. Dr. Dian Herawati STP, M.Si (DHE, K3) 4. Prof. Dr. Nancy Dewi Yuliana STP, MSc (NDY, K4) 5. Dr. Nur Wulandari , STP, M.Si (NWU, K1) 6. Ir. Subarna MSi (SUB, K2) 7. Dr. Valeria Tarigan, STP, MSi. (VAR, K3, K4) 8. Dr. Siti Nurjanah STP, MSi (SNU, K1, K2, K3, K4) 9. Dr. Uswatun Hasanah STP, M.Si. (UHA, K3, K4) 10. Harum Fadhilatunnur STP, M.Sc. (HFA, K1, K2)
Semester	:	Odd
Academic Year	:	2023/2024

Course Schedule

Parallel Class	Lecturer	Day	Time	Room
K1	HNL/NWU/SNU/UHA	Thursday	7.00 – 9.30	RK PAU Lt.2
K2	DNF/SUB/SNU/UHA	Monday	7.00 – 9.30	R. Satari 02.11 Lt.2
K3	DHE/VAR/SNU/HFA	Thursday	7.00 – 9.30	R. Satari 02.07 Lt.2
K4	NDY/VAR/SNU/HFA	Monday	7.00 – 09.30	RK MKDU 2 LSI Lt.1

Course Topic

Week	Topic	Sub-Topic	K1	K2	K3	4
1.	Introduction to Analysis Food	• Introduction to Food Analysis (chemistry, physics, and microbiology) • The importance of Food Analysis in Food Quality and Safety • Error in analysis (error random, error systematic), data validity,	HNL 17/8 Kuliah pengganti 2/10	DNF 14/8	DHE 17/8 Kuliah pengganti 2/10	NDY 14/8

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Week	Topic	Sub-Topic	K1	K2	K3	4
		data acceptability (accuracy and precision), and uncertainty , Sampling techniques.				
	Lectures Contract and Construction of the Course	• Lectures Contract • Explanation of the course structure • Group Distribution • Explaining the Assessment tools				
	PBL explanation	• **Problem statement for PBL :** Students establish imaginer food producing company and decide the type of product (product X) Students determine the type of main ingredients and process flow diagram of production Students determine the standard that must be fulfilled by their product (SNI and other relevant standards) Students determine the most appropriate method of analysis (Chemical, Physical, and Microbiological) for main ingredients , product intermediates (products/ materials in process), and the final products. Choice of analytical method has to ensure that the quality of the final product is in accordance with product SNI or quality international from the receiving country (if will be exported), or other relevant standards PBL concept is written in a form of papers and presentations at the end of the semester				
2	Analysis of Moisture Content and Ash Content	• Principle of various method of water analysis • Principle of various method of ash analysis	HNL 24/8	DNF 21/8	DHE 24/8	NDY 21/8

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Week	Topic	Sub-Topic	K1	K2	K3	4
	Protein Content Analysis	• Principle of various method of protein content analysis				
3	Analysis Oil and Fat	• Principle of various method of oil and fat Analysis • Principle of Analysis of Some Physical and Chemical Properties of Fats	HNL 31/8	DNF 28/8	DHE 31/8	NDY 28/8
	Analysis of Carbohydrate	Types Carbohydrates and Methods of analysis				
4	Basics of Chromatography	Basic Theory of Chromatography (symmetrical *peak, resolution, separation factor, capacity factor, and theoretical plate number)*	HNL 7/9	DNF 4/9	DHE 7/9	NDY 4/9
	HPLC and GC	• Principle of HPLC Analysis • Principle of GC Analysis				
5	UV -VIS, IR and Fluorometric Spectroscopy	Principle of UV-Vis, IR and Fluorometric Spectroscopy	HNL 14/9	DNF 11/9	DHE 14/9	NDY 11/9
	AAS and ICP-MS	• Principle of AAS technique • Principle of ICP-MS technique				
6.	Guest Lecturer	• The role of Food Analysis Food for Quality Control in Industry	HNL 21/9	DNF 18/9	DHE 21/9	NDY 18/9
7.	Food Physical Properties and Principles of the analysis	Physical Properties and Principles of analysis (dimensions, density)	NWU 28/9 Kuliah pengganti 3/10	SUB 25/9	VAR 28/9 Kuliah pengganti 3/10	VAR 25/9
		UTS 4-14 October 2023				
8.	Analysis of Physical Properties : Color	Principle of analysis using colorimeter and degree of white	NWU 19/10	SUB 16/10	VAR 19/10	VAR 16/10
9	Analysis of Physical Properties: Texture and rheology	• Principle of analysis using a viscometer • Principle of analysis using the Texture Analyzer	NWU 26/10	SUB 23/10	VAR 26/10	VAR 23/10

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Week	Topic	Sub-Topic	K1	K2	K3	4
10	Methods of Microbiology Analysis	Quantitative Analysis and Qualitative Analysis	UHA 2/11	UHA 30/10	HFA 2/11	HFA 30/10
11	Basic of Molecular Analysis (PCR)	Analysis of microbiology based on molecular techniques (PCR)	SNU 9/11	SNU 6/11	SNU 9/11	SNU 6/11
12	Application of microbiology analytical method in practical problem	Application of microbiology analytical method in practical problem	UHA 16/11	UHA 13/11	HFA 16/11	HFA 13/11
13.14	Presentation	Group Presentation (with external expert panelists (from other university or practitioner from industry) Paper submission	HNL 23/11	DNF 20/11	DHE 23/11	NDY 20/11
UAS 4 – 16 December 2023						

Course Assessment _

No	Criteria Evaluation	Range	Weight (%)
1.	Mid-Semester Exam	0-100	20
2.	End Semester Exam	0-100	20
3.	PBL 1-4 (Resume of discussion results, peer evaluation)	60-100	20
4.	Paper	60-100	20
5.	Presentation	60-100	20
			TOTAL 100

Category Determination (Letter of Quality) *

Letter of Quality	Point	Score Range
A	4.0	A 80
AB	3.5	AB: 75-79
B	3.0	B: 70-74
BC	2.5	BC: 65-69
C	2.0	C: 55-64
D	1.0	D: 45-54
E	0.0	E< 45

Remarks

1. Lecturers do not tolerate any cheating in the exams and acts of plagiarism in completing assignments/reports/writing papers or other forms of assessment.
2. If a student is found to have cheated on an exam or do any acts of plagiarism, the student will get a score of zero for that exam/other assignment.
3. Both parties agree to comply with the rules/regulations for the implementation of the course in accordance with the standard procedures applicable at IPB University.

Student Representative	Lecturer / Coordinator

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