MODULE HANDBOOK

Module Name	Food Analysis
Module level	Bachelor
Abbreviation, if applicable	3074112066
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	7th / Fourth Year
Module coordinator(s)	Prof. Dr. Titik Taufikurohmah, M.Si.
Lecturer(s)	Prof. Dr. Titik Taufikurohmah, M.Si. , Rusmini S.Pd., M.Si.
Language	Indonesian
Classification within the curriculum	optional
Teaching format/class hours per week during the semester:	2 hours lectures (50 min / hour)
Workload:	2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester, 79,33 total hours per semester ~ 3.18 ECTS**
Credit points:	2 CU x 1,59 = 3, 18 ECTS
Prerequisites course(s):	Analytical chemistry 3, analytical chemistry 4, organic chemistry 2, inorganic chemistry 2, biochemistry 2
Targeted learning outcomes:	CLO 1: Students have knowledge of the basic principles of analysis of foodstuffs both macro and micro nutrient ingredients using appropriate methods both classical (gravimetric and volumetric) and modern (UV-Vis Spectrophotometry, AAS, Chromatography and Electrical), as well as method selection. based on exact material properties according to AOAC standard methods, food safety principles and the latest journals CLO 2: Skilled students use tools in analyzing food ingredients, both macro and micro nutrient ingredients, using appropriate methods, both classical (gravimetric and volumetric) and modern (UV-Vis Spectrophotometry, AAS, Chromatography and Electric), as well as method selection based on exact material properties according to AOAC standard methods, food safety principles and the latest journals CLO 3: Students have the ability to collaborate and are responsible in carrying out the process of analyzing foodstuffs both macro and micro nutrient food ingredients using appropriate methods both classical (gravimetric and

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<tr><td></td><td>volumetric) and modern (UV-Vis, AAS, Chromatography and Electrical Spectrophotometry), as well as selecting a method based on the properties of the right material according to AOAC standard methods, food safety principles and the latest journals
CLO 4: Students have the ability to communicate the results of analysis of foodstuffs both macro and micro nutrient ingredients using appropriate methods both classical (gravimetric and volumetric) and modern (UV-Vis Spectrophotometry, AAS, Chromatography and Electrical), as well as the selection of methods based on exact material properties according to AOAC standard methods, food safety principles and current journals.</td></tr>
<tr><td>Content:</td><td>1. preliminary food analysis
2. food analysis methods
3. data analysis techniques
4. analysis of water content in food
5. analysis of ash content in food
6. analysis of mineral content in food
7. analysis of vitamin levels in food
8. Protein content analysis in food
9. analysis of fat content in food
10. analysis of carbohydrate content in food
11. analysis of levels of additives in food
12. analysis of contamination levels in food
13. food safety</td></tr>
<tr><td>Study / exam achievements:</td><td>Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio:
<table>
<tr><td>Assessment Components</td><td>Percentage of contribution</td></tr>
<tr><td>Participation</td><td>20%</td></tr>
<tr><td>Assignment</td><td>30%</td></tr>
<tr><td>Mid-semester test</td><td>20%</td></tr>
<tr><td>Final semester test</td><td>30%</td></tr>
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<tr><td>Media:</td><td>Computer, LCD, White board, laboratory</td></tr>
<tr><td>Learning Methods</td><td>Individuals assignment, group assignment, discussion, presentation, and practicum</td></tr>
<tr><td>Literature:</td><td>1. Slamet Sudarmaji, dkk, 1996. Analisis Bahan Makanan dan Pertanian, Yogyakarta: Liberty
2. James, C.S.,1995 Analitycal Chemistry of Foods, Blackie Academic and Professional
3. Artikel-artikel Journal yang relevan</td></tr>
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Notes:	*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. The Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.
	**1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019