

## MODULE HANDBOOK

Module Name	Food Analysis
Module level	Bachelor
Abbreviation, if applicable	8420402001
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	7 <sup>th</sup> /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	Bahasa Indonesia
Classification within the curriculum	Elective Course
Teaching format/class hours per week during the semester:	2 hours lectures (50 min / hour)
Workload:	1 CU for bachelor degree equals to 3 workhours per week or 170 minutes (50' face to face learning, 60' structured learning, and 60' independent learning). In one semester, courses are conducted in 14 weeks (excluding mid and end-term exam). Thus, 1 CU equals to 39.67 workhours per semester. One CU equals to 1.59 ECTS.
Credit points:	2 CU = 2 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:	<p>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</p> <p>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</p> <p>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</p>

	<p>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</p> <p>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.</p>
Content:	<ol style="list-style-type: none"> <li>1. preliminary food analysis</li> <li>2. food analysis methods</li> <li>3. data analysis techniques</li> <li>4. analysis of water content in food</li> <li>5. analysis of ash content in food</li> <li>6. analysis of mineral content in food</li> <li>7. analysis of vitamin levels in food</li> <li>8. Protein content analysis in food</li> <li>9. analysis of fat content in food</li> <li>10. analysis of carbohydrate content in food</li> <li>11. analysis of levels of additives in food</li> <li>12. analysis of contamination levels in food</li> <li>13. food safety</li> </ol>
Study / exam achievements:	<p>Students are considered to be competent and pass if at least get 55</p> <p>Final score is calculated as follows: 20% participation + 30% assignment + 20% middle exam (UTS) &amp; 30% final exam (UAS)</p> <p>Table index of graduation</p> <ul style="list-style-type: none"> <li>• A = 4 (85 ≤ - &lt; 100)</li> <li>• A- = 3,75 (80 ≤ - &lt; 85)</li> <li>• B+ = 3,5 (75 ≤ - &lt; 80)</li> <li>• B = 3 (70 ≤ - &lt; 75)</li> <li>• B- = 2,75 (65 ≤ - &lt; 75)</li> <li>• C+ = 2,5 (60 ≤ - &lt; 65)</li> <li>• C = 2 (55 ≤ - &lt; 60)</li> <li>• D = 1 (40 ≤ - &lt; 55)</li> <li>• E = 0 (0 ≤ - &lt; 40)</li> </ul>
Media:	Computer, LCD, White board, laboratory
Learning Methods	Individuals assignment, group assignment, discussion, presentation, and practicum
Literature:	<ol style="list-style-type: none"> <li>1. Slamet Sudarmaji, dkk, 1996. <i>Analisis Bahan Makanan dan Pertanian</i>, Yogyakarta: Liberty</li> <li>2. James, C.S., 1995 <i>Analytical Chemistry of Foods</i>, Blackie</li> </ol>

	<i>Academic and Professional</i> 3. Artikel-artikel Journal yang relevan
--	---