

### Module Descriptions

<b>Module designation</b>	<b>Food Analysis</b>
Semester(s) in which the module is taught	8 <sup>th</sup> semester/Fourth Year
Person responsible for the module	Dr. Rusmini S.Pd., M.Si
Language	Bahasa Indonesia (Regular Class) Bahasa Inggris (Internasional Class)
Relation to curriculum	Elective course
Teaching methods	Project-Based Learning 2 workhours per week (2 x 170 minutes per week)
Workload (incl. contact hours, self-study hours)	1 CU for a bachelor's degree equals 170 minutes (50 minutes face-to-face, 60 minutes structured, 60 minutes independent learning) per week × 14 weeks, excluding mid and end-term exams. = 39.67 work hours per semester = 1.587 ECTS.
Credit points	2 Credit Units (CU) = 3.18 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> <li>1. Students are able to analyze the basic principles of food analysis, including macronutrients and micronutrients, using appropriate methods, both classical and modern, for qualitative and quantitative analysis. They are also able to select methods based on appropriate material properties according to AOAC standard methods, food safety principles, and current journals.</li> <li>2. Students are skilled at using tools to analyze food, including macronutrients and micronutrients, using appropriate methods, both classical and modern, for qualitative and quantitative analysis.</li> <li>3. Students are able to communicate the results of food analysis, including macronutrient and micronutrient analysis, through experimental reports and scientific publications.</li> </ol>
Content	This course examines the basic principles of qualitative and quantitative food analysis methods, from a chemical perspective, analysis, and application perspectives, including validation. Methods for analyzing macronutrients and micronutrients in various food materials using classical and modern methods, and determining appropriate analytical methods based on standard methods or supporting journals. This course is accompanied by supporting laboratory activities. Students are able to master related concepts, be skilled in using tools, collaborate and be responsible, and communicate their knowledge and skills scientifically and apply them to business.
Examination forms	-

Study and examination requirements	Assessment includes: Participative Activities: 20% Project / Product Evaluation: 55% Practicum Assessment: 15% Test: 10%
Reading list	<ol style="list-style-type: none"> <li>1. Slamet Sudarmaji, dkk, 1996. Analisis Bahan Makanan dan Pertanian, Liberty, Yogyakarta</li> <li>2. James, C.S., 1995, Analytical Chemistry of Foods, Blackie Academic and Professional</li> <li>3. Novita Sari, D., &amp; Taufikurohmah, T. (2019). Pengaruh Penambahan Nanogold Terhadap Aktivitas Antioksidan Ekstrak Gambir (<i>Uncaria gambir</i> Roxb.) Effect of Nanogold Addition Toward Antioxidant Activity Of Extract Gambir (<i>Uncaria gambir</i> Roxb.). <i>Unesa Journal of Chemistry</i>, 8(1). <a href="https://doi.org/10.26740/ujc.v8n1.p%p">https://doi.org/10.26740/ujc.v8n1.p%p</a></li> <li>4. Sarmarina Sitanggung, Bestari Hasibuan, Cindra Emilia Pane, Dwi Septi Lennia Girsang, Indri Jayantri Saragih, Ninda Sari (2021) Evaluasi Nilai Gizi Mineral (Fe, Zn Dan Ca) Pada Pangan Dengan Penambahan Tepung Ikan Melalui Analisis Bioavailabilitas : Literature Review, <i>Jurnal Andaliman: Jurnal Gizi Pangan, Klinik dan Masyarakat</i>, 1(2): 22-30</li> <li>5. Arifah Madani, Rini Fertiasari, Angga Tritisari, dan Nurhayati Safitri, (2023), Analisis Kandungan Proksimat Cookies Tepung Tempe, <i>The Journal of Food Security and Agroindustry (JFSA)</i> Vol 1 (2), DOI: <a href="https://doi.org/10.58184/jfsa.v1i2.87">https://doi.org/10.58184/jfsa.v1i2.87</a></li> <li>6. Farida Ariani, Sofia Rohani (2024) Penentuan Kadar Lemak Pada Tepung Terigu Dan Tepung Maizena Menggunakan Metode Soxhlet, <i>Jurnal Ganec Swara</i> Vol. 18, No.1, 172-176</li> </ol>