

## MODULE HANDBOOK

Module Name	Quantitative Analytical Chemistry
Module level	Bachelor
Abbreviation, if applicable	3074213028
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	3 <sup>rd</sup> / second year
Module coordinator(s)	Prof. Dr. Sri Poedjiastoeti, M.Si.
Lecturer(s)	1. Prof. Dr. Sri Poedjiastoeti, M.Si. 2. Dr. Utiya Azizah M.Pd. 3. Dr. Pirim Setiarso, M.Pd. 4. Dr. Nita Kusumawati, M.Sc. 5. Rusmini S.Pd, M.Si.
Language	Bahasa Indonesia
Classification within the curriculum	Compulsory
Teaching format/class hours per week during the semester:	3 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:	3 CU = 3 x 1,59 = 4.77 ECTS
Prerequisites course(s):	Basic chemistry 2
Targeted learning outcomes:	<p><b>General Competence (knowledge):</b> Students have knowledge of the basic principles of quantitative analysis in terms of chemical structure, energetics and chemical analysis which includes the analysis process, evaluation of analysis results, chemical calculations, gravimetric and volumetric analysis (acid-base titration, precipitation titration, complexing titration, redox titration) and its applications.</p> <p><b>Spesific Competence:</b> Skilled students use tools in carrying out quantitative analysis in terms of chemical structure, energetics and chemical analysis which includes the analysis process, evaluation of analysis results, chemical calculations, gravimetric and volumetric analysis (acid-base titration, precipitation titration, complexing titration, redox titration) and its applications</p>

Content:	Study of the basic principles of quantitative analysis in terms of chemical structure, energetics and chemical analysis which includes the analysis process, evaluation of analysis results, chemical calculations, gravimetric and volumetric analysis (acid-base titration, precipitation titration, complexing titration, redox titration), followed by laboratory activities which supports so that students are able to master related concepts, are skilled at using tools, are honest and responsible and can communicate their knowledge and skills scientifically.
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% Partisipasi + 30% tugas + 20% middle exam (UTS) &amp; 30% final exam (UAS)</p> <p>Table index of graduation</p> <p>A = 4 (85 ≤ - &gt;= 100)</p> <p>A- = 3,75 (80 ≤ - &lt; 85)</p> <p>B+ = 3,5 (75 ≤ - &lt; 80)</p> <p>B = 3 (70 ≤ - &lt; 75)</p> <p>B- = 2,75 (65 ≤ - &lt; 75)</p> <p>C+ = 2,5 (60 ≤ - &lt; 65)</p> <p>C = 2 (55 ≤ - &lt; 60)</p> <p>D = 1 (40 ≤ - &lt; 55)</p> <p>E = 0 (0 ≤ - &lt; 40)</p>
Media:	Computer, LCD, White board
Learning Methods	Lectures, discussion, assignment
Literature:	<p>Basset,J.,et.al.1991. Vogel: <i>Texbook of Quantitative Inorganic Analysis Including Elementary Instrumental Analysis</i>. London: Longman Group Limited</p> <p>Day, Jr, R.A., dan Underwood, A.L., 2002. <i>Quantitative Analysis</i>. Sixth Ed. (Alih bahasa: Sopyan, I.). Jakarta: Penerbit Erlangga.</p> <p>Skoog, Douglas.A. 1982, <i>Fundamental of Analytical Chemistry</i>. Fourth Edition. Tokyo: Holt- Sounders Japan</p>