

MODULE HANDBOOK

Module Name	Quantitative Analytical Chemistry
Module level	Bachelor
Abbreviation, if applicable	8420403098
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	3 rd /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 course
Teaching format/class hours per week during the semester:	3 hours lectures (50 min / hour)
Workload:	3 x 50 minutes lectures, 3 x 60 minutes structured activity, 3 x 60 minutes individual activity, 14 weeks per semester, 119 total hours per semester ~ 4.77 ECTS**
Credit points:	3 CU = 3 x 1,59 = 4.77 ECTS
Prerequisite course(s):	Basic chemistry 2
Targeted learning outcomes:	<p>General Competence (knowledge): 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>Spesific Competence: 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 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:</p> <table border="1"> <thead> <tr> <th>Assessment Components</th> <th>Percentage of contribution</th> </tr> </thead> <tbody> <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> </tbody> </table>	Assessment Components	Percentage of contribution	Participation	20%	Assignment	30%	Mid-semester test	20%	Final semester test	30%
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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>										
Notes:	<p>*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.</p> <p>**1 CU = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019</p>										