



MINISTRY OF EDUCATION, CULTURE, RESEARCH,
AND TECHNOLOGY

UNIVERSITAS NEGERI SURABAYA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES

Ketintang Campus, D-1 Building, Surabaya 60231 +6231-8296427

Website: www.fmipa.unesa.ac.id, email: info_fmipa@unesa.ac.id

Master Program of Science Education

Module Handbook

<i>Module Name :</i>	<i>Kimia Sekolah/ Chemistry for High School</i>
<i>Module level :</i>	<i>Master Program of Science Education</i>
<i>Course Code :</i>	<i>8410102146</i>
<i>Abbreviation, if applicable:</i>	<i>-</i>
<i>Courses included in the module, if applicable:</i>	<i>Not Applicable</i>
<i>Semester/Term</i>	<i>1st /First Year</i>
<i>Module coordinator(s)</i>	<i>Dr. Sukarmin, M.Pd.</i>
<i>Lecturer(s):</i>	<i>Dr. Sukarmin, M.Pd.</i>
<i>Language:</i>	<i>Indonesian Language</i>
<i>Classification within the curriculum:</i>	<i>Compulsory/ Elective</i>
<i>Teaching format/class hours per week during the semester:</i>	<i>2 contact hours of lectures (Indonesia credit semester or CU*)</i>
<i>Workload :</i>	<i>2 x 50 minutes lectures, 2 x 90 minutes structured activity, 2 x 100 minutes individual activity, 14 weeks per semester, 112 total hours per semester ~ 4.48 ECTS**</i>
<i>Credit Point:</i>	<i>2 CU (4.48 ECTS)</i>
<i>Requirements:</i>	
<i>Learning goals/competencies:</i>	Knowledge (KNO-2) CLO-1 <i>Mastering knowledge and technology chemistry material based on the applicable school curriculum through literature review</i> CLO-2 <i>Mastering chemistry learning problems in schools from the material aspect, including students' misconceptions and learning difficulties through the study of science material through literature studies or field studies</i> Competency (COM-3) CLO-3 <i>Designing and creating chemistry material according to the school curriculum that can be used in chemistry learning activities at school or to support science learning research activities at school</i>
<i>Content</i>	<i>Studying the concept of stoichiometry in chemistry, the structure of matter and chemical bonds, solutions and their properties, colloids and their uses, chemistry as a science of reactions,</i>



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	<i>thermodynamics and thermochemistry, as well as the basic concepts of organic chemistry and biochemistry in lectures through discussions and presentations.</i>																														
<i>Attribute Soft skill:</i>	<i>Scientific report, public speaking, and team work</i>																														
<i>Study/exam achievements:</i>	<p>Final index is defined as follow:</p> <table border="1"> <thead> <tr> <th><i>Index</i></th> <th><i>Converted Score</i></th> <th><i>Score Range</i></th> </tr> </thead> <tbody> <tr> <td>A</td> <td>4.00</td> <td>$85 \leq A \leq 100$</td> </tr> <tr> <td>A-</td> <td>3.75</td> <td>$80 \leq A- < 85$</td> </tr> <tr> <td>B+</td> <td>3.50</td> <td>$75 \leq B+ < 80$</td> </tr> <tr> <td>B</td> <td>3.00</td> <td>$70 \leq B < 75$</td> </tr> <tr> <td>B-</td> <td>2.75</td> <td>$65 \leq B- < 70$</td> </tr> <tr> <td>C+</td> <td>2.50</td> <td>$60 \leq C+ < 65$</td> </tr> <tr> <td>C</td> <td>2.00</td> <td>$55 \leq C < 60$</td> </tr> <tr> <td>D</td> <td>1.00</td> <td>$40 \leq D < 55$</td> </tr> <tr> <td>E</td> <td>0.00</td> <td>$0 \leq E < 40$</td> </tr> </tbody> </table>	<i>Index</i>	<i>Converted Score</i>	<i>Score Range</i>	A	4.00	$85 \leq A \leq 100$	A-	3.75	$80 \leq A- < 85$	B+	3.50	$75 \leq B+ < 80$	B	3.00	$70 \leq B < 75$	B-	2.75	$65 \leq B- < 70$	C+	2.50	$60 \leq C+ < 65$	C	2.00	$55 \leq C < 60$	D	1.00	$40 \leq D < 55$	E	0.00	$0 \leq E < 40$
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<i>Learning Methods :</i>	<i>Case Method, Discussion, and Article Review</i>																														
<i>Form of Media:</i>	<i>Power Point slides, e-book file, and multimedia.</i>																														
<i>Literature (primary references):</i>	<ol style="list-style-type: none"> <i>Petrucci, R. H., et al. 2017. General Chemistry Principles and Modern Applications. Toronto: Pearson Canada Inc.</i> <i>Chang, R. and Overby, J. 2011. General Chemistry the Essential Concepts. New York: McGraw-Hill.</i> <i>Phillips, J.S. 2002. Glenco Chemistry Concepts and Applications. New York: Glencoe McGraw-Hill.</i> 																														
<i>Notes:</i>	<p><i>*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom (50 minutes); (b) structured activity (90 minutes); and (c) individual activity (100 minutes) according to according to Rector Decree of Universitas Negeri Surabaya No. 598/UN38/HK/AK/2020</i></p> <p><i>**1 CU = 2.24 ECTS according to Rector Decree of Universitas Negeri Surabaya No. 598/UN38/HK/AK/2020</i></p> <p><i>*Total ECTS = (total hours workload/ 60 min) / 25 hours</i></p> <p>Each ECTS is equals with 25 hours</p>																														
<i>Last Amendment</i>	<i>5 January 2023</i>																														