MODULE HANDBOOK

Module Name	School Chemistry
Module level	Bachelor
Abbreviation, if applicable	8420402171
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	6th/Third Year
Module coordinator(s)	Dian Novita, ST., M.Pd.
Lecturer(s)	1. Dr. Ismono, M.Si. 2. Dr. Muchlis, M.Pd. 3. Dian Novita, ST., M.Pd. 4. Rusmini, S.Pd., M.Pd.
Language	Indonesian
Classification within the Curriculum	Compulsory Course
Teaching format/class hours per week during the semester:	2 hours lecturers (50 min per hours)
Workload:	2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester, 79.33 total hours per semester ~ 3.18 ECTS**
Credit points:	2 CU = 2 x 1.59 = 3.18 ECTS
Prerequisite course(s):	-
Targeted learning outcomes:	1. Understand the basic principles of chemistry at the SMP, SMA, and SMK education unit levels in accordance with the applicable curriculum covering the depth and breadth of the material. 2. Able to solve science and technology problems in the general field of chemistry and in a simple scope such as through the application of knowledge of chemical materials at the junior, senior high and vocational school level according to the applicable curriculum covering the depth and breadth of the material and the application of relevant technology. 3. Having the ability to utilize ICT-based learning resources and media in understanding the concept of chemistry. 4. Make decisions about the relationship between basic chemical concepts and laboratory activities, research results, and the existence of chemistry in everyday life. 5. Demonstrate an attitude of responsibility for work in his field of expertise independently.
Content:	1. Introduction to Chemistry and Chemical Data Analysis 2. Substances, Moles, and Stoichiometry 3. Atomic and Electron Structure 4. Periodic and Periodic Table of the Elements 5. Ionic Bonds and Metal Bonds

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<tr><td></td><td>6. Covalent Bonds and Chemical Reactions
7. Properties of Substances and the Law of Gases
8. Energy and Chemical Reactions
9. Chemical Reactions and Equilibria
10. Redox and Electrochemical Reactions
11. Mixtures and Solutions
12. Hydrocarbons, Substituted Hydrocarbons and Their Reactions
13. Chemistry in Everyday Life</td></tr>
<tr><td>Study / exam achievements:</td><td>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:
<table>
<tr><th>Assessment Components</th><th>Percentage of contribution</th></tr>
<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>
</table></td></tr>
<tr><td>Media:</td><td>Computer, LCD, White board</td></tr>
<tr><td>Learning Methods</td><td>Individuals assignment, group assignment, discussion, presentation, and practicum</td></tr>
<tr><td>Literature:</td><td>1. Dingrando, L., Gregg, K.V., Hainen, N., Wistrom, C. 1990. Chemistry: Matter & Change, Student Edition (GLENCOE CHEMISTRY) 2nd Edition. USA: John Wiley & Sons Limited.
2. Brady, J.E., Jespersen, N.D., Hyslop, A. 2014. Chemistry. USA: John Wiley & Sons Limited.
3. Brady, E. James. 1990. General Chemistry: Principles and Structure. USA: John Wiley & Sons Limited.</td></tr>
<tr><td rowspan="2">Notes:</td><td>*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.</td></tr>
<tr><td>**1 CU = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019</td></tr>
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