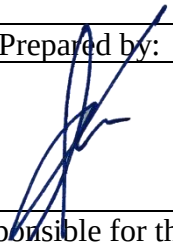
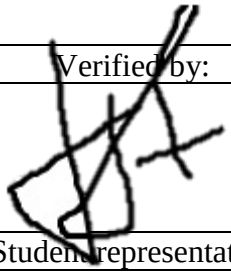
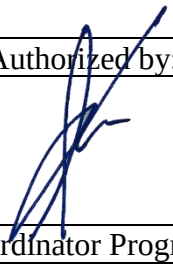
<table>
<tr><td colspan="2">  </td><td colspan="4">Faculty of Natural Sciences and Mathematics
Chemistry Department
Chemistry Education Study Program</td></tr>
<tr><td colspan="2">Module name</td><td colspan="4">Chemistry for Senior High School I</td></tr>
<tr><td colspan="2">Module level, if applicable</td><td colspan="4">2nd Year</td></tr>
<tr><td colspan="2">Code, if applicable</td><td colspan="4">SPK-428</td></tr>
<tr><td colspan="2">Semester(s) in which the module is taught</td><td colspan="4">4th semester</td></tr>
<tr><td colspan="2">Person responsible for the module</td><td colspan="4">Krisna Merdekawati, M.Pd</td></tr>
<tr><td colspan="2">Lecturer</td><td colspan="4">Krisna Merdekawati, M.Pd
Yogo Dwi Prasetyo, M.Pd., M.Sc</td></tr>
<tr><td colspan="2">Language</td><td colspan="4">Bahasa Indonesia</td></tr>
<tr><td colspan="2">Relation to curriculum</td><td colspan="4">Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Class size</td><td>Forms of active participation</td><td colspan="3">Workload 91 hours</td></tr>
<tr><td rowspan="3">Theory</td><td rowspan="3">50-60</td><td rowspan="3">Discussion</td><td>Lecture: 100 (min) x 16 (meeting)</td><td colspan="2">27 hours</td></tr>
<tr><td>Assignment: 120 (min) x 16 (week)</td><td colspan="2">32 hours</td></tr>
<tr><td>Independent study: 120 (min) x 16 (week)</td><td colspan="2">32 hours</td></tr>
<tr><td colspan="2">ECTS credit</td><td colspan="4">3.25</td></tr>
<tr><td colspan="2">Credit points</td><td colspan="4">2 SCU</td></tr>
<tr><td colspan="2">Requirements according to the examination regulations</td><td colspan="4">Minimum attendance at lectures is 75% (according to UII regulation)</td></tr>
<tr><td colspan="2">Recommended prerequisites</td><td colspan="4">N/A</td></tr>
<tr><td colspan="2">Related course</td><td colspan="4">Chemistry for Senior High School I</td></tr>
<tr><td colspan="2">Module objectives/intended learning outcomes</td><td colspan="4">On successful completion of the course students should be able to:
1. Abstract the concept of atomic structure and the periodic system of elements in life.
a. Atomic models and quantum mechanics.
b. The periodic table of chemical elements.
2. Explain the concept of chemical bonds.</td></tr>
</table>

<table>
<tr><td></td><td>
a. Analyze the differences between ionic, covalent, and hydrogen bonds.
b. Make models and describe molecular shapes and intermolecular forces.
3. Explain the concept of electrolyte and non-electrolyte solutions and redox reactions.
a. Analyze the difference between electrolyte and non-electrolyte solutions.
b. Abstract redox reactions in life
4. Explain the concept of compound nomenclature and reaction equations.
a. Identify the rules for naming compounds.
b. Make reaction equations.
5. Explain the basic laws of chemistry and solution stoichiometry.
a. Demonstrate the basic laws of chemistry.
b. Determine the stoichiometry of a compound.
</td></tr>
<tr><td>Content</td><td>
● High school chemistry curriculum: development goals and direction,
● High school characteristics,
● High school learning substances,
● High school learning competencies, and
● High school chemistry materials for grades I.
</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>
Final score (NA) is calculated as follows:
<table>
<tr><th>Intended learning outcomes</th><th>Weight (%)</th><th>Technique of assessment</th></tr>
<tr><td>1</td><td>20</td><td>Written test (midterm)</td></tr>
<tr><td>2</td><td>20</td><td>Written test (midterm)</td></tr>
<tr><td>3</td><td>20</td><td>Written test (midterm)</td></tr>
<tr><td>4</td><td>20</td><td>Written test (Final Examination)</td></tr>
<tr><td>5</td><td>20</td><td>Written test (Final Examination)</td></tr>
</table>
</td></tr>
<tr><td>Media employed</td><td>Powerpoint slide presentation, video, Google classroom</td></tr>
<tr><td>Reading list</td><td>

Brady, J.E, 1990, General Chemistry Principles and Structure, 5th ed., New York: John Willey & Sons.
Ebbing, D., and Gammon, S.D., 2008, Experiments in General Chemistry, 9th ed., New York: John Willey & Sons.
Permendikbud No. 59 Tahun 2014 tentang Kurikulum 2013 SMA/ Madrasah Aliyah

</td></tr>
</table>

Prepared by:	Verified by:	Authorized by:
		
Person responsible for the module	Student representative	Coordinator Program