<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">Health and Safety at Work</td></tr>
<tr><td colspan="2">Module level, if applicable</td><td colspan="4">3rd year</td></tr>
<tr><td colspan="2">Code, if applicable</td><td colspan="4">SPK-644</td></tr>
<tr><td colspan="2">Semester(s) in which the module is taught</td><td colspan="4">6th semester</td></tr>
<tr><td colspan="2">Person responsible for the module</td><td colspan="4">Prof. Riyanto, Ph.D</td></tr>
<tr><td colspan="2">Lecturer</td><td colspan="4">Prof. Riyanto, Ph.D
Artina Diniaty, M.Pd</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">Management and Quality Assurance Laboratory School</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. Explain the basics of HSW
2. Explain about work accidents and occupational diseases
a. Explain about work accidents (definition, classification, causal factors, causal theory, and prevention efforts)</td></tr>
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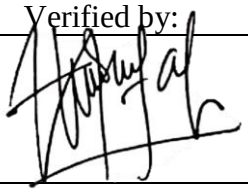
<tr><td></td><td>b. Explain about occupational diseases (definition, causal factors, types, diagnosis, and prevention)
3. Explain about HSW Management System
4. Explain the dangers of chemicals with dual use
5. Explain the laboratory security system
6. Explain about toxicology
7. Explain about emergency management
8. Explain about the transportation of hazardous chemicals
9. Explain about work safety based on behavior
10. Explain about process safety management</td></tr>
<tr><td>Content</td><td>● Basics of Health and Safety at Work (HSW),
● Occupational accidents and occupational diseases,
● HSW management system,
● Multiple-use chemical hazards,
● Risk management,
● Laboratory security systems,
● Toxicology,
● Emergency management,
● Transportation of hazardous chemicals,
● Safety behavioral-based work, and
● Process safety</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>10</td><td>Written test (midterm)</td></tr>
<tr><td>2</td><td>10</td><td>Written test (midterm)</td></tr>
<tr><td>3</td><td>10</td><td>Written test (midterm)</td></tr>
<tr><td>4</td><td>10</td><td>Written test (midterm)</td></tr>
<tr><td>5</td><td>10</td><td>Written test (midterm)</td></tr>
<tr><td>6</td><td>10</td><td>Written test (Final Examination)</td></tr>
<tr><td>7</td><td>10</td><td>Written test (Final Examination)</td></tr>
<tr><td>8</td><td>10</td><td>Written test (Final Examination)</td></tr>
<tr><td>9</td><td>10</td><td>Written test (Final Examination)</td></tr>
<tr><td>10</td><td>10</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>
</table>

Reading list	Indah Rachmatiah Siti Salami, dkk, 2015, *Kesehatan dan Keselamatan Lingkungan Kerja*, Yogyakarta: UGM Press UU No. 1 Tahun 1970 tentang Keselamatan Kerja PP No. 50 tahun 2012 tentang Sistem Manajemen Kesehatan dan Keselamatan Kerja (SMK3) SK Direktur Jenderal Perhubungan Darat Nomor 725/AJ.302/DRJD/2004 tentang Penyelenggaraan Pengangkutan Bahan Berbahaya dan Beracun (B3) di Jalan Lisa Moran dan Tina Masciangioli, 2010, *Keselamatan dan Keamanan Laboratorium Kimia: Panduan Pengelolaan Bahan Kimia dengan Bijak*, Washington, DC: The National Academies Press Keputusan Menteri Tenaga Kerja Nomor 187/MEN/1999 tentang Pengendalian Bahan Kimia Berbahaya di Tempat Kerja

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