		Faculty of Natural Sciences and Mathematics Chemistry Department Chemistry Education Study Program		
Module name		Management and Quality Assurance Laboratory School		
Module level, if applicable		2nd year		
Code, if applicable		SPK-429		
Semester(s) in which the module is taught		4th semester		
Person responsible for the module		Prof. Riyanto, Ph.D		
Lecturer		Prof. Riyanto, Ph.D Beta Wulan Febriana, M.Pd		
Language		Bahasa Indonesia		
Relation to curriculum		*Compulsory*		
Teaching methods	Class size	Forms of active participation	Workload 91 hours	
Theory	50-60	Discussion	Lecture: 100 (min) x 16 (meeting)	27 hours
			Assignment: 120 (min) x 16 (week)	32 hours
			Independent study: 120 (min) x 16 (week)	32 hours
ECTS credit		3.25 hours		
Credit points		2 SCU		
Requirements according to the examination regulations		Minimum attendance at lectures is 75% (according to UII regulation)		
Recommended prerequisites		N/A		
Related course		N/A		
Module objectives/intended learning outcomes		On successful completion of the course students should be able to: 1. Explain the types of laboratories and their functions, organizational structures and laboratory plans 2. Explain safety in the laboratory and the handling of tools and chemicals. 3. Manage laboratory waste. 4. Make ISO 17025: 2018 documents according to the guidelines.		

<table>
<tr><td></td><td>5. Describe how to calibrate laboratory equipment.</td></tr>
<tr><td>Content</td><td>• Types of laboratories,
• Laboratory functions,
• Laboratory organizational structures,
• Laboratory layouts and plans,
• The layout of tools/instruments and materials,
• MSDS,
• Laboratory safety and safety equipment,
• Laboratory waste management,
• Laboratory staff and finances, ISO 17025: Management requirements and technical, Quality Document: Level 1-4
• Calibration</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>Non test: project assessment</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>Power point slide presentation, video, Google classroom</td></tr>
<tr><td>Reading list</td><td>Anonim, 2007, ISO/IEC 17025:2005, General requirements for the competence of testing and calibration laboratories Multiple, Distributed through American National Standards Institute (ANSI).
Hadi, A., 2009, Pemahaman dan Penerapan ISO/IEC 17025: 2005, Jakarta: Gramedia Pustaka Utama
Hadi, A., 2018, Persyaratan Umum Kompetensi Laboratorium Pengujian dan Laboratorium Kalibrasi ISO/IEC 17025: 2017, Jakarta: Gramedia Pustaka.
Feigenbaum, A.V., 1992, Kendali Mutu Terpadu Jilid I, terjemahan, Jakarta: Erlangga.
Feigenbaum, A.V., 1990, Total Quality Control, 3rd. edition, London: Mc Graw-Hill Book Co.
Ross, J.E., 1994, Total Quality Managemen, St. Luice Press.
Besterfield, D.H., 2008, Quality Control, 8th ed., Prentice Hall.
Khamidinal, 2009, Teknik Laboratorium Kimia, Yogyakarta: Pustaka Utama.</td></tr>
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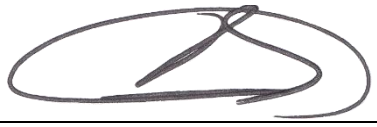
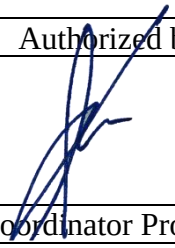
Prepared by:	Verified by:	Authorized by:
		
Person responsible for the module	Student representative	Coordinator Program