

Module Descriptions

A **module** is a self-contained **learning unit** within a higher education program that includes thematically related courses and is assigned a **fixed number of credits**. It follows specific **learning objectives**, includes an **assessment component**, and contributes to achieving the qualifications of a degree program. In some countries, “modules” are also named “courses”.

Please provide a module description for each module. In addition to the compulsory and elective modules, this also includes credited internships and the final thesis.

Please summarize all module descriptions in one document (Module Handbook) and create a table of contents so that the modules can be found easily.

Module designation	<i>Chemical Practicum</i>
Semester(s) in which the module is taught	1
Person responsible for the module	<i>Prof. Dr. Sri Handayani</i> <i>Prof. Dr. Dyah Purwaningsih</i>
Language	<i>Indonesia</i>
Relation to curriculum	<i>Compulsory /elective /specialisation</i>
Teaching methods	<i>Lecture, discussion, lab work, project</i>
Workload (incl. contact hours, self-study hours)	<i>(Estimated) Total workload:</i> <i>170 minutes/week for lab work</i>
Credit points	<i>1 sks</i>
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<i>On successful completion of the course students should be able to:</i> <i>1. understand basic concepts in Organic Chemistry through laboratory practicum activities.</i> <i>2. understand basic concepts in Inorganic Chemistry through laboratory practicum activities.</i> <i>3. design an independent project by developing a student worksheet (LKPD) on a selected topic in Chemistry.</i>

Content	- concepts in Organic Chemistry through laboratory practicum activities: Chalcone synthesis through Claisen-Schmidt condensation; identification of organic structures using TLC (Thin Layer Chromatography); utilization of natural materials in soap making. - understand basic concepts in Inorganic Chemistry through laboratory practicum activities: Thermochromism in coordination compounds;the concept of acidity in hydrated metal ions;determination of acetic acid concentration by titrimetry. - design an independent project by developing a student worksheet (LKPD) on a selected topic in Chemistry																								
Examination forms	Essay, project report and presentation, written tests																								
Study and examination requirements	Attendance at lab work is 100% Final score (NA) is calculated as follows: <table><tr><th>Learning Outcome</th><th>Weight (%)</th><th>Technique of Assesment</th></tr><tr><td>1</td><td>5</td><td>Participation</td></tr><tr><td>1</td><td>5</td><td>Quizz</td></tr><tr><td>2</td><td>10</td><td>Group Discussion</td></tr><tr><td>2-3</td><td>30</td><td>Lab work</td></tr><tr><td>3</td><td>20</td><td>Project</td></tr><tr><td>4</td><td>15</td><td>Mid-term Written Test</td></tr><tr><td>5</td><td>15</td><td>Final Exam Written Test</td></tr></table>	Learning Outcome	Weight (%)	Technique of Assesment	1	5	Participation	1	5	Quizz	2	10	Group Discussion	2-3	30	Lab work	3	20	Project	4	15	Mid-term Written Test	5	15	Final Exam Written Test
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Reading list	- Handayani, S., (2022), <i>Praktikum Kimia</i>, FMIPA UNY Yogyakarta - García, J. et al. (2016) , <i>Experimental Organic Chemistry Laboratory Manual</i>, Elsevier - American Psychological Association.(APA). (2019). <i>Publication manual</i>, 7th ed. Washington, DC: American Psychological Association. - Jespersen, N.; Brady, J. (2012), <i>Chemistry: The Molecular Nature of Matter</i>, 6th ed. New York: John Wiley and Sons - Chang, R. (2010), <i>Chemistry</i>, 10th ed. New York: The Mc-Graw Hill Companies Inc. - Oxtoby, David W et.all. (2008). <i>Principles of Modern Chemistry</i> 6 th Ed. Belmont: Thomson Brook/Cole																								

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