



**UNIVERSITAS NEGERI YOGYAKARTA**  
 FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
 DEPARTMENT OF CHEMISTRY EDUCATION  
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**Bachelor of Education in Chemistry**

**MODULE HANDBOOK**

Module name:	<b>Chemistry Research Project</b>
Module level, if applicable:	Undergraduate
Code:	KIP 6209
Sub-heading, if applicable:	-
Classes, if applicable:	2
Semester:	7 <sup>th</sup>
Module coordinator:	Dr. Antuni Wiyarsi
Lecturer(s):	<b>Erfan Priyambodo, S.Pd.Si.,M.Si.</b> ; Dr. Antuni Wiyarsi, S.Pd.Si.,M.Sc.; Marfuatun, S.Pd.Si.,M.Si.
Language:	Bahasa Indonesia and English
Classification within the curriculum:	Compulsory Subject
Teaching format / class hours per week during the semester:	Lectures: 100 minutes lectures, 120 minutes structured activities and 120 minutes individual study per week
Workload:	Total workload of the activity is 136 hours per semester which consist of 100 minutes lectures, 120 minutes structured activities, 120 minutes individual study per week.
Credit points:	2SKS (3.28 ECTS)
Prerequisites course(s):	-
Course Outcome:	After taking this course, the students are expected to be able to: CO1. conduct research in accordance with the project work procedures and safety designed CO2. design useful chemical research projects CO3. present the results of the useful chemical research project and report it
Content:	This course contains useful chemical research project designs, conducting research, presenting research results and reporting them. 1. Introduction to the Chemical Research Project 2. Systematics of Chemical Research Proposals 3. Workshop on Preparation of Chemical Research Proposals 4. Presentation of Chemical Research Proposal 5. Implementation of Chemical Research 6. Data analysis 7. Compilation of Chemical Research Reports 8. Presentation of Chemical Research Report
Study / exam achievements:	Attitude assessment is carried out at each meeting by observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is marked very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not taken into account in

	<p>the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude. The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight (%)</th> </tr> </thead> <tbody> <tr> <td rowspan="4">1</td> <td rowspan="4">CO1, CO2, CO3</td> <td>Assignment</td> <td rowspan="4">Presentation / written test</td> <td>20</td> </tr> <tr> <td>Presentation</td> <td>10</td> </tr> <tr> <td>Final Exam</td> <td>40</td> </tr> <tr> <td>Midterm Exam</td> <td>30</td> </tr> <tr> <td colspan="3">Total</td> <td></td> <td>100</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight (%)	1	CO1, CO2, CO3	Assignment	Presentation / written test	20	Presentation	10	Final Exam	40	Midterm Exam	30	Total				100
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Total				100																		
Forms of media:	Handout, Board, LCD Projector, Laptop/Computer, Module.																					
References:	<ul style="list-style-type: none"> <li>Skoog, D.A., Holler, F.J., &amp; Crouch, S.R. (2018). <i>Principles of Instrumental Analysis 7<sup>th</sup> ed.</i> Boston: Chegange Learning</li> <li>Ancheyta, J. (2017). <i>Chemicals Reaction Kinetics: Concepts, Methods, and Case Studies.</i> Mexico City: Wiley</li> <li>Sivasankar, B. (2012). <i>Instrumental Methods of Analysis.</i> New Delhi: OUP India</li> <li>Akhluwalia, V.K. et al. (2005) <i>Laboratory Technique in Organic Chemistry.</i> New Delhi: IK International</li> <li>American Chemical Society Specifications. (2006) <i>Reagent Chemicals: Specification and Procedures 10<sup>th</sup> ed.</i> Washington: Oxford University Press</li> <li>Ahmad, H. (2012). <i>Kimia Analitik Kualitatif.</i> Bandung: Citra Aditya Bhakti</li> </ul>																					

### PLO and CO mapping

	PLO					
	Attitude		Knowledge	Specific Skill	General Skill	
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CO1				√	√	
CO2			√			
CO3						√