UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY
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Module name:	Thesis
Module level, if applicable:	Undergraduate
Code:	KMA 6621
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	8th
Module coordinator:	Jaslin Ikhsan, Ph.D.
Lecturer(s):	Chemistry Department Team
Language:	Bahasa Indonesia and English
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	300 minutes lectures per week
Workload:	Total workload is 80 hours per semester which consists of 300 minutes course per week for 16 weeks, excluded structured activities and individual study
Credit points:	6 SKS (10 ECTS)
Prerequisites course(s):	-
Course Outcomes	After taking this course, the students have ability to: CO1. Demonstrate piety to God and exhibit a noble character during the course CO2. Maximize the use of IT to complete the undergraduate thesis CO3. Refer to various literature to gain better strategy and research technique to solve the problem CO4. Conduct reserach in chemistry using the right scientific method CO5. Analyze the concept and ways of thinking in chemistry to improve their expertise which are applicable on their daily lives CO6. Be independent, responsible and highly motivated when completing the course CO7. Write down ideas in the form of undergraduate thesis CO8. Defend the result of the research orally during the undergraduate thesis defense CO9. Apply chemistry as an alternative to solve problems CO10. Evaluate the result of the research in chemistry using the concept of mathematics and science CO11.Bring innovation in chemistry research by implementing the right strategies and scientific procedure to solve problems
Content:	This course helps students to implement the basic concept of scientific research based on their expertise by designing,

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<tr><td></td><td>executing, reporting and defending their research in the undergrade thesis defense.</td></tr>
<tr><td>Study / exam achievements:</td><td>The final mark will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO1, CO2, CO3, CO6, CO9, and CO11</td><td>undergraduate thesis proposal</td><td>Rubrics for undergraduate thesis proposal</td><td>15%</td></tr>
<tr><td>2</td><td>CO4, CO5, and CO9</td><td>undergraduate thesis presentation</td><td>Rubrics for written test</td><td>15%</td></tr>
<tr><td>3</td><td>CO3, CO4, CO5, CO6, CO9 and CO7</td><td>undergraduate thesis report</td><td>Rubrics for undergraduate thesis report</td><td>30%</td></tr>
<tr><td>4</td><td>CO4, CO8, and CO10</td><td>undergraduate thesis exam</td><td>Rubrics for oral test</td><td>40%</td></tr>
<tr><td colspan="4">Total</td><td>100%</td></tr>
</table></td></tr>
<tr><td>Forms of media:</td><td>LCD Projector, laptop, and PPT slides</td></tr>
<tr><td>Reference:</td><td>A. Anan’eva, E.A., Mesyats, E.A., Nagovitsyna, O.A. et al. On the interrelation between the methodologies of chemistry and physics. Russ. J. Phys. Chem. 90, 511–516 (2016). https://doi.org/10.1134/S0036024416020047
B. Moser L.B., Hirschmann M.T. (2019) How to Write a Scientific Article. In: Musahl V. et al. (eds) Basic Methods Handbook for Clinical Orthopaedic Research. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-58254-1_54
C. Gruba, Paul, Zobel, Justin, 2017, How to Write Your First Thesis, Springer
D. American Psychological Association. (2010). Publication Manual of the American Psychological Association. Washington DC: APA
E. Regulations of Mistry of National Education number 46 year 2009 about standardized spelling in Bahasa Indonesia
F. Research articles in chemistry</td></tr>
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PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1	✓									
CO2		✓								
CO3			✓							
CO4			✓							
CO5				✓						
CO6					✓					
CO7						✓				
CO8							✓			
CO9								✓		
CO10									✓	
CO11										✓