



UNIVERSITAS NEGERI JAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
CHEMISTRY STUDY PROGRAM

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Bachelor in Chemistry

MODULE HANDBOOK

Module name:	Main Group Chemistry	
Module level, if applicable:	Undergraduate	
Code:		
Sub-heading, if applicable:		
Classes, if applicable:		
Semester:	Ganjil	
Module coordinator:	Dr. Fera Kurniadewi, M.Si	
Lecturer(s):	1. Dr. Sukro Muhab 2. Dr. Agung Purwanto, M.Si 3. Dr. Setia Budi, M.Sc	
Language:	Bahasa Indonesia	
Classification within the curriculum:	Compulsory course	
Type of Teaching	Contact hours per week during the semester	Class Size
Lecture (Expository, discussion, exercise)	100 minutes	40
Workload:	Total workload is 510 minutes (4.5 ECTS) per semester which consists of 150 minutes (1.3 ECTS) learning activity, 180 minutes (1.6 ECTS) structured task and 180 minutes (1.6 ECTS) individual learning per week for 16 weeks.	
Credit points:	4.5 ECTS	
Prerequisite course(s):	Structure of Inorganic Atoms and Molecules	
Course outcomes:	After taking this course the students have ability to: CLO1. Understand the basic principles of science in the basic properties of the main group elements in solving problems in chemical science CLO2. Able to master the knowledge of main group compounds related to changes in structure, properties, functions, changes in energy and dynamics, in the transformation and synthesis of inorganic chemistry and its application	

	<p>CLO3. Understand the concept of main group properties including the formation of salts, oxides, acids, hydrides, nitrides, carbides, halides and noble gases and their applications</p> <p>CLO4. Understand basic operational knowledge about the working function of the instrument, as well as analysis of data and information from the instrument used to verify the main group elements.</p> <p>CLO5. Able to interpret and evaluate scientific data and generate conclusions by considering scientific and technological aspects as well as scientific ethics.</p>															
Content:	<ol style="list-style-type: none"> 1. Elements of Group 1 2. Elements of Group 2 3. Elements of Group 17 4. Elements of Group 18 5. Elements of Group 13 6. Elements of Group 14 7. Elements of Group 15 8. Elements of Group 16 															
Study/exam achievements:	<p>Examinations are conducted as Unit Tests. There are two-unit tests, each covers 4-5 chapters. The final marks are derived from unit tests (70%) and structured tasks (30%).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">No</th> <th style="width: 15%;">CO</th> <th style="width: 30%;">Assesment Object</th> <th style="width: 25%;">Assessment Techniques</th> <th style="width: 20%;">Weight</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">CO 1-9</td> <td>a. Assignments b. UTS c. UAS d. Presence</td> <td style="text-align: center;">Written test</td> <td style="text-align: center;">20% 30% 40% 10%</td> </tr> <tr> <td colspan="4" style="text-align: right;">Total</td> <td style="text-align: center;">100%</td> </tr> </tbody> </table>	No	CO	Assesment Object	Assessment Techniques	Weight	1	CO 1-9	a. Assignments b. UTS c. UAS d. Presence	Written test	20% 30% 40% 10%	Total				100%
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1	CO 1-9	a. Assignments b. UTS c. UAS d. Presence	Written test	20% 30% 40% 10%												
Total				100%												
Media	Computer, Module, Textbook, LMS, Zoom, Google Classroom, Google Meet, Microsoft Teams															
Literatures	<ol style="list-style-type: none"> 1. Atkins, P.W., Shriver, D., Overton, T.L., Rourke, J.P., Weller, M.T., Armstrong, F.A., 2018, Shriver and Atkins' Inorganic Chemistry, 7th Edition, Oxford University Press. 2. Huheey, J.E., Keiter, E.A., and Keiter, R.L., 1993, Inorganic Chemistry : Principles and Structure Reactivity, 4th edition, Harper Collins Publisher 3. Housecroft, C.E., and Sharpe, A.G., 2012, Inorganic Chemistry 4th Edtn, Pearson Education Limited 4. Miessler, G.L., Fischer, P.J., and Tarr, D.A., 2014, Inorganic Chemistry, 5th Edtn, Pearson Education. 5. Greenwood, N.N., and Earnshaw, A. 1997, Chemistry of the Elements, 2nd ed., Butterworth-Heinemann, Oxford 															

