MODULE HANDBOOK

Module Name	Mechanism of Inorganic Reaction
Module Level	Bachelor
Abbreviation, if applicable	3074212056
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	7th/ fourth year
Module coordinator(s)	Dr. Amaria, M.Si.
Lecturer(s)	**Prof. Dr. Sari Edi C., M.Si. ; Dr. Amaria, M.Si.** ; **Dina Kartika M., S.Si., M.Sc.**
Language	Bahasa Indonesia
Classification within the curriculum	~~Compulsory~~/Elective
Teaching format/class hours per week during the semester	2 hours lectures (50 min / hour)
Workload	Lecture: 2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester. 79.33 total hours per semester ~ 3.18 ECTS**
Credit point	2 CU x 1.59 = 3.18 ECTS
Requirement	Basic chemistry I, II, Inorganic Chemistry I (Basic Theory of Inorganic) and Coordination Chemistry
Target Learning Outcomes	PLO 1 Mastering the concepts of structure, dynamics and energy, as well as the basic principles of separation, analysis, synthesis and characterization of micromolecular compounds and their applications. PLO 5 Able to apply logical, critical, systematic and innovative thinking in the context of developing or applying science and technology by paying attention to and applying humanities values according to the field of chemistry in problem solving.
Content	Studies on thermodynamic stability, stereochemistry of complex compounds, mechanism and kinetics of substitution reactions of octahedral and square complexes in a group collaboration forum with discussion activities

<table>
<tr><td>Attribute Soft skill</td><td>Active communication; Discipline; Collaboration; Responsibility; and Argumentation in class and outdoor setting</td></tr>
<tr><td>Study/exam achievements</td><td>Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio:
<table>
<tr><td>Assessment Components</td><td>Percentage of contribution</td></tr>
<tr><td>Participation</td><td>20%</td></tr>
<tr><td>Assignment</td><td>30%</td></tr>
<tr><td>Mid-semester test</td><td>20%</td></tr>
<tr><td>Final semester test</td><td>30%</td></tr>
</table>
Grade Conversion of 0-100 scale into 0-4 scale is set as below:
<table>
<tr><td>Letter</td><td>Number</td><td>Grade interval</td></tr>
<tr><td>A</td><td>4.00</td><td>$85 \leq A \leq 100$</td></tr>
<tr><td>A-</td><td>3.75</td><td>$80 \leq A- < 85$</td></tr>
<tr><td>B+</td><td>3.50</td><td>$75 \leq B+ < 80$</td></tr>
<tr><td>B</td><td>3.00</td><td>$70 \leq B < 75$</td></tr>
<tr><td>B-</td><td>2.75</td><td>$65 \leq B- < 70$</td></tr>
<tr><td>C+</td><td>2.50</td><td>$60 \leq C+ < 65$</td></tr>
<tr><td>C</td><td>2.00</td><td>$55 \leq C < 60$</td></tr>
<tr><td>D</td><td>1.00</td><td>$40 \leq D < 55$</td></tr>
<tr><td>E</td><td>0.00</td><td>$0 \leq E < 40$</td></tr>
</table></td></tr>
<tr><td>Media:</td><td>Computer, LCD, White board, Presentation, and Books.</td></tr>
<tr><td>Learning Methods</td><td>Lecture using: Student-centered approach; project-based learning; and discussion; and presentations (structured activities)</td></tr>
<tr><td>Literature:</td><td>1. Basolo, F. and Pearson R.G. 1973. Mechanisms of Inorganic Reactions., Wiley Eastern Private LTD. New Delhi.
2. Benson, D., 1968. Mechanisms of Inorganic Reactions in Solution, McGraw-Hill, London.
3. Douglas, B.E. ; McDaniel, D. H. ; Alexander, J.J., 1994. Concepts and Models of Inorganic Chemistry, Third Edition, John Wiley & Sons, Inc. New York.
4. Huheey, J.E. ; Keiter, E.A. ; Keiter, R.L., 1990, Inorganic Chemistry, Principles of Structure and Reactivity, Fourth Edition, Harper Collins College</td></tr>
</table>

	Publishers. 5. Miessler, G.L. & Tarr, D. A., 1991, Inorganic Chemistry, Prentice Hall International, Inc., London.
Notes:	*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. The Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.
	**1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019