

## MODULE HANDBOOK

Module Name	Coordination Chemistry
Module level	Bachelor
Abbreviation, if applicable	3074212034
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	4 <sup>th</sup> semester/Second Year
Module coordinator(s)	Dr. Amaria, M.Si.
Lecturer(s)	Prof. Dr. Sari Edi Cahyaningrum, M.Si. Dr. Amaria, M.Si. Dina Kartika Maharani, S.Si., M.Sc.
Language	Indonesian
Classification within the curriculum	Compulsory Course
Teaching format/class hours per week during the semester:	2 hours lecturers (50 min per hours)
Workload:	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 points:	2 CU x 1.59 = 3.18 ECTS
Prerequisites course(s):	-
Targeted learning outcomes:	CLO1 Understand the concepts of covalent bonds, ligands, stereochemistry, stability, magnetic properties and electronic spectra of coordination compounds. CLO2 Able to draw structures and predict the properties of coordination compounds CLO3 Communicate both verbally and in writing the concept of chemical bonds, stereochemistry, stability, magnetic properties, and electronic spectra of the coordination compound. CLO4 Demonstrate caring attitude and responsibility in applying coordination compounds in the environment
Content:	<ul style="list-style-type: none"> <li>• The concept of coordination compounds,</li> <li>• Bond theories,</li> <li>• Types of ligands,</li> <li>• Stereochemistry,</li> <li>• Stability of complex ions,</li> <li>• Term symbols,</li> <li>• Multiplicity,</li> <li>• Orgel diagrams,</li> <li>• Tanabe-Sugano diagrams of coordination compounds</li> </ul>
Study / exam achievements:	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:

	Assessment Components	Percentage of contribution
	Participation	20%
	Assignment	30%
	Mid-semester test	20%
	Final semester test	30%
Media:	Computer, LCD, White board	
Learning Methods	Individuals assignment, group assignment, discussion, presentation	
Literature:	<ol style="list-style-type: none"> <li>1. Basolo, F and Johnson, R.C. 1986. Coordination Chemistry, 2nd Edition. New York: W.A. Benjamin, Inc.</li> <li>2. Sugiarto, Bambang. 2006. Teori Senyawa Koordinasi. Surabaya: Unesa University Press.</li> <li>3. Quagliano, J. V. And Vallarino, L. M., 1969. Coordination Chemistry, Massachusetts: D. C. Heath and Company</li> <li>4. Huheey, E. James, Ellen, A.K, and Richard I.K. 1978. Inorganic Chemistry, Principle of Structure and Reactivity. USA: Harper Collins College Publishers</li> <li>5. Madan, R.D., 1997. Modern Inorganic Chemistry , S. Chand and Company LTD, New Delhi.</li> </ol>	
Notes:	<p>*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.</p> <p>**1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019</p>	