MODULE HANDBOOK

Module Name	Coordination Chemistry
Module level	Bachelor
Abbreviation, if applicable	8420402116
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	5th/Third Year
Module coordinator(s)	Dr. Amaria, M.Si.
Lecturer(s)	Prof. Dr. Sari Edi Cahyaningrum. 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:	1 CU for bachelor degree equals to 3 workhours per week or 170 minutes (50' face to face learning, 60' structured learning, and 60' independent learning). In one semester, courses are conducted in 14 weeks (excluding mid and end-term exam). Thus, 1 CU equals to 39.67 workhours per semester. One CU equals to 1.59 ECTS
Credit points:	2 CU = 2 x 1.59 = 3.18 ECTS
Prerequisite course(s):	-
Targeted learning outcomes:	CLO 1 : Students are able to understand the concepts of covalent bonding, ligands, stereochemistry, stability, magnetic properties and electronic spectra of coordinating compounds CLO 2 : Students are able to structure and predict the properties of coordination compounds CLO 3 : Students are able to communicate both verbally and in writing the concepts of chemical bonds, stereochemistry, stability, magnetic properties, and electronic spectra of coordinating compounds CLO 4 : Students Have a caring and responsible attitude in applying coordination compounds in the environment
Content:	**Introduction**: The properties, the development of coordination compounds and the nomenclature **Bonds in coordination compounds:** Effective Atomic Number, Valence Bond Theory, Crystal Field Theory, Molecular Orbital Theory **Geometry and Isomerism of Coordination compounds:** Various isomerism in coordination compounds, Geometry isomersm, Optic isomerism **Stabilty of Coordination Compounds**: Stability of the complex thermodynamic and kinetic, Reaction steps for the

	reaction of the formation of the coordination compound, Factors affecting the stability of coordination compounds. **Term Simbol, Multiplisitas, Diagram Orgel, dan Diagram Tanabe-Sugano**
Study/exam achievements:	Students are considered to be competent and pass if at least get 55 Final score is calculated as follows: 20% participation + 30% assignment + 20% middle exam (UTS) & 30% final exam (UAS) Table index of graduation • A = 4 (85 ≤-≥ 100) • A- = 3,75 (80 ≤-< 85) • B+ = 3,5 (75 ≤- < 80) • B = 3 (70 ≤-< 75) • B- = 2,75 (65 ≤-<75) • C+ = 2,5 (60 ≤-<65) • C = 2 (55 ≤-<60) • D = 1 (40 ≤-<55) • E = 0 (0 ≤-<40)
Media:	Computer, LCD, White board
Learning Methods	Individuals assignment, group assignment, discussion, and presentation
Literature:	1. Basolo, F and Johnson, R.C. 1986. *Coordination Chemistry, 2nd Edition*. New York: W.A. Benjamin, Inc. 2. Sugiarto, Bambang. 2006. *Teori Senyawa Koordinasi*. Surabaya: Unesa University Press 3. Quagliano, J. V. And Vallarino, L. M., 1969. *Coordination Chemistry*, Massachusetts: D. C. Heath and Company 4. Huheey, E. James, Ellen, A.K, and Richard I.K. 1978. *Inorganic Chemistry, Principle of Structure and Reactivity*. USA: Harper Collins College Publishers 5. Madan, R.D., 1997. *Modern Inorganic Chemistry*, S. Chand and Company LTD, New Delhi.