

Module Descriptions

Module designation	Coordination Chemistry
Semester(s) in which the module is taught	4th semester/ 2nd year
Person responsible for the module	Dr. Amaria, M.Si.
Language	Bahasa Indonesia (Regular Class) Bahasa Inggris (Internasional Class)
Relation to curriculum	Compulsory course
Teaching methods	Case Method 2 workhours per week (3 x 170 minutes per week)
Workload (incl. contact hours, self-study hours)	1 CU for a bachelor's degree equals 170 minutes (50 minutes face-to-face, 60 minutes structured, 60 minutes independent learning) per week × 14 weeks, excluding mid and end-term exams. = 39.67 work hours per semester = 1.587 ECTS.
Credit points	2 Credit Units (CU) = 3.18 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. Able to elaborate on the concepts of covalent bonds, ligands, stereochemistry, stability, magnetic properties, and electronic spectra of coordination compounds. 2. Able to predict the structure and properties of coordination compounds. 3. Able to communicate, both verbally and in writing, the concepts of chemical bonding, stereochemistry, stability, magnetic properties, and electronic spectra of coordination compounds. 4. Able to demonstrate a caring and responsible attitude in applying coordination compounds in the environment.
Content	Study of the concepts: chemical bonding, stereochemistry, reaction mechanisms, properties, spectra, preparation, and stability of coordination chemistry.
Examination forms	Essay and Oral Presentation
Study and examination requirements	<p>Study and Examination Requirements/Assessment:</p> <ol style="list-style-type: none"> 1. Individual assignments (case analysis reports) 2. Group case studies and discussions 3. Documentation and presentation of case study findings <p>Assessment Recap (Case Study-Oriented):</p> <ol style="list-style-type: none"> 1. Participatory Activities/Case Study Analysis: 60% 2. Portfolio: 17,5% 3. Test: 22.5% <p style="text-align: center;">Total: 100%</p>

Reading list	<ol style="list-style-type: none">1. Quagliano, J. V. And Vallarino, L. M., 1969. Coordination Chemistry, Massachusetts: D. C. Heath and Company2. Huheey, E. James, Ellen, A.K, and Richard I.K. 1978. Inorganic Chemistry, Principle of Structure and Reactivity. USA: Harper Collins College Publishers3. Madan, R.D., 1997. Modern Inorganic Chemistry, S. Chand and Company LTD, New Delhi.4. Kagatkar, S., Sunil, D., 2021. Schiff Bases and Their Complexes in Organic Light Emitting Diode Application. Journal of Electronic Materials. 50, 6708 6723.5. Liang, L., Wu X., et al. 2022. Synthesis and characterization of polypyridine ruthenium(II) complexes and anticancer efficacy studies in vivo and in vitro. Journal of Inorganic Biochemistry. 236, 111963
--------------	--