

Module Handbook

Module Name:	Physical Inorganic Chemistry
Module Level:	Bachelor
Abbreviation, if applicable:	KII 301
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	6 TH / Third Years
Module coordinator(s):	Dr. Hartati
Lecturer(s):	Harsasi Setyawati, M.Si ; Ahmadi Jaya Permana, M.Si
Language:	BahasaIndonesia
Classification within the curriculum	Compulsory Course / Elective Studies
Teaching format / class hours per week during semester:	3 hours lectures (50 min / hour)
Workload:	3 hours lectures, 3 hours structured activities, 3hours individual study, 13 week per semester, and total 117 hours per semester ~ 3.9 ECTS *
Credit Points:	3 SCU
Requirements:	Inorganic Chemistry II (KII 203)
Learning goals/competencies:	<p>General Competence(knowledge) : Able to describe the basic principles of inorganic reactions, energy ties with inorganic reactions and electronegative elements forming compounds</p> <p>Specific Competence :</p> <ol style="list-style-type: none"> 1. Being able to decipher the basic principles of inorganic reactions, the types of solvent, the relationship between the free energy of the reaction enthalpy and entropy of inorganic compounds 2. Able to apply the theory of acids and bases in chemical reactions and acid-base reaction equations based on different solvents 3. Ability to calculate constant of the acid by reaction enthalpy equation Pauling and inorganic compounds based on equality Drago-Wayland, energy, enthalpy and entropy in chemical reactions of inorganic compounds, inorganic compounds of energy on the constituent elements electronegativity 4. Being able to interpret the chemical reactions that form in various solvents, the spontaneity of a chemical reaction by price reaction free energy 5. Being able to determine the percent of inorganic ions bimolecular compounds based on different constituent elements electronegativity.
Content:	In the course of physical inorganic chemistry will discuss the basic principles of inorganic reactions, acid-base theory, an overview of solvents, inorganic reaction relations with energy, and energy ties with electronegative elements in forming compounds
Soft skill	Good communication and team-work
Study/exam achievements:	Students are considered to be competent and pass if at least get 55

	<p>The final value is calculated as follows: 20% + 10% assignment soft skill + midterms (UTS) 35% + final exams (UAS) 35%</p> <p>Table Value Graduation A: 100> NA≥75 AB: 74,9≥NA≥70 B: 69,9≥NA≥65 BC: 64,9≥NA≥60 C: 59,9≥NA≥55 D: 54,9≥NA≥40 E: 39,9≥NA</p>
Learning Methods	Lectures and Discussion
Forms of Media:	LCD, Computer, White board, internet
Literature:	<ol style="list-style-type: none"> 1. Dasent< W.E., 1962, <i>Inorganic Energetic, an Introduction</i>, 2nd ed., Cambridge University Press, Cambridge, London 2. Miessler, G.L., Tarr, D.A., 1991, <i>Inoranic Chemistry</i>, Prentice Hall, International Inc., New Jersey 3. Huheey, J.E., 1983, <i>Inorganic Chemistry, Principles of Structure and Reactivity</i>, 3rd ed., Harper and Publisher, New York 4. Rivai Harrizul, 1995, <i>Azas Pemeriksaan Kimia</i>, UI Press, Jakarta 5. Bowser, J.R., 1993, <i>Inorganic Chemistry</i>, Book cole Pub co., California 6. Lee, J.D., 1991, <i>Concise Inorganic Chemistry</i>, 4th ed., Chapman & Hall, London Brady, J.E., <i>General Chemistry</i> (Terjemahan dengan judul Kimia untuk Universitas oleh Pujaatmaka, A.H.), penerbit Erlangga, Jakarta
Notes:	<p>*Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours</p> <p>Each ECTS is equals with 25 hours</p>