

Module Handbook

Modul Name	Elucidation of Organic Structure
Module Level	Bachelor
Abbreviation, applicable if	KIO 302
Sub-heading, applicable if	-
Course included in the module, if applicable	-
Semester/term	6 th / third year
Modul coordinator(s)	Dr. MulyadiTanjung, MS.(C1) Dr. NanikSitiAminah, MSi. (C2);
Lecturer(s)	Dr. PratiwiPudjiastuti, MSi.; Dr. Alfinda Novi Kristanti, DEA;
Language	Bahasa Indonesia
Classification within the curriculum	Compulsory Course
Teaching format/class hours per week during the semester	3 hours (50 min/hour)
Workload	3 hours lecture, 3hours individual activities, 3 hours structured activities, 13 weeks per semester, andtotal 117 hours semester ~ 3,9 ECTS *
Credit point	3
Requirement	Organic Chemistry II
Learning Outcomes	<p>General competence (Knowledge): Being able to deduce the molecular structure of organic compounds by testing the physical, chemical and physico-chemical (spectroscopic).</p> <p>Specific Competence:</p> <ol style="list-style-type: none"> 1. Being able to interpret class of organic compounds based on the physical properties, solubility and analysis of functional groups 2. Being able to predict spectra of compounds by UV - VIS 3. Able to interpret the IR spectra of organic compounds 4. Being able to predict the structure of organic compounds by H - NMR and C - NMR 5. Being able to predict the structure of organic molecules based on their molecular weight and fragmentation pattern 6. Predicting the structure of organic compounds by spectral UV - VIS, IR, NMR and MS
Content	Preliminary analysis of organic compounds consisting of the determination of the physical properties, elemental analysis, solubility classes, analysis of functional groups. Basic theory and interpretation of spectral UV-VIS, IR, NMR and Mass Spectrometry with a variety of ionization techniques in organic structure determination. Summing up the structure of the compound based on the data analysis of physical properties, class solubility, functional groups, spectral UV-VIS, IR, NMR and MS
Attribute softskill	Communication skill, group skill, logical skill
Study/exam achievements	<p>Students are considered to be competent and pass if at least get 55</p> <p>Final score is calculated as follows: Quiz 20%, Structured activities 20%, middle exam (UTS) 30%; final</p>

	<p>exam(UAS) 30%</p> <p>Final index graduation</p> <p>A : 100>NA≥75</p> <p>AB: 74,9> NA≥70</p> <p>B : 69,9> NA≥65</p> <p>BC : 64,9> NA≥60</p> <p>C : 59,9>NA≥55</p> <p>D : 54,9>NA≥40</p> <p>E : 39,9≥NA</p>
Learning Methods	<ul style="list-style-type: none"> - Lecture - Discussion
Forms of media	LCD, computer, White board, internet
Literature	<ol style="list-style-type: none"> 1. Shriner et al, 1980, <i>The Systematic Identification of Organic Compounds</i>, 6th ed., John wiley & Sons, New York 2. Silverstain, Bassler, Morrill, 1991, <i>Spectrometric Identification of Organic Compounds</i>, 5th ed., John wiley & Sons, New York 3. William, D.H., Fleming, I., 1987, <i>Spectrometric Identification of Organic Compounds</i>, 4th ed., McGraw-Hill, New York
Note	<p>*Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours</p> <p>Each ECTS is equals with 25 hours</p>