

MODULE HANDBOOK

Module Name	Practicum of Organic Chemistry
Module level	Bachelor
Abbreviation, if applicable	-
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	4 th /Second Year
Module coordinator(s)	Prof. Dr. Tukiran, M.Si.
Lecturer(s)	1. Prof. Dr. Suyatno, M.Si. 2. Dr. Ismono, M.S. 3. Dr. Mitarlis, M.Si. 4. Dr. Rinaningsih, M.Pd.
Language	Indonesian
Classification within the curriculum	Compulsory Course
Teaching format/class hours per week during the semester	3 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	3 CU = 3 x 1.59 = 4.77 ECTS
Prerequisites course(s)	-
Targeted learning outcomes	CLO 1 : Students have the skills to perform purification, identify functional groups, determine physical properties, synthesize simple organic compounds, and isolate biological organic compounds. CLO 2 : Students have the ability to make decisions based on the results of the refining process, identification of functional groups, determination of physical properties, synthesis of simple organic compounds, and isolation of biological organic compounds. CLO 3 : Students have the ability to mastery the basic concepts of purification, identification of functional groups, determination of physical properties, synthesis of simple organic compounds, and isolation of biological organic compounds. CLO 4 : Students have a responsible attitude in identifying, synthesizing and isolating organic compounds.
Content	1. Basic principles of distillation, sublimation, and solvent extraction and basic skills working in the laboratory 2. Practicum of re-crystallization and melting point determination 3. Practicum of alkanes, alkenes, and alkyne 4. Practicum of alcohol and phenol

	<ol style="list-style-type: none"> 5. Practicum of aldehyde and ketone 6. Practicum of carboxylic acids 7. Practicum of Identification to types of carbohydrates 8. Practicum of Identification to the properties of proteins 9. Practicum of Identification to Lipids 10. Practicum of aspirin synthesis 11. Practicum of <i>n</i>-Butyl acetate Synthesis 12. Practicum of Isolation of ginger oil 13. Practicum of Phytochemical Test 14. Practicum of extraction and purification of biological organic compounds, and 15. Presentation of practicum results
Study / exam achievements	<p>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).</p> <p>Table index of graduation</p> <ul style="list-style-type: none"> • 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, chemicals and laboratory equipment for doing practicum
Learning Methods	Individuals assignment, group assignment, discussion, presentation, and practicum
Literature	<ol style="list-style-type: none"> 1. Fessenden, R.J. dan Fessenden, J.S. (1998). <i>Kimia Organik</i>. Jilid 1 dan 2. Penerjemah AH Pudjaatmaka. Jakarta: Erlangga. 2. Solomon, T.W.G. & Fryhle, C.B. (2011). <i>Organic Chemistry</i>. 10th Edition. New York: John Wiley & Sons, Inc. 3. Vogel, A.I. (1974). <i>A Text Book of Practical Organic Chemistry</i>. London: Longman Group Limited. 4. Anwar, C., Purwono, B., Pranowo, H.D., Wahyuningsih, T.D. (1996). <i>Pengantar Praktikum Kimia Organik</i>. Jakarta: Depdikbud Dirjendikti. 5. Harborne, J.B. (1987). <i>Metode Fitokimia</i>. Penerjemah: Kosasih P. Bandung : Penerbit ITB.