

MODULE HANDBOOK

Module Name	Practicum of Organic Chemistry
Module level	Bachelor
Abbreviation, if applicable	3074212038
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)	Prof. Dr. Suyatno, M.Si., Dr. Ismono, M.S., Dr. Mitarlis, M.Si., Dr. Rinaningsih, M.Pd., Dr. Ratih Dewi Saputri, M.Si.
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	2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester, 79,33 total hours per semester ~ 3.18 ECTS**
Credit points	2 CU x 1.59 = 3.18 ECTS
Prerequisites course(s)	-
Targeted learning outcomes	<p>CLO 1 Students have the skills to perform purification, identify functional groups, determine physical properties, synthesize simple organic compounds, and isolate biological organic compounds.</p> <p>CLO 2 Students can make decisions based on the refining process results, identification of functional groups, determination of physical properties, synthesis of simple organic compounds, and isolation of biological organic compounds.</p> <p>CLO 3 Students can master the basic concepts of purification, identification of functional groups, determination of physical properties, synthesis of simple organic compounds, and isolation of biological organic compounds.</p> <p>CLO 4 Students have a responsible attitude in identifying, synthesizing, and isolating organic compounds.</p>
Content	<ol style="list-style-type: none"> 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 alkynes 4. Practicum of alcohol and phenol 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	Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio: <table border="1" data-bbox="598 629 1406 871"> <thead> <tr> <th>Assessment Components</th> <th>Percentage of contribution</th> </tr> </thead> <tbody> <tr> <td>Participation</td> <td>20%</td> </tr> <tr> <td>Assignment</td> <td>30%</td> </tr> <tr> <td>Mid-semester test</td> <td>20%</td> </tr> <tr> <td>Final semester test</td> <td>30%</td> </tr> </tbody> </table>	Assessment Components	Percentage of contribution	Participation	20%	Assignment	30%	Mid-semester test	20%	Final semester test	30%
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Media	Computer, LCD, White board, chemicals and laboratory equipment for doing practicum										
Learning Methods	Individuals assignment, group assignment, discussion, presentation, and practicum										
Literature	1. Anwar, C., Purwono, B., Pranowo, H.D., Wahyuningsih, T.D. (1996). <i>Pengantar Praktikum Kimia Organik</i> . Jakarta: Depdikbud Dirjendikti. 2. Fessenden, R.J. dan Fessenden, J.S. (1998). <i>Kimia Organik</i> . Jilid 1 dan 2. Penerjemah AH Pudjaatmaka. Jakarta: Erlangga. 3. Harborne, J.B. (1987). <i>Metode Fitokimia</i> . Penerjemah: Kosasih P. Bandung : Penerbit ITB. 4. Solomon, T.W.G. & Fryhle, C.B. (2011). <i>Organic Chemistry</i> . 10 th Edition. New York: John Wiley & Sons, Inc. 5. Vogel, A.I. (1974). <i>A Text Book of Practical Organic Chemistry</i> . London: Longman Group Limited.										
Notes:	*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. The Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018. **1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019										