MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY
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MODULE HANDBOOK

Module Name:	Mono-function Organic Compound
Module level:	Bachelor
Course Code :	8420403164
Abbreviation, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	3rd/Second year
Module coordinator(s):	Dr. Ismono M.S.
Lecturer(s):	Dra. Nurul Hidayati, M.Si. Dr. Mitarlis, S.Pd., M.Si. Dr. Rinaningsih, M.Pd.
Language:	Bahasa Indonesia
Classification within the Curriculum:	Compulsory Course
Teaching format/class hours per week during the semester:	3 hours lectures (50 min / hour)
Workload:	3 x 50 minutes lectures, 3 x 60 minutes structured activity, 3 x 60 minutes individual activity, 14 weeks per semester, 119 total hours per semester ~ 4.77 ECTS**
Credit unit:	3 CU = 3 x 1.59 = 4.77 ECTS
Prerequisite course(s):	-
Targeted learning outcomes:	CLO 1 Students can use information based on experience and cases in everyday life, other learning resources, and ICT to support understanding of the concept of monofunctional compound with discussions, presentations, and collaboration to study Organic Chemistry 1: Monofunctional Compound. CLO 2 Students have knowledge about structure theory of organic compound, by doing scientific process skills, critical, analytical, and creative thinking skills, as well as problems solving skills. CLO 3 Having a responsible attitude by applying an understanding of learning material in the organic chemistry 1 (monofunctional compound) about the properties of compounds in implementation in everyday life.

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<tr><td></td><td>CLO 4 Students be able to participate in society and have a commitment to developing self-potential in order to build character to achieve organizational goals.</td></tr>
<tr><td>Content:</td><td>1. Introduction: Definition of organic compound, structure theory and the properties of organic compounds.
2. The structure, nomenclature, isomers, and properties and synthesis of alkanes, alkenes and alkyne compounds.
3. The structure, nomenclature and properties of aromatic hydrocarbons and the application of substitution reactions for the synthesis of other compounds.
4. The structure, nomenclature, properties and synthesis of alkyl halogenides.
5. Stereochemistry theory includes: geometric isomers in alkenes, geometric isomers in cyclic compounds, conformation of open-chain compounds, cyclic compound forms, cyclohexane conformers.
6. Structure, nomenclature, classification of properties, differences and similarities as well as the synthesis of alcohol - phenol - ether compounds.
7. Structure, nomenclature, properties and is able to predict isomers and can synthesize carbonyl compounds
8. Structure, nomenclature, isomers, properties especially acidity and synthesis of carboxylic acids and their derivatives
9. Structure, nomenclature, isomers, properties and synthesis of amine compounds.</td></tr>
<tr><td>Study / exam achievements:</td><td>The final grade (NA) is calculated based on the following ratio:
<table>
<tr><td>Assessment Components</td><td>Percentage of contribution</td></tr>
<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>
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Grade conversion of 0-100 scale into 0-4 scale is set as below:
<table>
<tr><td>Letter</td><td>Number</td><td>Grade Interval</td></tr>
<tr><td>A</td><td>4,00</td><td>$85 \leq A \leq 100$</td></tr>
<tr><td>A-</td><td>3,75</td><td>$80 \leq A- < 85$</td></tr>
<tr><td>B+</td><td>3,50</td><td>$75 \leq B+ < 80$</td></tr>
<tr><td>B</td><td>3,00</td><td>$70 \leq B < 75$</td></tr>
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<tr><td>B-</td><td>2,75</td><td>$65 \leq B- < 70$</td></tr>
<tr><td>C+</td><td>2,50</td><td>$60 \leq C+ < 65$</td></tr>
<tr><td>C</td><td>2,00</td><td>$55 \leq C < 60$</td></tr>
<tr><td>D</td><td>1,00</td><td>$40 \leq D < 55$</td></tr>
<tr><td>E</td><td>0,00</td><td>$0 \leq E < 40$</td></tr>
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<tr><td>Media:</td><td>Computer, LCD, White board, chemicals and equipment in laboratory for doing practicum</td></tr>
<tr><td>Learning Methods</td><td>Individuals assignment, group assignment, discussion, presentation, and practicum</td></tr>
<tr><td>Literature:</td><td>1. Fessenden, Ralph J. and Fessenden, Joan S. 1995. Organic Chemistry, Fifth Edition.
2. Solomons G., TW. 2011. Organic Chemistry tenth edition. New York: John Wiley & Sons Inc.
3. The article which is related to the topic of monofunctional compounds from website resources</td></tr>
<tr><td>Notes:</td><td>*1 credit unit or sks 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 credit unit or sks = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/HK/AK/2019</td></tr>
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