

## MODULE HANDBOOK

Module Name	Organic Polymer Chemistry									
Module Level	Bachelor									
Abbreviation, if applicable	3074112079									
Sub-heading, if applicable	-									
Course included in the module, if applicable	-									
Semester/term	8 <sup>th</sup> / Fourth year									
Module coordinator(s)	Dr. Ismono, M.S.									
Lecturer(s)	Dr. ismono, M.S. Prof. Dr. Titik Taufikurohmah, M.Si.									
Language	Indonesian Language									
Classification within the curriculum	Elective course									
Teaching format/class hours per week during the semester	2 hours lectures (50 min / hour)									
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 point	2 CU x 1.59 = 3.18 ECTS									
Prerequisite course(s)	Monofunction Organic Compounds and Polyfunction Organic Compound									
Targeted Learning Outcomes	<p>CLO 1: Able to use the learning resources and ICT to support learning related to polymers and implementation of polymers in everyday life.</p> <p>CLO 2: Mastering the knowledge of polymers, and implementation of polymers in everyday life.</p> <p>CLO 3: Able to make decisions in determining the positive and negative aspects of the role of polymers in everyday life</p> <p>CLO 4: Demonstrate a responsible by implementing the positive impact and how to overcome the negative impact of using polymers in everyday life</p>									
Content	This course discusses the polymer classification, reaction mechanisms and polymer kinetics, ionic addition polymers and free radicals, condensation polymers, determination of polymer molecular mass, polymer solubility, polymer structure and stereochemistry, copolymer reactions, and polymer implementation in everyday life and industry.									
Study/exam achievements	<p>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:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Assessment Components</th> <th style="text-align: center;">Percentage of contribution</th> </tr> </thead> <tbody> <tr> <td>Participation</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>Assignment</td> <td style="text-align: center;">30%</td> </tr> <tr> <td>Mid-semester test</td> <td style="text-align: center;">20%</td> </tr> </tbody> </table>		Assessment Components	Percentage of contribution	Participation	20%	Assignment	30%	Mid-semester test	20%
Assessment Components	Percentage of contribution									
Participation	20%									
Assignment	30%									
Mid-semester test	20%									

	Final semester test	30%
Media	Computer, LCD, White board	
Learning Methods	Lectures, discussion, assignment	
Literature	<ol style="list-style-type: none"> <li>1. Akay, M. (2012). <i>Introduction to Polymer Science and Technology, 1<sup>st</sup> Ed.</i> <a href="http://bookboon.com/en/introduction-to-polymer-science-and-technology-ebook">http://bookboon.com/en/introduction-to-polymer-science-and-technology-ebook</a></li> <li>2. Fessenden, R.J. dan Fessenden, J.S. (1998). <i>Kimia Organik</i>. Jilid 1 dan 2. Penerjemah AH Pudjattmaka. Jakarta: Erlangga.</li> <li>3. Idol, J.D. &amp; Richard L. Lehman, R.L. (2004), <i>Polymer</i>, CRC Press, Boca Raton, London, New York, Washington DC, <a href="http://amipp.rutgers.edu/assets/documents/scholarlypubs/Polyimers.pdf">http://amipp.rutgers.edu/assets/documents/scholarlypubs/Polyimers.pdf</a></li> <li>4. <u>Mark</u>, J.E. (2007), <i>Physical Properties of Polymers Handbook</i>, <a href="http://link.springer.com/book/10.1007%2F978-0-387-69002-5">http://link.springer.com/book/10.1007%2F978-0-387-69002-5</a></li> <li>5. Osian, (1970), <i>Principles of Polymerization</i>, New York: McGraw-Hill</li> </ol>	
Notes:	<p>*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.</p> <p>**1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/Hk/Ak/2019</p>	