

MODULE HANDBOOK

Module Name	Surface Chemistry					
Module Level	Bachelor					
Abbreviation, if applicable	3074213046					
Sub-heading, if applicable	-					
Course included in the module, if applicable	-					
Semester/term	5 th / Third Year					
Module coordinator(s)	Prof. Dr. Harun Nasrudin, M.S.					
Lecturer(s)	Bertha Yonata, M.Pd.					
Language	Indonesian					
Classification within the curriculum	Compulsory					
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 Point	3 CU x 1.59 = 4.77 ECTS					
Requirement	Physical Chemistry III					
Learning Outcome	<ul style="list-style-type: none"> • Students have the ability to communicate the results of viscosity, surface tension, adsorption, and colloidal analysis so that they are able to develop a conceptual framework for formulating actions or alternative actions in solving chemical problems in life. • Students are skilled in using tools in analyzing viscosity, surface tension, adsorption, and colloids. • Students have knowledge of the surface characteristics of capillary symptoms, surface thermodynamics, adsorption, surfactants, detergents, emulsions, bases and aerosols, chemisorption and catalysts. • Students have the ability to collaborate and are responsible for designing, implementing and reporting the results of experiments on viscosity, surface tension, adsorption, and colloids. 					
Content	Study of the surface characteristics of capillary symptoms, surface thermodynamics, adsorption, surfactants, detergents, emulsions, bases and aerosols, chemisorption and catalysts					
Study/Exam Achievement	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" style="width: 100%; margin-top: 5px;"> <thead> <tr> <th style="text-align: left;">Assessment Components</th> <th style="text-align: left;">Percentage of contribution</th> </tr> </thead> <tbody> <tr> <td>Participation</td> <td style="text-align: center;">20%</td> </tr> </tbody> </table>		Assessment Components	Percentage of contribution	Participation	20%
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	Assignment	30%
	Mid-semester test	20%
	Final semester test	30%
Media	Computer, LCD, White board, laboratory instruments	
Learning Methods	Lectures, discussion, assignment, laboratory activity	
Literature	Duncan J.S. 2004. Introduction to Colloid and Surface Chemistry. Butter Worths Adamson dan Gost AP, 1977, Physical Chemistry of Surfaces 6 th ed. New York: Willey Inter Science.	
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	