

## MODULE HANDBOOK

Module Name	Physical Chemistry III
Module Level	Bachelor
Abbreviation, if applicable	KFIII
Sub-heading, if applicable	
Course included in the module, if applicable	
Semester/term	5 <sup>th</sup> /third year
Module coordinator(s)	Prof. Dr. Suyono, M.Pd.
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 hours lecture, 3hours structured activities, 3 hours individual activities, 13 week a semester, and total 117 hours a semester 3.9 ECTS
Credit Point	3 SCU
Requirement	Physical Chemistry I
Learning Outcome	<p>Students have the ability to communicate the results of experiments so they are able to develop a conceptual framework for formulating actions or alternative actions in solving chemical problems in life.</p> <p>Students skillfully use tools in determining reaction rates and reaction mechanisms based on empirical facts (inductive dimensions) and submit theoretical arguments to explore empirical facts that occur (deductive dimensions) in the field of reaction kinetics.</p> <p>Students have knowledge of the laws of reaction rates and reaction mechanisms based on empirical facts (inductive dimensions) and submit theoretical arguments to explore empirical facts that occur (deductive dimensions) in the field of reaction kinetics.</p> <p>Students have the ability to cooperate and are responsible for assessing the rate of reaction as a function of concentration, temperature, and catalyst as well as the legal interpretation of the reaction rate to the discussion and design of reaction mechanisms (including photochemical).</p>
Content	Empirical and theoretical studies of reaction rates as a function of concentration, temperature and catalysts and the

	interpretation of the reaction rate laws to the discussion and design of reaction mechanisms (including photochemical).
Study/Exam Achievement	<p>Students are considered to be competent and pass if at least get 56</p> <p>Final score is calculated as follows: 30% assignment, 20% middle exam (UTS) &amp; 30% final exam (UAS)</p> <p>Table index of graduation</p> <p>0 - 39.99 E,  40 - 54.99 D,  55 - 59.99 C,  60 - 64.99 C+,  65 - 69.99 B-,  70 - 74.99 B,  75 - 79.99 B+,  80 - 84.99 A-,  85 - 100 A.</p>
Media	Computer, LCD, White board, laboratory instruments
Learning Methods	Lectures, discussion, assignment, laboratory activity
Literature	<p>Wilkinson, Frank. 1936. <i>Chemical Kinetics and Reaction Mechanisms</i>. Victoria: Van Nostrand Reinhold Company.</p> <p>Atkins, P. W. 1995. <i>Physical Chemistry</i>. Third Edition. New York: W. H. Freeman and Company.</p> <p>Castelan, Gilbert W. 1983. <i>Physical Chemistry</i>. Third Edition. Tokyo: Addison-Wesley Publishing Company.</p>
Note	Total ECTS = {(total hours workload x 50 min) / 60 min} / 25 hours Each ECTS is equals with 25 hours