		Faculty of Natural Sciences and Mathematics Chemistry Department Chemistry Education Study Program			
Module name		Computer application for chemistry labwork			
Module level, if applicable		1 st Year			
Code, if applicable		SPK - 213			
Semester(s) in which the		2 nd semester			
module is taught					
Person responsible for the module		Muhaimin, M.Sc.			
Lecturer		Muhaimin, M.Sc.			
Language		Indonesia			
Relation to curriculum		Compulsory			
Teaching methods	Class size	Forms of active participation	Workload 4	5 hours	
Practicum	20-25	Laboratory	Laboratory work: 170	23 hours	
		work,	(min) x 8 (meeting)		
		discussion	Preparation: 120 (min) x 8	22 hours	
			+100 (min) x 2		
			Exam: $100 (min) + 100 (min)$		
ECTS Credit		1.61			
Credit points		1 SCU			
Requirements according to the examination regulations		Student must follow all the series of practicum activities. Violation of this will result in giving an E value (failing practicum). Student who do not participate in the practicum for 3 (three) times without justified reasons may not attend the next practicum and are considered to have resigned from the practicum. Student who for some reason cannot follow the practicum according to the predetermined schedule can apply for inhal practicum. Inhal costs are determined by the laboratory. Student who inhal allowed for a student a maximum of 3 (three) times. Student who have not completed laboratory expenses such as tools, materials or tasks (if any) within a certain time will			
Recommended prerequisites		N/A			
Recommended prerequisites		IV/A			

Related course	Statistics for Research		
Module objectives/intended	On successful completion of the course students should be		
learning outcomes	able to:		
	1. Explain the concept of uses Ms. Word, Reference		
	manager, Ms. Excel, Chemsketch, ChemDraw, Marvin		
	Sketch, SPSS, Minitab in Chemistry		
	2. Use the computer	applicati	on of chemistry: Ms. Word,
	Reference man	ager, N	Is. Excel, Chemsketch,
	ChemDraw, Ma	arvin Sk	etch, SPSS, Minitab in
	Chemistry		
	3. Apply computer applications to Che		ons to Chemistry for writing
	scientific papers or scientific articles		
Content	• Ms. Word		
	Reference manager		
	• Ms. Excel		
	• Chemsketch		
	• ChemDraw		
	Marvin Sketch		
	• SPSS		
	• Minitab		
Study and examination	Final score (NA) is calculated as follows:		
requirements and forms of	Intended	Weight	Technique of assessment
examination	learning outcomes	(%)	
	1	40	Test: pretest and posttest
	2	30	Non test: performance
			observation
	3	30	Non test: lab work report
Media employed	Computer application for chemistry		
Reading list	Muhaimin, 2017, Aplikasi Komputer Untuk Kimia,		
	Semesta Aksara, Yogyakarta		

Prepared by:	Verified by:	Authorized by:			
STARLOUM	molat	P			
Person responsible for the module	Student representative	Coordinator Program			