



Universitas Negeri Surabaya
Faculty of Mathematics and Natural Sciences
Undergraduate Chemistry Study Program

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Computer application	4720102005		T=2	P=0	ECTS=3.18	2	July 18, 2024
AUTHORIZATION	SP Developer		Course Cluster Coordinator			Study Program Coordinator	
			Dr. Amaria, M.Si.	
Learning model	Case Studies						
Program Learning Outcomes (PLO)	PLO study program that is charged to the course						
	Program Objectives (PO)						
	PLO-PO Matrix						
		P.O					
Short Course Description	Discussion of various office computer applications for data processing and report creation as well as chemical applications such as Chemoffice, ChemLab and others for the basics of modeling and computing through computer-based practice						
References	Main :						
	1. ... 2006. User 19s Guide Chem & Bio Office Desktop 2008 for Windows. CambridgeSoft Corporations 2. Guy Hart-Davis. 2007. How to do everything with Microsoft Office Word 2007. The McGraw-Hill Companies 3. Nories, A.C., 1981, Computational Chemistry; An Introduction to Numerical Method, John Wiley & Son 4. Paul McFedries. 2007. Microsoft Office PowerPoint 2007: Top 100 Simplified Tips & Tricks. Wiley Publishing, Inc 5. Robert de Levie. 2004. How To Use Excel In Analytical Chemistry And In General Scientific Data Analysis. Cambridge University Press 6. Paul McFedries. 2007. Microsoft Office PowerPoint 2007: Top 100 Simplified Tips & Tricks. Wiley Publishing, Inc.						
	Supporters:						
Supporting lecturer	Dr. I Gusti Made Sanjaya, M.Si.						
Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (offline)	Online (online)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Formatting page settings for scientific reports	Can adjust margins and page setup. Can write headers, footers, page numbers. Can set tab stops and hyperlinks	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and practice 2 X 50			0%
2	Write a script with appropriate functions	Can format tables Can write reaction equations Can use Auto Correct to speed up writing	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and practice 2 X 50			0%
3	Layout scientific documents	Can layout manuscripts according to scientific journal templates	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and practice 2 X 50			0%
4	Using Excel functions to process data	Can set up tables Can use the sum, if, vlookoop, countif functions to process data	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and Practice 2 X 50			0%
5	Using Excel functions to process data	Using Excell functions to create graphs	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and practice 2 X 50			0%
6	Use powerpoint functions to create interactive presentations	Can create interactive presentation scripts	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and practice 2 X 50			0%
7	Use powerpoint functions to create interactive presentations	Can create interactive presentation scripts	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and practice 2 X 50			0%
8	UTS		Criteria: UTS Assessment (weight 2)	1 X 1			0%
9	Using chemoffice functions to draw 2D structures	Writing 2D organic structures Exporting to MS Word	Criteria: Assessment of participation during lectures (weight 2) and assessment of assignments (weight 3)	Discussion and practice 2 X 50			0%
10	Using chemoffice functions to draw 3D structures	Writing 3D organic structures Exporting to MS Word	Criteria: 1.Assessment of participation during lectures (weight 2) 2.Assignment assessment (weight 3)	Discussion and practice 2 X 50			0%
11	understand molecular mechanics	Characterize chemicals with molecular mechanics	Criteria: 1.Assessment of participation during lectures (weight 2) 2.Assignment assessment (weight 3)	discussion and practice 2 X 50			0%

12	understand electronic structure methods	Characterizing chemicals using ab initio electronic structure methods	Criteria: 1. Assessment of participation during lectures (weight 2) 2. Assignment assessment (weight 3)	discussion and practice 2 X 50			0%
13	understand semi-empirical electronic structure methods	characterize chemicals with semi-empirical electronic structure methods	Criteria: 1. Assessment of participation during lectures (weight 2) 2. Assignment assessment (weight 3)	discussion and practice 2 X 50			0%
14	understand DFT	characterize chemicals using the DFT method	Criteria: 1. Assessment of participation during lectures (weight 2) 2. Assignment assessment (weight 3)	discussion and practice 2 X 50			0%
15	Determining the character of a chemical	make informed decisions about how best to characterize a chemical	Criteria: 1. Assessment of participation during lectures (weight 2) 2. Assignment assessment (weight 3)	discussion and practice 1 X 1			0%
16	UAS		Criteria: UAS Assessment (weight 3)	2 X 50			0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

- Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
- The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
- Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
- Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
- Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
- Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
- Forms of assessment:** test and non-test.
- Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
- Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.

