



UNIVERSITI TEKNOLOGI MARA

SPC631: INTRODUCTION TO ANALYTICAL AND PHYSICAL CHEMISTRY

Course Name (English)	INTRODUCTION TO ANALYTICAL AND PHYSICAL CHEMISTRY APPROVED
Course Code	SPC631
MQF Credit	3
Course Description	This course is the continuation of the basic principles of chemistry including properties of solutions, kinetics, acids and bases, equilibria, thermochemistry and electrochemistry. This course will also introduce the concepts of analytical chemistry which include chemical measurements and laboratory exercises. The syllabus content will be delivered through lectures and e-learning. The outcomes shall be assessed through a variety of tools which include tests, assignments and final examination.
Transferable Skills	Independent and Critical Thinker Solution Provider Expert in the field
Teaching Methodologies	Lectures, Blended Learning, Tutorial, Discussion
CLO	CLO1 Describe the basic concept of physical and analytical chemistry. CLO2 Solve problems involving analytical and physical chemistry. CLO3 Communicate and interact effectively in a team. CLO4 Show positive values in line with teaching profession.
Pre-Requisite Courses	No course recommendations
Topics	
1. Volumetric Analysis 1.1) n/a	
2. Solutions and their behavior 2.1) n/a	
3. Chemical Kinetic 3.1) n/a	
4. Chemical Equilibrium 4.1) n/a	
5. Acid-base Equilibrium 5.1) n/a	
6. Thermochemistry 6.1) n/a	
7. Electrochemistry 7.1) n/a	

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Test 1= 15% Test 2= 15% Quiz= 5% Presentation= 20% Blended learning= 5%	60%	CLO1 , CLO2 , CLO3 , CLO4

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> • Brown, T.L, LeMay Jr., Burnsten, B.E., Murphy, C.J., & Woodward, P. 2008, <i>Chemistry the central science</i>, 11th Ed., Pearson Prentice Hall New Jersey • Mark, S.C & Edward, I. P. 2009, <i>Introductory chemistry: An active learning approach</i>, 4th Ed., Brooks Cole. Belmont, CA, USA • Ira, B. & George, O. 2006, <i>An introduction to general chemistry: Connect chemistry in your life</i>, 2nd Ed., W. H. Freeman. New York, USA • Christian, G. D. 2009, <i>Analytical Chemistry</i>, 6th Ed., John Wiley and Sons. Inc. Washington
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources