



UNIVERSITI TEKNOLOGI MARA

CMT630: COLLOID AND SURFACE CHEMISTRY

Course Name (English)	COLLOID AND SURFACE CHEMISTRY APPROVED
Course Code	CMT630
MQF Credit	3
Course Description	This course will introduce students the basic principles of colloid and surface chemistry. Foundation of colloid surface chemistry will be explained and details. Essentially, colloids involving solid and liquid adsorption, stability, destabilization, surface tension and contact angle properties will be taught and assigned. Measurements of colloids properties and characterization method will also discussed.
Transferable Skills	Scientific thinking Critical thinking
Teaching Methodologies	Lectures, Blended Learning, Journal/Article Critique
CLO	CLO1 Upon completion, students will be able to comprehend the colloidal and surface chemistry system. CLO2 Upon completion, students will be able to critically explain the colloidal physicochemical properties (colloidal particles interactions, stability, surface tension, contact angle and association), and analyze how these properties affect the colloidal system.
Pre-Requisite Courses	No course recommendations
Topics	
1. Colloidal System 1.1) Classification of colloidal system 1.2) Surface Chemistry of colloidal system 1.3) Properties of colloid particles 1.4) Preparation of lyophobic colloidal system	
2. Stability of Colloidal Dispersions 2.1) Colloidal particles surface interactions 2.2) Electrostatic stability 2.3) Steric stability	
3. Instability of Colloidal Dispersion 3.1) Types of Instability of colloidal particles 3.2) Schultz Hardy Rule	
4. Physicochemical of colloid and surface chemistry 4.1) Adsorption at Colloidal surface 4.2) Surface Tension of colloidal system 4.3) Contact angle of colloidal system	
5. Association Colloid 5.1) Surfactant systems 5.2) Micellisation	

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Journal/Article Critique	Students will be in a group, maximum, 3 students per group.	20%	CLO2
	Test	2 tests. One at middle semester and the other will be end of semester	40%	CLO1

Reading List	This Course does not have any book resources
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources