Course Specifications

General Information

Course name	Colloidal Chemistry
Course number	CHEM4225
Faculty	
Department	
Course type	Major Needs
Course level	4
Credit hours (theoretical)	2
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - What are colloids, Types of colloidal systems., Properties of lyophitic and lyophobic colloids, Methods of preparation the colloids, Properties of colloids : optical , kinetic and electrical, Purification of colloids,Stability of sols, Application of sols, Theories of electric double layer, Interfacial phenomena, Wetting phenomena and application, Basic adsorpation Iso therm, Types of adsorption Isotherm, Theories of adsorpation

Intended Learning Outcomes

Knowledge and Understanding

* 1. Explain what is the meaning of colloids.
* 2. Explain the types and properties of colloids
* 3. Ability to prepare different types of colloid

Course Contents

1 - The following majer topics will be covered in the formal lectures. They are:

Books and References

Essential books	1. Principles of colloid and surface sciences" P.C. Hiemez, R. Rajagopalan, 3a, Ed., Mareel Dekker, New York, 1997 2. Hand book of Surface and colloid chemistry" Third Edition K.S. Birdi, CRC Press, Taylor Francis Group, 2009 3. Handbook of Applied Surface and colloid Chemistry" Volum 2 Krister Holmberge, Dinesh O. Shan, Milan J. Schwuger. John Wiely Sons Ltd. 2002 4. Colloid Science: Principles, Methods and Applications 2nd Edition Terence Gosgrove, Witey Blackwell, 2010 5. Introduction to Applied colloids and surface chemistry" Georgios M. kontogeorgis, Soren kiil, John Willy, Sons, Inc. 2012 6. Introduction to colloid and surface chemistry Fourth Edition Duncan Shaw, Elsevir ltd. 1992