

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Industrial Chemistry (2)
Course number	CHEM3207
Faculty	
Department	
Course type	Major Needs
Course level	3
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Objective

Course Contents

1 - It encompasses more aspect of chemical industries in a general paints, varnishes, adhesives and electroch platting industries.
2 - Paints and varnishes: Fundamentals of paint technology: Raw materials, required of good paints, properties of coating, Characteristics and properties of pigments, Function of pigments in paints, General classification of pigments, White pigments, colored pigments, pigment dispersion, Binders: classification , composition and preparations, Paint solvents: properties and classification, Paint additives: plasticizers, driers agents antiskinning antisetting agents, surface active flow promoting, Antifoaming , Antisagging and preservatives, Fails of paints during preparation, storage and application, External and Internal paints formulation, Varnishes: composition, classification and formulations.
3 - Adhesives, Theories of adhesion, Classification of adhesives, Application and formulation of adhesives
4 - Electroplating, Fundamental principles of electroplating, Preparation of metal surface: decreasing, pickling, Rensing and polishing processes., Preparation of electroplating baths., Electroplating processes examples, Annodizing

Books and References

Essential books	Paint varnish Solvent coating Technology", Eiri Board, Engineers India, Research Institute, 2011
	Paint and varnish facts and formulae": a handbook for the Maker, Dealer and user for paints and varnishes, J. N Haff, Forgotten Books, 2015
	Modern Electroplating 5th Edition, Mordechay Schlesinger, Milan Paunovic, Wiley, ECS, 2010
	Electroplating Engineering Handbook" Fourth Edition Lawrence, J. Dumey, Elsevier, 2015
	Electroplating" Basic Principles, Processes and practice, Nasser kanani, Atotech, Elsevier, 2004
	Paint Manufacture" J.R. Kapuria and Board of consultants of Engineers , SBP consultants Engineers PVT. LTd, Delhi, 2005