

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. SEMESTER : VI
CHEMICAL TECHNOLOGY

Subject Name: Technology of Ceramic Coatings

Subject Code: 163607

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam(E)	University Exam(P)	Mid Sem Exam(Theory) (M)	Practical (Internal)
4	0	3	7	70	0	30	50

Sr. No	Course contents
1.	Comparison of Ceramic & Organic coatings. Different type of coatings such as thermal barrier coatings, high emissivity refractory & special coatings etc. Characteristics of coatings.
2.	Raw materials & composition of some Frit preparations, milling, enamel slip etc.
3.	Preparation of substrate for ceramic coatings. Wetting of different substrates by glass,. Theory of adherence.
4.	Opacity, opacifying agents, Drying, Firing, Applications of coatings on substrate. Coating defects & trouble shooting, Testing of coatings.

Reference Books:

1. Ceramic Films & Coatings, J B Wachtman & R A Haber, William Andrew, 1993
2. Intermetallic & Ceramic Coatings, N B Dahotre, T S Sudarshan, M Dekker, 1991
3. Ceramic Whitewares, Sen S., Oxford & IBH Publishing Pvt Ltd., 1992
4. Technology of Ceramics & Refractories, Budnikov, P.P, MIT Press, 1964
5. Elements of ceramics ,Norton F.H, Longman higher education, 2nd Ed, 2001
6. Introduction to ceramics, Barsoum, Institute Of Physics Publishing (gb) 2002
7. Introduction to Ceramics ,Kingery W.D,. Wiley New York :, 2nd Ed, 1976.
8. Material Science ,Smith, Mcgraw Hill Higher Education, 4th Ed,2005
9. Industrial ceramics ,Singer & Singer, , Oxford & Ibh (From Technip), 1st Ed.,2008
10. Textbook of physical Geology ,Mukherjee, , CBS Publishers & Distributors-New Delhi 1st Ed.,2011
11. Textbook of Mineralogy, Tyrrel,W, , CBS Publishers & Distributors-New Delhi ,4th Ed.,2006