

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.E. SEMESTER : VII**  
**CHEMICAL TECHNOLOGY**

**Subject Name: Special Topics in Glass & Ceramics – II**

**Subject Code: 183603**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam(E)	University Exam(P)	Mid Sem Exam(Theory) (M)	Practical (Internal)
3	0	3	6	70	30	30	20

Sr. No	Course contents
1.	Glass manufacturing & machinery for making rods, fibers, bottles, tubes, bulbs, bangles, safety glasses, laminated glasses etc. Manufacturing defects & troubleshooting in glass Industry
2.	Non-Conventional Processing of Glasses, Radiation Shielding glasses, Heat absorbing glasses, Chalcogenide & halide glasses, TV picture tube glass, LASER glass, Glass filters, Specialty glasses, Floor tiles, sanitary tiles
3.	Basics of metallurgy & its relevance in glass & ceramics. Comparison of processes in metal products & ceramics. Comparison of ceramic materials with polymeric products including transparent materials
4.	Pollution control in Glass & Ceramic Industry

**Reference Books:**

1. Handbook of Glass Manufacture, Tooley F.V, Ashlee Pub Co. Ltd.,1984
2. Glass Engineering Handbook, Shan E.B., Mc Graw Hill, 3<sup>rd</sup> Ed., 1984
3. Handbook of Glass Properties, N P Bansal and R A Doremus, Academic Press, 1986
4. Engineering Physical Metallurgy, Lakhtin and Weinstein, University Press of the Pacific, 2000
5. Elements of ceramics ,Norton F.H, Longman higher education, 2<sup>nd</sup> 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, 4<sup>th</sup> Ed,2005
9. Industrial ceramics ,Singer & Singer, , Oxford & Ibh ( From Technip), 1<sup>st</sup> Ed.,2008
10. Textbook of physical Geology ,Mukherjee, , CBS Publishers & Distributors-New Delhi 1<sup>st</sup> Ed.,2011
11. Textbook of Mineralogy, Tyrrel,W, , CBS Publishers & Distributors, 4<sup>th</sup> Ed.,2006
12. Textbook of Geology, J B Mahapatra, CBS Publishers & Distributors, 2<sup>nd</sup> Ed. ,2008