

SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc (Materials Science)
Semester: IV
Syllabus with Effect from: June - 2013

Paper Code: PS04EMTS02	Total Credit: 4
Title Of Paper: Ceramic Technology	

Unit	Description in detail	Weightage (%)
I	Traditional ceramics, Powder for Engineering Ceramics, additives and chemicals, waste materials and function of main raw materials in various ceramic body.	25%
II	Various types of machines used in production processes such as Ball mill, Filter press , Pug mill, Jolly, Jigger, Toddle Press, Mechanical Press, Hydraulic Press, Iso-static press, spray drier.	25%
III	Various casting Methods, Extrusion methods, Press method, Injection moulding , Dry pressing, Isostatic Pressing, HIP, slip casting. Glazing Raw Materials, glazing techniques and defects of glazing.	25%
IV	Coal, liquid fuel, gaseous fuel, control of combustion, Heat Transfer, Heat Recovery system , furnace and Emission. Types of furnace used, firing techniques, understanding defects of firing.	25%

Basic Text & Reference Books:-

- Science of Engineering Materials – Manas Chanda
- Ceramic Science for Materials Technologists – I. J. McColm.
- An Introduction to carbon science – Herry Marsh
- Industrial Ceramic – F. Singer, S. Singer.
- Hand Book of Ceramics , S, Kumar.

