

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma in Architectural Assistantship

Semester: II

Subject Name: **Building Material II**
 Subject Code: **320025**

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

Rationale:

This course deals with some more types materials used in the construction industry. Various factors affecting the selection of materials for given situations are also discussed. This course, thus, helps the student to understand the application of modern materials for buildings designed by him.

Topic No.	Name of Topic	No. of Hours		
		Lect.	Pract.	Total
1.	Floor finishes	7	—	7
2.	Wall finishes	7	—	7
3.	Ceiling materials	7	—	7
4.	Roofing materials	7	—	7
5.	Building fixtures	4	—	4
6.	Paints	7	—	7
7.	Varnishes	3	—	3
	Total	42		42

T.R.S & EO's:

Select suitable material for various items of building construction

EO's

- 1.1 Understand the properties and uses of various materials used for building construction.
- 1.2 Compare the different alternative materials suitable to a given job.
- 1.3 Select suitable materials for building construction for the given job.

Sr. No.	Course Content:
1.	THEORY: FLOOR FINISHES: 1.1 Selection of floor finishes 1.2 Factors affecting the selection: 1.2.1 Base, room use, degree of comfort required, maintenance, cost, appearance, safety and durability. 1.3 Types of flooring Wood - Strip flooring, block flooring, Timber board, Timber Sheet Tiles - a) Mosaic b) Ceramic c) Linoleum d) Thermoplastic tiles e) flexible pvc tiles f) corktiles g) quarrytiles h) rubber tiles. 1.4 Terrazzo, marble finish, IPS, Kota, Granite, Cement Concrete Tile, Asbestos tile.
2.	WALL FINISHES: 2.1 Give requirements and uses of the following types of wall finishes. Materials: 2.1.1 Wall papers 2.1.2 Cement mortar plaster 2.1.3 Glazed tiles 2.1.4 Gypsum plaster 2.1.5 Stucco plaster 2.1.6 Special External Finishes for plaster surface • Rough cast • Smooth cast • Barium plaster • Wall tiles
3.	CEILING MATERIALS: 3.1 Give requirements & uses of the following ceiling materials: 3.1.1 Ply wood 3.1.2 Hard board 3.1.3 Plain A.C. Sheet 3.2.1 Fiber board 3.2.2 Asbestos tiles

	3.2.3 Glass roof tiles 3.2.4 Thermo feriz 3.2.5 Gypsum plaster board 3.2.6 Sprayed plaster 3.2.10 Glass fiber 3.2.11 Hession cloth
4.	ROOFING MATERIALS: 4.1 Give their standard sizes, uses & their requirements: 4.2 Asbestos sheet 4.2.1 G.I. Sheet 4.2.2 Mangalore tiles 4.2.3 Polyester glass fiber sheet (Acrylic Sheet) 4.2.4 Wire reinforced PVC Sheet 4.2.5 PVC Sheet
5.	BUILDING FIXTURES: 5.1 Know the types, sizes & uses of building fixtures and hardware as per ISI. 5.2 Tower bolt 5.3 Hinges 5.4 Door handles 5.5 Door spring 5.6 Latches 5.7 Floor door stopper 5.8 Locks 5.9 Door closer 5.10 Wire mesh (mosquito & fly proof) 5.11 Ell drop 5.12 Magic eye (eye hole)
6.	PAINTS: 6.1 Know the requirements & uses of the following paints: 6.2 Water based paints 6.3 Alkali base 6.4 Linseed oil base 6.5 Cement Paint 6.6 Plastic Emulsions 6.7 Oil Paints 6.8 Acrylic Paints 6.9 Chlorinated rubber base 6.10 Epoxy base (only pigments)

7.	Topic -7 VARNISHES: Know the requirements & uses of different types of varnishes.

Students are required to be taken for relevant site visit

Note:

Market Survey of latest newly available material is to be carried out by The students as home Assignment

Reference Books:

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|-------------------------------|-----------------------|
| 1. Civil Engineering Material | - T.T.T.I. Chandigarh |
| 2. Materials of construction | - R.S.Deshpande. |
| 3. Materials of Construction | - Frank R. Dogostino |
| 4. Engineering materials | - S.C.Rangwala. |