

GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Bachelor of Interior Design

SEMESTER-1

SUBJECT NAME – BASIC STRUCTURE-I
SUBJECT CODE – 1015103

EMPHASIS:

- Exposure to built forms through behavior of materials and Basic Structural systems.

CONTENT:

- Glossary of technical words.
- Natural structures and their intuitive behavior, their relationship with man-made structures, with various examples through models and analysis
- Functions of structures.
- Primary and secondary forces acting on structures – gravitational force i.e. dead load, live load, and environment loads like wind, temperature variation, earthquake etc.
- Basic elements of structure and study of their behavior through models.
- Characteristic requirements of structural design – strength, stiffness and stability
- Structural properties of basic materials like masonry, timber, concrete and steel.
- Introduction to basic structural systems such as post-beam, bearing wall system, Trusses, rigid frames and their behavior. Study of distribution of loads through the elements of these systems with the help of case Studies.
- Effect of simple geometric forms on the overall structural behavior.

THRUST/PROJECT:

- Presentations, models, case studies, and analysis of structural systems in the above-mentioned framework.

REFERENCES:

- Jeffery Cook - Seeking Structures from Nature
- D.K. Ching - Building Structure Illustrated.
- Forrest Wilson -Structure: The Essence of Architecture