



GUJARAT TECHNOLOGICAL UNIVERSITY

BACHELOR OF ENGINEERING SYLLABUS

Minor/Honours Degree : Forensic Structural Engineering

Subject Code : 114AU01

Subject Name : Forensic Science & Law

WEF Academic Year :	2023-24
Semester :	4
Category of the Course :	Compulsory

Prerequisite :	Basic Civil Engineering
Rationale :	Rapid economic development and fast-track modern construction practices can trigger catastrophic structural failures. To investigate structural failures scientifically, this program will become very useful. This program would help to understand Forensic Science & Law, appreciate and investigate construction failures along with Structural evaluation of existing structures, the experience of material testing and non-destructive testing, Prevention and resolution of Construction Disputes etc. Forensic Structural Engineering Studio will give opportunity to students to work on case studies as well as live projects.

Course Scheme :

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	PR		Theory		Practical		
			ESE (E)	PA(M)	ESE (V)	PA (I)		
2	0	0	2	70	0	0	0	70

Course Content :

Sr. No.	Course Content	No. of Hours	% of Weightage
1	Nature, need and scope	4	10
2	Principles and laws of forensic science	8	30
3	Global development of Forensic Science	8	30
4	Forensic Science in India	8	30
	Total	28	100



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Reference Book :

1. Forensic Structural Engineering Handbook, Robert T. Ratay, McGraw-Hill Professional; 2nd edition (16 January 2010).
2. Forensic Engineering: Damage Assessments for Residential and Commercial Structures, Stephen E. Petty, CRC Press; 2nd edition (24 September 2021)
3. Structural Condition Assessment, Robert T. Ratay, John Wiley & Sons Inc; 1st edition (11 February 2005)
4. Repair And Rehabilitation Of Concrete Structures, Modi P.I. and Patel Chirag, PHI Learning Pvt. Ltd (1 January 2016)

Course Outcome :

After Completion of the Course, Student will able to :

No	Course Outcomes	RBT Level*
01	Understanding of the importance of the Laws in Forensic science.	UN
02	Interpret the reasoning behind the principles and laws of forensic science	RM/UN
03	Develop a knowhow of the current status of forensic science in India	UN

*RM: Remember, UN: Understand, AP: Apply, AN: Analyze, EL: Evaluate, CR: Create

Suggested Course Practical List : NA

List of Laboratory/Learning Resources Required : NA

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