



DREAM. BELIEVE. ACHIEVE

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  iVidyanikethan

**L&T**  
**EduTech**  
ACADEMIC COLLABORATION  
PARTNER



DREAM. BELIEVE. ACHIEVE

**B.Tech Civil Engineering**  
with specialization in  
**Structural Design System**  
in collaboration with L&T







## OVERVIEW

The structural design systems are undergoing transformation due to newer structural forms, materials and automation. Pre-engineered and precast construction calls for a different approach to design and construction.

Various challenges like complex-shaped high-rise buildings, deep pile foundations due to poor soil conditions and changes in climatic and seismic conditions have emerged in the construction industry, for which expertise from concept to commissioning is required. Due to the need for mass housing and faster construction, precast construction is in high demand.

The construction of steel buildings is in demand due to affordable pricing, energy savings, ease of constructability and erection. Increasing the efficiency of resource usage while reducing building's impact on human health and the environment is now more important due to which all industries are moving to a more sustainable design of buildings. Bridge engineering has undergone various transformations over the years.

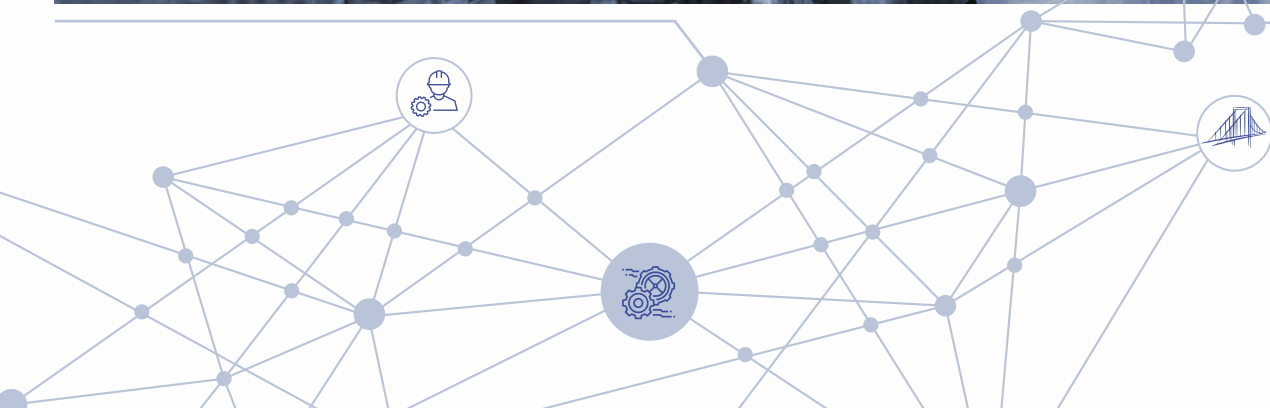
Nowadays, bridges are constructed in different materials like RCC, steel, PSC or composites. Cable-stayed and balanced cantilever bridge constructions are adopted

for the upcoming infrastructure projects. State of the art in launching of bridges during construction has brought innovation in this field.

Building planning and designing is a collaborative process that requires inputs from multiple stakeholders including engineers, architects, builders, clients, etc. Hence, an integrated approach to building services is an unavoidable part of building construction. The Advanced Building Information Modelling technique solves the problem of managing these multiple stakeholders at all levels of the construction process.

Technology-advanced construction methods require project planning and management as an integral part of the whole construction process. The construction industry currently faces major productivity, efficiency and cost management challenges.

Though the industry has been generating huge data, informed decision making using this data has become an imperative necessity of the hour. Construction analytics is the process of collecting, analysing and mining data to improve capital project outcomes, for risk mitigation and informed decision making at various stages of the construction process.





# COURSES

S.NO.	COURSE	DISCIPLINE	COURSE CREDITS	SEMESTER
1	Construction Equipment and Techniques	Civil	3	II
2	Concreting Techniques & Practices	Civil	3	III
3	Building Information Modelling in Architecture, Engineering and Construction	Civil	3	IV
4	Practical Design of Structural Steel Members	Civil	3	V
5	Design of Reinforced Concrete Buildings and Practices	Civil	3	VI
6	Structural Steel Buildings - Design and Practices	Civil	3	VI
7	Precast Members - Systems & Construction	Civil	3	VII
8	Design of Pre- Engineered Buildings	Civil	3	VII
OPTIONAL COURSES				
1	Formwork Engineering Practices	Civil	3	V
2	Bridge Engineering Practices	Civil	3	VII
3	Design and Execution of Pile Foundations	Civil	3	VII
OPTIONAL ELECTIVES				
1	Engineering Graphics and Design	Civil	3	I
2	Geospatial Techniques in Practice	Multi-disciplinary	3	VI
3	Project Management for Professionals	Multi-disciplinary	3	VII/VIII

# SOFTWARE TOOLS COVERED



STAAD  
PRO



SAFE



ETABS

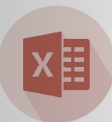


AUTODESK  
REVIT




MS PROJECT


# CASE STUDIES COVERED




Excel spreadsheets development for design of steel Members




ETAB analysis and design of shear wall building



Precast commercial and residential buildings



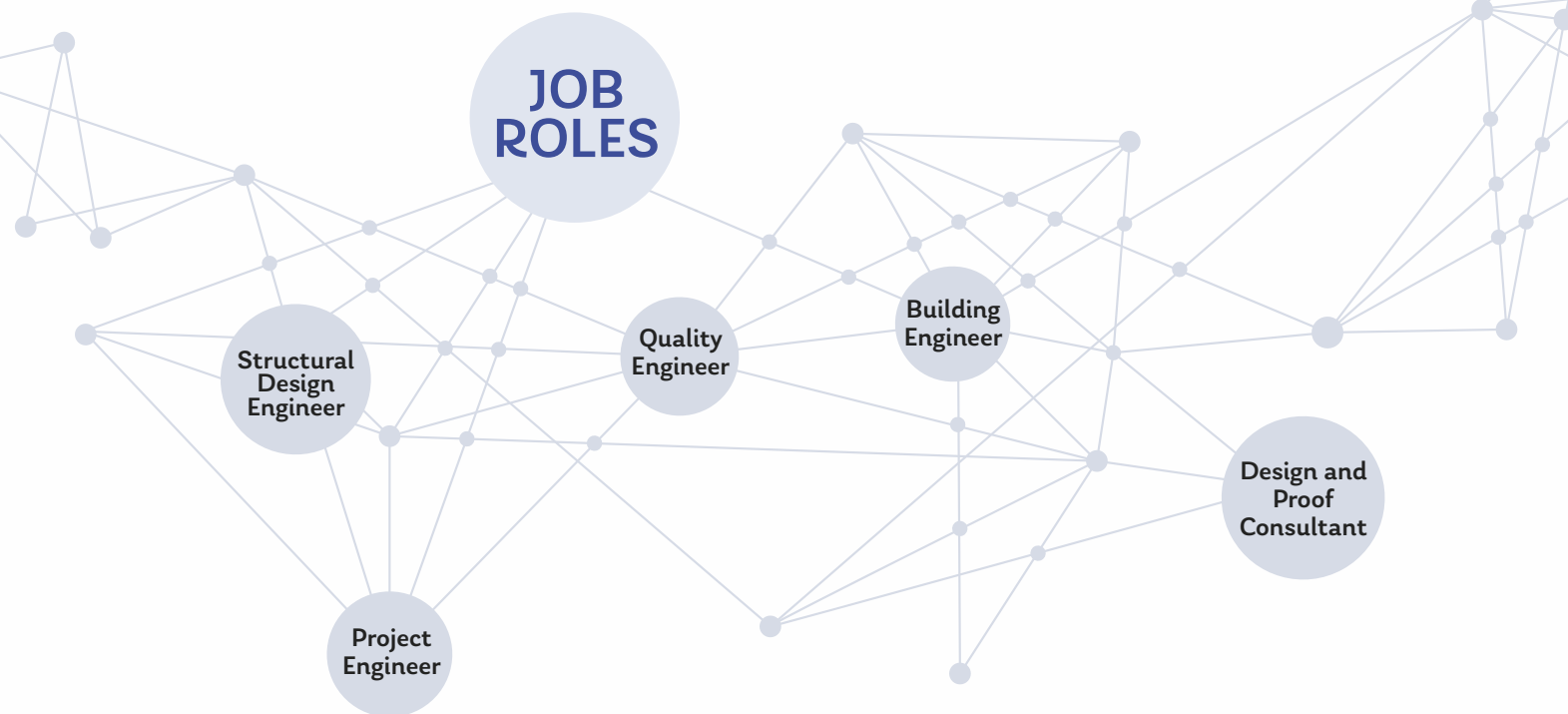
STAAD analysis an design of a multistoried steel commercial building



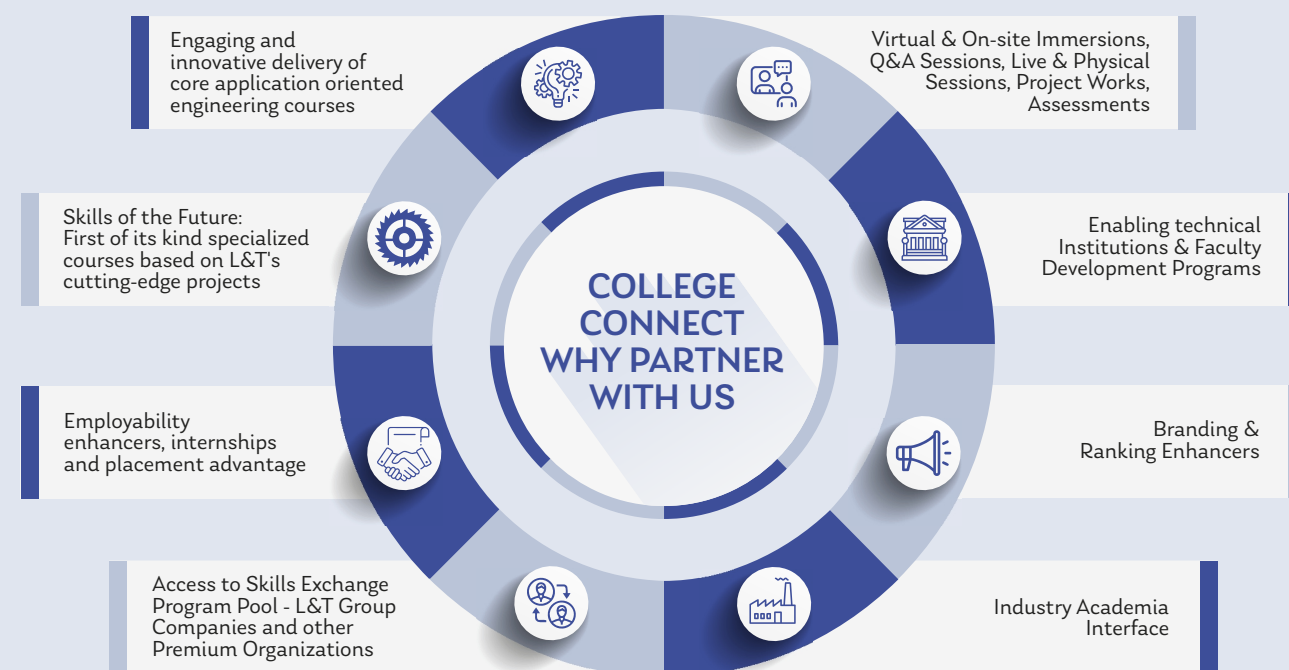
Pre-engineered building of an automobile plant



## EMPLOYABILITY POTENTIAL



## USP OF L&T EDUTECH COURSES



## CERTIFICATE SAMPLES

