



GLASS IN BUILDINGS : DESIGN AND APPLICATIONS

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TYPE OF COURSE : Rerun | Elective | UG

COURSE DURATION : 12 weeks (26 Jul'21 - 15 Oct'21)

INTENDED AUDIENCE : Any Interested Audience

EXAM DATE : 23 Oct 2021

PRE-REQUISITES : Elective for third Year Civil Engineering and fourth year Architecture students.

INDUSTRIES APPLICABLE TO : Structural Glass Industry/ Building Façade Industry

COURSE OUTLINE :

The field of Building Envelope Design & Construction has become a specialized field with several codes emphasizing energy efficiency to buildings both on mandatory and voluntary basis. Glass is one of the energy efficient materials that lend aesthetic and functional value to a building. Glass being extensively used in buildings, whereas the fields aligning including the right selection, analysis, design including facade design and consulting is tremendously facing lack of knowledge and competent professionals across the country. This course on 'Glass in Buildings: Design and Applications' will holistically cover the critical aspects of glass facade engineering and glass architecture & design

ABOUT INSTRUCTOR :

Prof. K N Satyanarayana, Civil Engineering, IIT Tirupathi

Dr. E. Rajasekar is an assistant professor at the Department of Architecture and Planning, IIT Roorkee, India. He is an Architect with post-graduation in Building Technology and Construction Management and PhD on Thermal comfort and building performance from IIT Madras. He is a Shastri Indo - Canadian Institute Doctoral Fellow. He specializes in the field of building performance assessment focused on the thermal, acoustics and lighting parameters. He carries a rich research and industry experience in this field and has published more than 20 technical papers in peer-reviewed journals and conferences. He is a USGBC LEED accredited professional and a GRIHA certified professional.

COURSE PLAN :

Week 01 : Introduction – Glass the Building Material

Week 02 : Float Glass Manufacturing Process

Week 03 : Building Envelope Design

Week 04 : Glass Application on Facades and future of facades

Week 05 : Architectural Glass – The Basics

Week 06 : Fire Resistant Glazing

Week 07 : Acoustic Glass Solutions

Week 08 : Interior Glazing Applications

Week 09 : Introduction to National Building Code (NBC) 2016

Week 10 : Case Study – Design and selection of Glass and Glazing system – Safety and Structural Performance

Week 11 : Design and selection criteria for energy performance of Glass and Glazing system

Week 12 : Design and application of sealant