STRUCTUREX
ENGINEERING CONSULTING TRAINING

PG Program in

Bridge Design & BrIM Technology

Program Broucher - 2025

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The Content

INTRODUCTION

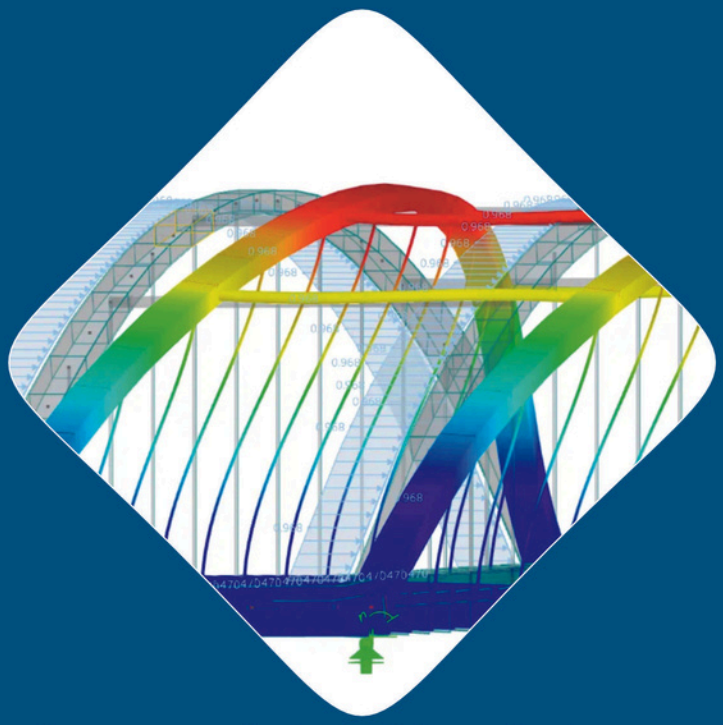
we are designer engineer architecture planner technical specialists and trainer. we operate in the innovation and revolutionary changing field of designer and engineering construction installation and infrastructure educational services rank top in relate with civil/structure/infrastructure

We have a global community of engineers, technician and expert to deliver quality of training and services

community of 10000+ and still counting
Our trainee are from South east Asia Europe, Australia and UAE.

Our corporate training program and engineering educational services ranked top in INDIA and all over the world by most recognized organizations. We provide courses relate with civil/structural/ infrastructure engineering.

ABOUT PROGRAM



Technology based approach in bridge design and engineering

Post Graduation Diploma in **Computational Bridge Information Modelling(Brim) Design & Engineering** is a full flange training program whichenable you to pursue your carrier in different technical positions.Due to technical advancement in Design and engineering worldwideprofessional qualification are not satisfying current MNC company jobdemand, So STRUCTUREX Department of corporate training design thiscourse for Professional, Fresh Graduate and Technical Specialist. Realchallenge for engineers and technical specialist are increasing day byday due to project complexity and environment factor, by adapting datadriven technology this course enable you to accept that challenges.Bridge Design and engineering is one of the adventures and challengingfield in human Mankind. World wide there are many of iconic bridgestructure, so in this course we will do case study of iconic bridgestructure. Computational Engineering and design enable us to designand build most efficient engineering model ,their parameter is driven byVisual programming language with FEA and Solid element based software. Cloud based remote workstation and working in a team willgive you real exposure.

EXCLUSIVE CAREER SUPPORT

STRUCTUREX provide a life time career assistance to ensure candidates success and getting Placed.

Live Career-Oriented Webinars

Live webinar sessions that include curriculum and career services walkthrough to help learners understand their learning objective and expectations of hiring managers.

Leadership Skill Development Sessions

Recurring training sessions with experts to help learners develop Interpersonal and Leadership Skills.

1-on-1 Career Mentoring Sessions

One-on-one Career Mentoring sessions on how to develop the right skills and attitude to secure a dream job.

Exhaustive Interview Preparation

Expert tips, sample interview questions, mock interviews with constructive feedback from industry experts to gain hands-on experience of technical rounds , HR round, and more.

Job Search Assistance & Job Feeds

Access to multiple job portals to help learners navigate through thousands of jobs including global remote jobs.

Profile Building Assistance

A dedicated Career Coach will provide expert tips on how to create an attractive , relevant resume and LinkedIn Profile.

TECHNICAL HIGHLIGHTS

Type of Project	Codes	Software
RC Bridge (Slab/T-Guider)	RC:5 Section1	TEKLA STRUCTURE
Tee Beam Bridges	IRC : 6 - Section II	MIDAS CIVIL
Box Girder Bridges	IRC : 21	STAAD PRO
Prestressed Concrete Bridges	IS : 456	RWIND
Bearings and Substructures	IRC : 112	ALL PILE & RELEVANT
Beam or box girder bridges	IS-875 (Part-1,2,3)	RAM CONNECTION / IDEA STATICA
Steel Truss bridges (ROB)	IS : 1893	MS-EXCEL
Arch bridges	IS:1894	
Balance Cantilever (Case Study)	IRC 6-2000	
box culverts	ACI 318-95	
	AASTO 2010 Rating	
	AASTO 2018 Rating	
	AASTO LRFD	
	AASTO STD	
	BS 5400	
	EUROCODE	

CORPORATE TRAINING PROCESS

STRUCTUREX Pvt. Ltd. Online program learning providing best project based and career oriented training to fresher and experienced engineer. We focus on core and latest technological approach to provide best career oriented training. Quality management and critical engineering is our backbone. Fresh collage graduate have a great opportunity to start career and get placed in their desire company, **With our PGD, MASTER and SKILL Certification Program.**

Online training Process

- Interview and offer letter
- Personal coaching
- Group formation
- Online learning management
- Technical setup
- Conceptual and theory
- National & International environment
- Software and tools traning
- Technical workshops
- Project Training
- Assessment
- Certification
- Career Assistance & Placement

KEY HIGHLIGHTS

- 8 Month Online e-class Room
- 200+ Hours of Intensive Learning
- 10+ Live and Existing Projects
- PG Diploma Certification in Bridge Design & Technology
- 1 Year of on job training experience
- Project Certification

EXCELLENT FEATURES

- 100% Live Session
- Low Intensity Batch
- Recording of Live Class to Download with all study material
- Personal Doubt Clearing Session
- Weekly Basis Performance Record

PROGRAM METHODOLOGY

Engineering skills and Technology

Whole course content with concept, engineering theory code provision and Tools (software).

We give same importance for all the steps involves throughout the projects. Like Concepts design, Engineering Design, Management and Automation.

BRIM MODELLING
Tekla Structure
BrIM
(Bridge information modelling)

BRIDGE DESIGN & ANALYSIS
Codes ,conceptual and Theory
MIDAS CIVIL, STAAD PRO, SAP2000 ,RAM CONNECTION and RWIND

BrIM Collaboration
Fabrication
Construction

ENGINEERING SKILL SET
Interpreting result , Preparing reports

MODULE:01 BRIM (Bridge Information Modeling)

Total Learning hr : 30-35 hr.

Total Project cover : 03

Topic:

1. Modeling of Bridge Structure,
2. Detailing of Bridge Structure Fundamentals,
3. Bridge Management and Report,
4. Bridge Fabrication detailing ,
5. Brim Collaboration and Cloud Support.

BRIDGE INFORMATION MODELING (BRIM)

What is Bridge Information Modeling (BrIM)?

Although BIM can be utilized in various types of building projects,its use in bridge construction has been limited. Instead of verticalarchitecture, bridges are horizontal travel ways, and the projectsare by default heavy construction assignments. Like a version ofBIM customized to suit bridge projects, BrIM provides a completerepresentation of the physical and functional characteristics of abridge asset, offering an information resource for its entire lifecycle.Bridge Information Modeling (BrIM) boosts the quality ofdesign with accurate information, consistent documentation, andimproved constructability of structures. BrIM allows for accuratepre-fabrication and just-in-time material deliveries, and supportsproject collaboration across disciplines. Ultimately resulting inoptimized solutions for all project parties as well as storinginformation for preventive maintenance.

BRIM : TEKLA STRUCTURE

Model to build and maintain

Tekla Structures is a full structural workflow solution from geometry to rebar design or connection detailing, followed by steel fabrication or precast manufacturing, all the way to erection and planning of scaffolding, concrete formworks, and pours on-site. And, when the revisions are updated during construction, the owner has an as-built model to be registered and used for asset management.

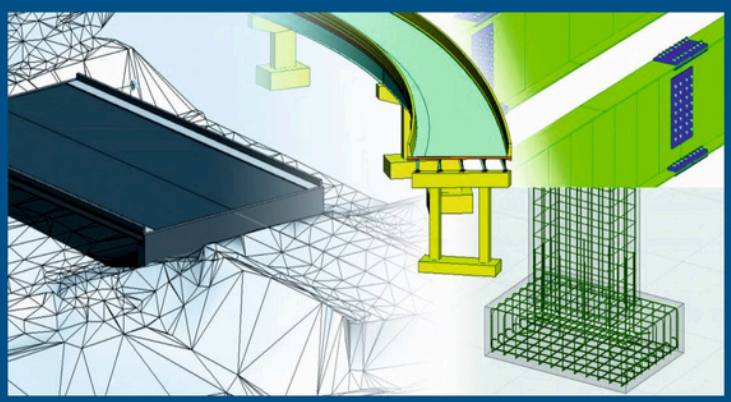
With Tekla Structures you can:

1. Model to build
2. Import road alignment automatically
3. Define key sections easily
4. Detail Rebar efficiently, any size or complexity
5. Update the model at any time
6. Add content from our library
7. Accurate quantities and documentation
8. Communicate with the model
9. Prevent errors and waste on-site
10. Use the model for asset management

Smart Bridge Facility Management

Move your bridge life-cycle management to model-based workflow, including approval processes and construction projects. Achieve better project delivery without delays and over budget. After construction use and update the digital as-built bridge model in maintenance and inspections.

1. Move from paper-based approval process to model-based process
2. Build digital bridge registries with information models (IFC format)
3. Use the bridge model information for collaboration on Trimble Connect
4. Keep a record of revisions and project progress with Trimble Connect
5. Examine the as-built model data with health monitoring data, e.g. sensor data
6. Use the digital as-built model information in inspections
7. Link the as-built model with inspection notes, photographs, pile driving records, etc.
8. Develop digital asset management processes utilizing the model data



BRIDGE INFORMATION MODELING (BRIM)

Data standardization

- Transparent Communication
- High-level collaboration

Technology

- Parametric
- Visual Programming

People

- Model-based practices
- BrIM Skills

MODULE:02 BRIDGE ANALYSIS & DESIGN

Total Learning hr : 60-70 hr.

Total Project cover : 5

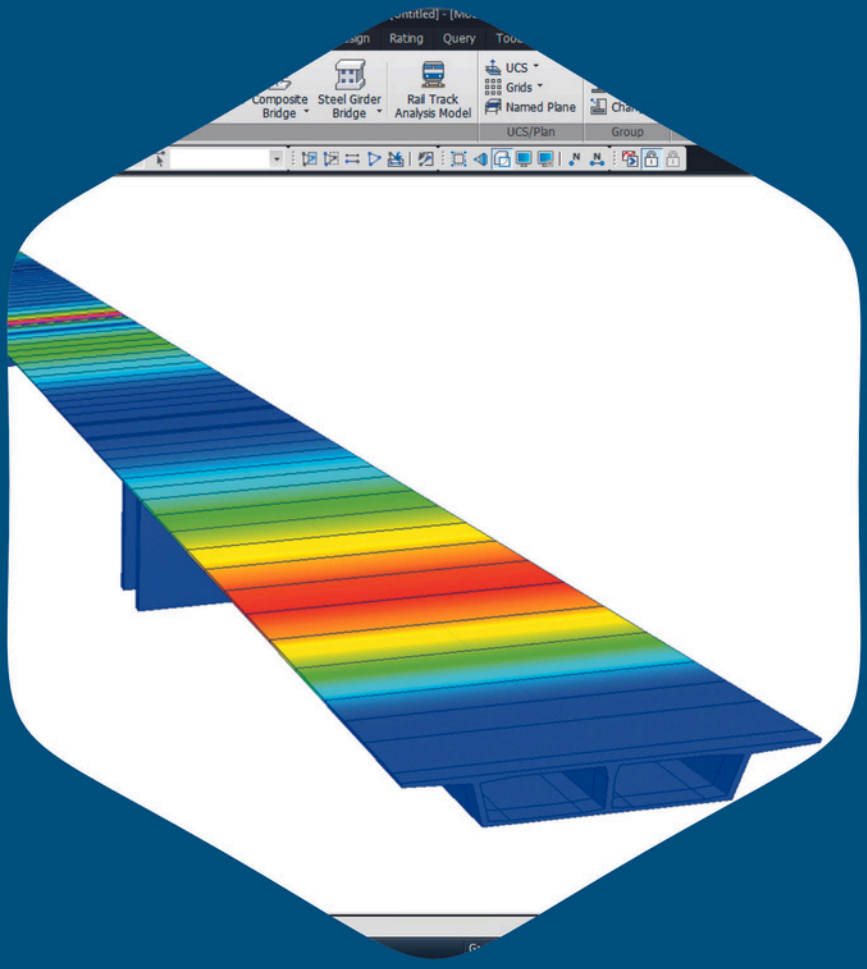
Topic:

1. Bridge Basic to Advance Analysis,
2. Bridge Design,
3. Bridge Structure wind simulation,
4. Bridge Manual Design,

MIDAS CIVIL FOR DESIGN AND ANALYSIS

MIDAS CIVIL

Midas Civil is the most powerful software for analysing and designing steel, concrete, wood, aluminum and composite structures. Experienced engineers who have a good understanding of the concept of modelling, analysis and design of a structure are well aware of this well-known and professional software. Three years of experience, along with suggestions from engineers working with Midas Civil, have made it the most applicable design and analysis software available in the global marketplace. The toolbars embedded in the graphical user interface make it easy to enter the information needed for modelling, analysis, and design.



STAAD PRO FOR DESIGN AND ANALYSIS

STAAD.Pro is a comprehensive and integrated finite element analysis and design application that includes visualization capabilities, a simple user interface, and a wide range of design codes. You can analyse any structure exposed to static, dynamic, wind, earthquake, thermal, and moving loads. STAAD. Pro provides structural analysis and design for any type of project, including buildings, culverts, plants, bridges, stadiums, and marine structures.

STAAD.Pro

BRIDGE ANALYSIS AND DESIGN

- MIDAS and Staad handles numerous types of analyses
- Moving Loads - Static,
- Moving Loads - Dynamic,
- Many powerful dynamic analysis for both linear and nonlinear analysis,
- Response Spectrum analysis,
- Time History: Linear Model, Direct Integration Method , Non-Linear FNA
- Powerful Nonlinear Analysis tools associated with either geometric or material response
- Nonlinear Buckling
- P-Delta
- Direct-Integration Time History
- Buckling
- Staged Construction
- Staged Construction Stages
- Creep and Shrinkage
- Static Pushover
- Nonlinear Layered Shell
- Dynamic
- Modal
- PBD (Performance Based Design)

BRIDGE DESIGN CAPABILITY

- Utilize Interactive design capabilities in MIDAS to maximize efficiency
- Composite Steel I- and U-Girder Bridges
- Concrete Box and Multi cell Concrete Box Girder Bridges
- T-Beam Bridges
- Concrete Slab Bridges
- Precast I- and U-Girder Bridges
- Load Rating
- Utilize interactive rating capabilities in MIDAS to maximize efficiency
- Composite Steel I- and U-Girder Bridges
- Concrete Box and Multicell Bridges
- Precast I- and U-Girder Bridges
- T-Beam Bridges
- Concrete Slab Bridges
- T-Beam Bridges
- Output and Display
- Deformed Geometry
- Force Diagrams
- Influence Surfaces
- Force Diagrams
- Bridge Responses
- Animations

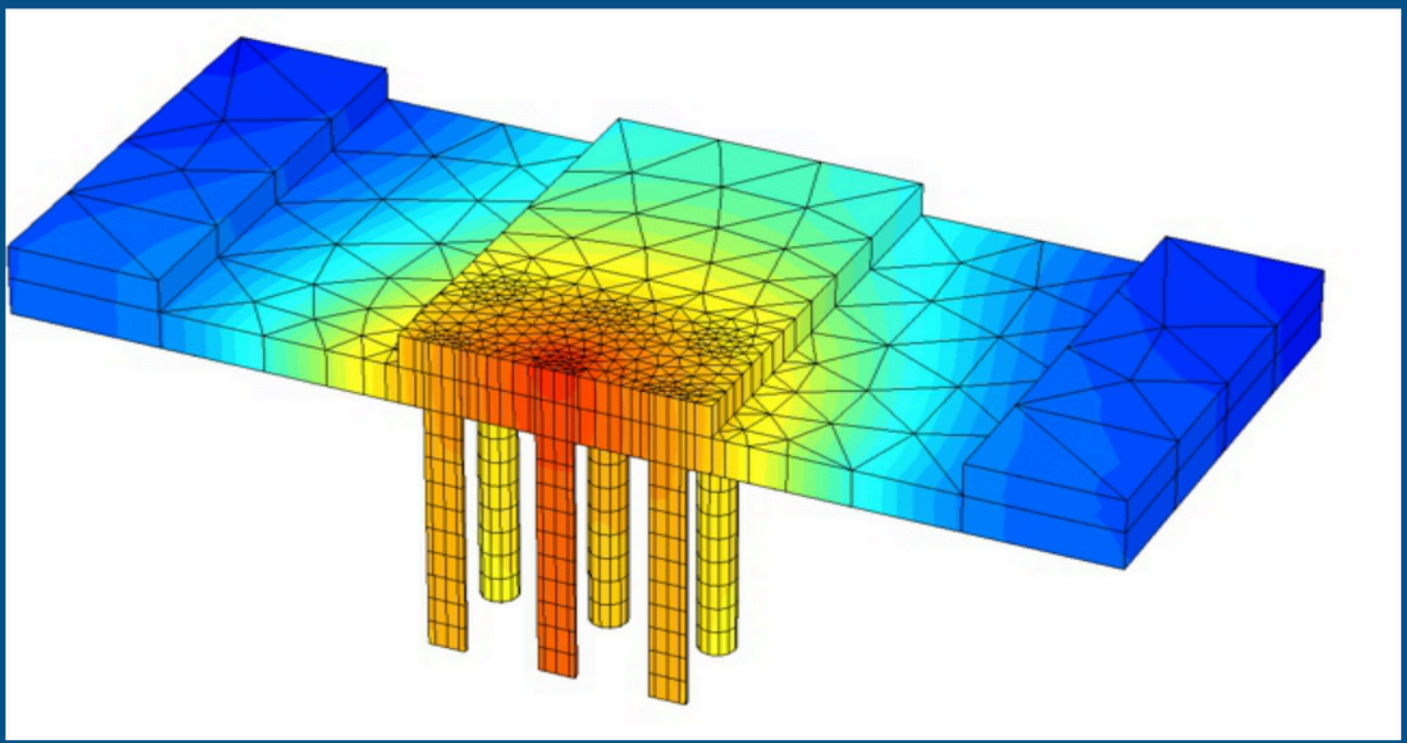
FOUNDATION & SLAB SYSTEM

Foundation and Slab Design

1. Transverse analysis for Box girder
2. Transverse analysis for I girder
3. Application of loads and combinations
4. Section and Material Properties
5. Results Interpretation and Extraction
6. Section design checks - SLS & ULS

Substructure & Abutment

1. Single Pier Substructure system with Pile foundation
2. Portal Pier Substructure system with Pile foundation
3. Strut and Tie theory of design
4. Flexure Theory of design
6. Section design checks - SLS & ULS



BRIDGE STEEL CONNECTION DESIGN

STAAD RAM CONNECTION Or IDEA STATICA

RAM Connection can be used stand alone or fully integrated with RAM Structural System, RAM Elements, and STAAD.Pro for steel connection design. To check a specific connection, design a single connection for multiple joints, or optimize each connection in your structure, RAM Connection gets you there quicker than ever before. Automated Connection Design Designing, checking, and optimizing shear, moment, gusset, splice, bracket, base plate, and truss connections, according to AISC (ASD or LRFD), EN 1993, BS 5950, IS 800, GB 50017

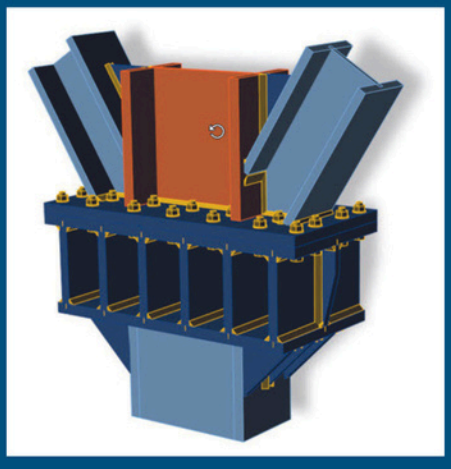
RAM
CONNECT Edition

IDEA STATICA FOR STEEL CONNECTION DESIGN

IDEA StatiCa®
Calculate yesterday's estimates

AS4100, and NZS 3404 has never been this automated.

- Connection Families (Joint Types)
- Single Plate (SP) Connections – Shear
- Designing Moment Connection
- Designing Gusset Connection
- Designing Base plate Connection
- Designing Splice Connection
- Detailed skill



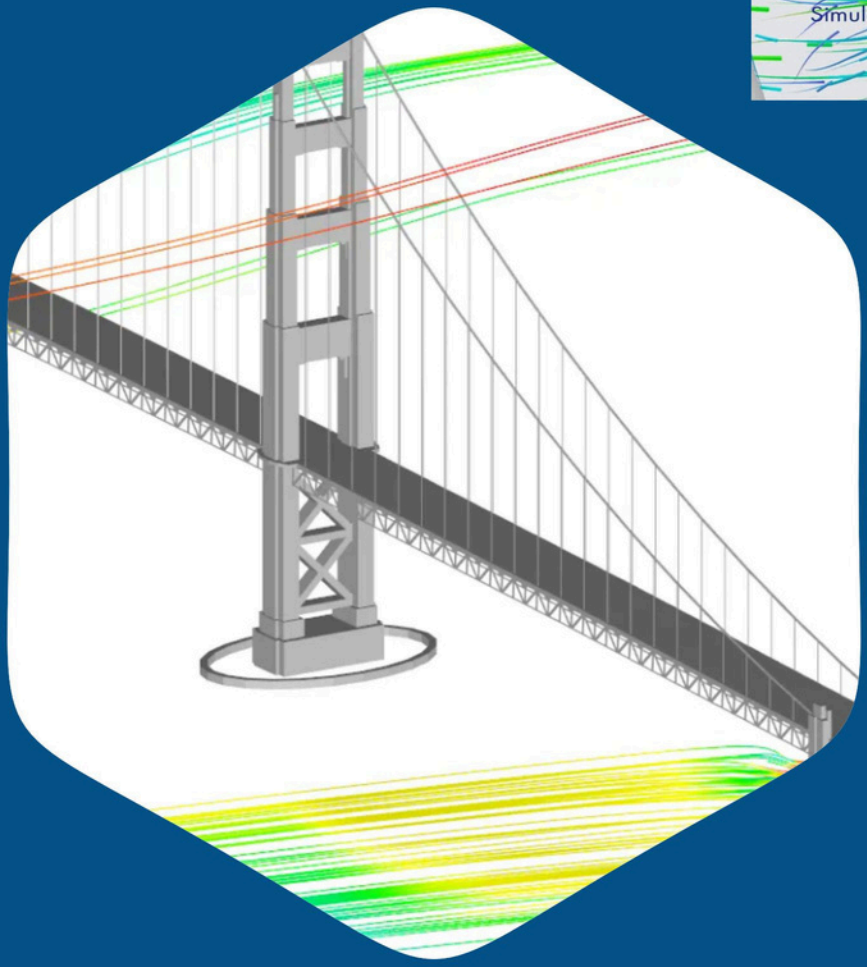
CONNECTION DESIGN AND ANALYSIS

- Connection Families (Joint Types)
- Single Plate (SP) Connections – Shear
- Single Plate (SP) Splice Connections
- End Plate (EP) Connections - Shear
- End Plate (EP) Splice Connections – Axial
- Double Angle (DA) Connections – Shear
- Double Angle (DA) Splice Connections – Shear
- Standard Tee (ST) Connections – Shear
- Bent Plate (BP) Connections – Shear
- Seated (SS or US) Connections – Shear
- Through Plate (TP) Connections - Shear
- Flange Plate (FP) Connections – Moment
- Flange Plate (FP) Splice Connections - Moment
- Directly Welded (DW) Connections – Moment
- Moment Angles/Tees (MA/MT) Connections - Moment
- Fully Directly Welded (DW) Connections – Combined
- Fully Directly Welded (DW) Splice Connections – Combined
- Column Cap (CC) Connections – Combined
- Moment End Plate (MEP) Connections – Combined
- Moment End Plate (MEP) Splice Connections – Combined
- Moment End Plate Knee (MEP Knee) Connections – Combined
- Column Base (CB) Connections – Combined
- Seismic Provisions for BCF Moment Frames
- Vertical Braced Frame Gusset Connections
- Horizontal Braced Frame Gusset Connections
- Truss Connections – Y Joints
- Truss Connections – K Joints
- Truss Connections – X Joints
- Bolt Groups
- Weld Groups

WIND SIMULATION OF BRIDGE STRUCTURE

DUBAL RWIND

RWIND Simulation Case Setup RWIND Simulation software, developed by companies PC-PROGRESS and DLUBAL, was designed as specialized tool for rapid CFD simulations of wind load on large variety of structures. RWIND Simulation works as standalone software, or it can be directly connected with structural design software RFEM or RSTAB. RWIND Simulation user interface is super ease of use with minimal necessary settings and user skills. The work flow is very simple. The input for RWIND Simulation is the surface model of the structure(CAD,.STL). The virtual wind tunnel is created around the structure. Wind speed is set. There st of the parameters are not mandatory, but available.



MODULE : 03

WORKSHOP FOR BRIDGE ANALYSIS & DESIGN

Total Learning hr : 20-30 Hr.

Total Project cover : 03

WORKSHOP

LIVE PROJECT'S (Any one of Below)

01 Four Laning divided Project Highway of Existing Dimapur - Kohima Road on EPC basis starts from design km. 152.210 to km. 166.735 (Design Length 14.525 Kms) (Existing km. 156.000 to km. 172.900, Length M16.900 Kms) of NH 39 (New No. is NH - 29) in the state of Nagaland

02 Construction of new link nh-133b from km: 0.20 in Jharkhand to km: 15.885 including ganga bridge and construction of Manihari bypass from 0.00 to 5.50

03 Construction of six/eight lane Vadodara expressway from km 279.00 to km 292 (Ankleshwar to Manubar section of Vadodara Mumbai expressway) in the state of Gujarat under Nhdp phase-v on hybrid Annulty mode (phase Ia-pacahage iv)

SAMPLE CERTIFICATE

1st August,2024

Certificate ID: SX-PGD-58
www.structurex.live/verify/

STRUCTUREX

Corporate Training

STRUCTUREX PRIVATE LIMITED
Certifies that

Mr. Sanjay Singh

has Successfully Completed

Post Graduate Diploma Program in

BRIDGE DESIGN & TECHNOLOGY

A Program that include BRIM & Different type of bridge Analysis & Design with Live Projects , National -International Code of Practice and Application of Different Type of Software.

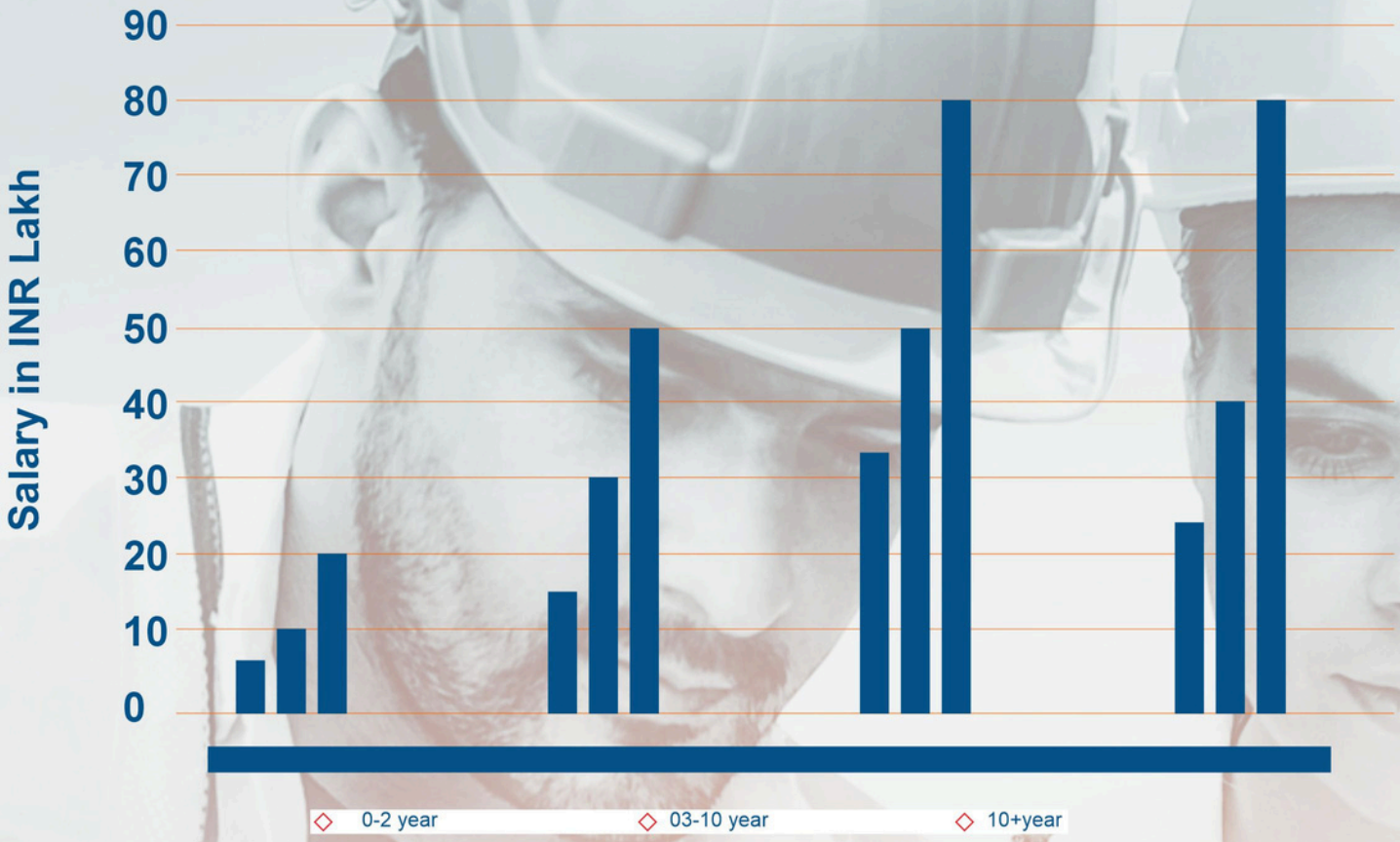
STRUCTUREX PVT. LTD. SEAL CORPORATE TRAINING

Program Coordinator

Program Director

CAREER PROSPECTIVE

Salary of bridge Engineering`s



Global Hiring Company

ARUP	ATKINS Member of the SNC-Lavalin Group	TATA TATA CONSULTING ENGINEERS LIMITED	Stantec
wsp	Kimley»Horn Expect More. Experience Better.	kpff	Balfour Beatty Construction
Honeywell	RAMBOLL	FLUOR	BECHTEL
INTEGRAL	COWI	M MOTT MACDONALD	Shapoorji Pallonji
SKANSKA	ARCADIS	Jacobs	VINCI

ADMISSION PROCESS

Enrolment Form

A one-on-one chat with our SME to understand your basic knowledge, prior work experience, and your expectations from the course. After your interview assessment,

Interview and offer letter

A one-on-one chat with our SME to understand your basic knowledge, prior work experience, and your expectations from the course. After your interview assessment, you will receive an offer letter from us.

Payment

Based on your interview performance, you would receive an offer letter and an fee payment as per option choosed

Batch Allotment

After the payment formalities, you will be given course credentials and your learning journey will begin!

FEATURES , ELIGIBILITY & FEE STRUCTURE

Key Features:

1. Mode of Program: Online Live
2. Platform : MS-Team
3. Duration: 08 Month
4. Recording of live class
5. Access of E-Liberary
6. 1 Year access of www.academy.structurex.live for learning

Eligibility

Bachelor/Master/PHD in civil engineering or relevant work experience in AEC Industry

Program Fee:

INR 75,000 (Including 18% GST)

Other then Indian & African subcontinent : USD 12,00/-

Maximum 2 installment applicable(No Cost EMI Only available with third party or credit card)

For One Time Payment option : 10% Fee Wavier

Refund Policy
1. If Program not start within 3 Month of Registration fee will refund.
2. Above than that no refund will be given.

Contact Us:
For further details, please reach out to:
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www.structurex.live

STRUCTUREX

ENGINEERING CONSULTING TRAINING

THANKS FOR BEING WITH US

For more Information Visit

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