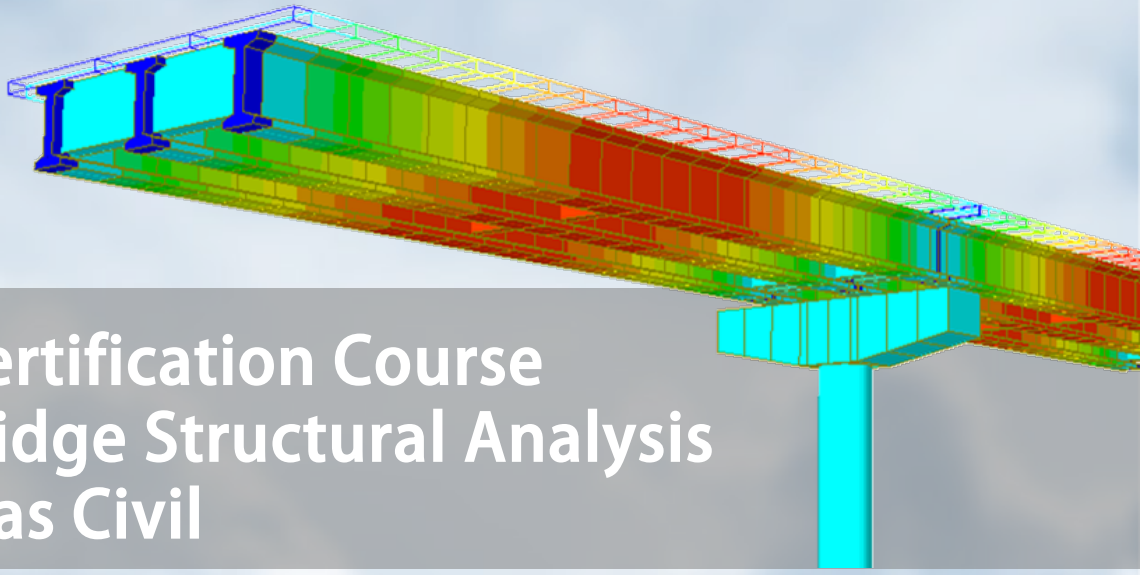
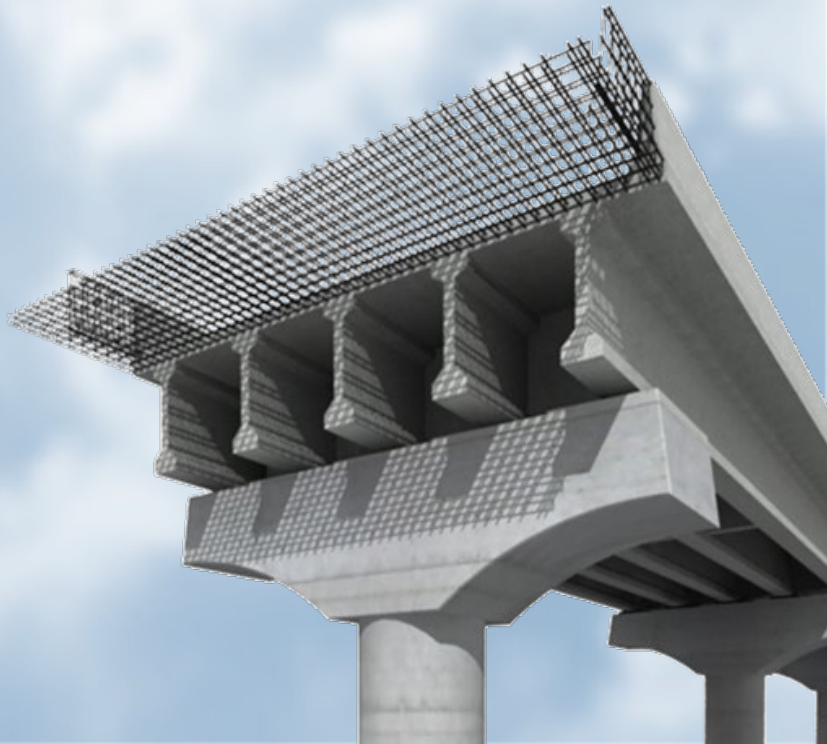
MIDAS



Online Certification Course in PSC Bridge Structural Analysis with midas Civil

MIDAS ACADEMY



midas Civil

Course Overview:

Online PSC Bridge Engineering courses through **MIDAS Academy**, our E-Learning Platform are designed for students & professionals who want to learn the ins and outs of midas Civil to help boost their productivity and skills for work. Focuses on **Fast Track Learning to master midas Civil, PSC Box & PSC Composite I Girder Bridge Analysis & Design as per Indian Codes**

Exclusive 100% Cash Back Offer for those who complete the below listed Courses on PSC Bridges **in December.**

Program Deliverables:

- 8,9 & 5-hours Module for Beginners, Intermediate & Proficient Users
- Classes are online & flexible. Join us from the comfort of your home (or cafe, or park, or anywhere else)
- Study material & WhatsApp support to complete the courses
- Trial License for **Software Proficiency Certification**

*100% Cash Back offer on Joining MIDAS Academy & Get Certification on all three Bridge Courses to become midas Civil Expert User for PSC Applications

For more details mail **academy@midasit.com**

WhatsApp us @ 9136962529

What you will learn:

midas Civil for Beginners: Mastering midas Civil

- Mastering Software: midas Civil(Model Generation)
- Interactive Tutorial:2D portal frame (Model Generation)
- Mastering Software: midas Civil- (Load, Analysis & Result)
- Interactive Tutorial: 2D Portal Frame(Load, Analysis & Result)
- Project Application: PSC Box Girder Bridge: Loading as per IRC 6 & Analysis as per IRC 112

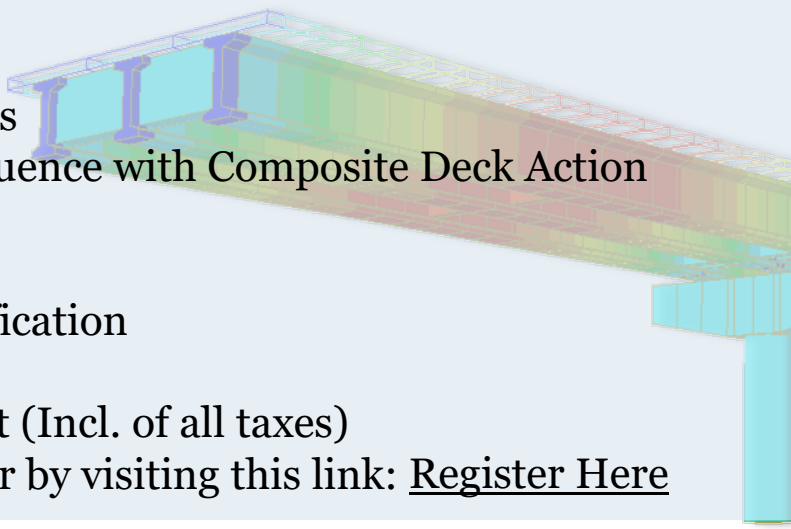
Fee: INR 350/- Per Participant (Incl. of all taxes)
Registration: You can enroll by visiting this link: Register Here

midas Civil for Intermediate: PSC Box Girder Bridge

- Longitudinal Analysis
- Transverse Analysis
- Ultimate Limit State Design IRC 112
- Serviceability Limit State Design IRC 112
- Substructure design IRC 112

Fee: INR 990/- Per Participant (Incl. of all taxes)
Registration: You can register by visiting this link: Register Here

midas Civil for Proficient: PSC Composite I Girder Bridge



- Geometric Modelling
- Static & bridge Specific loads
- Construction Stage(CS) Sequence with Composite Deck Action
- Result Interpretation
- Design-IRC 112
- Manual Vs midas Civil Verification

Fee: INR 700/- Per Participant (Incl. of all taxes)
Registration: You can register by visiting this link: Register Here

#Course Curriculum

midas Civil for Beginners: Mastering midas Civil

MODULE 1. INTRODUCTION

- midas Civil for Beginners: Course Overview
- Why Learn midas Civil?
- What to Expect from the midas Civil Beginner Course?
- midas Civil Installation & License

MODULE 2. MASTERING SOFTWARE: MIDAS CIVIL (MODEL GENERATION)

- Windows & Menu System
- Preference Settings
- Manipulate Model View
- Selection & Activation
- Model Generation
- Verify Input (1/2)

MODULE 3. INTERACTIVE TUTORIAL : 2D PORTAL FRAME (MODEL GENERATION)

- Initial Setting (Units)
- Structure definition: Structure Type
- Structure definition: Define Point Grid
- Property Definition: Material Definition
- Property Definition: Section Definition
- Geometric Modelling: Create Elements
- Geometric Modelling: Extrude Elements
- Boundary Definition: Defining Supports
- Boundary Definition: Defining Node Local Axis
- Boundary Definition: Defining Spring Supports

MODULE 4. MASTERING SOFTWARE: MIDAS CIVIL – (LOAD, ANALYSIS & RESULT)

- Load Definition
- Verify Input (2/2)
- Analysis
- Result Interpretation

MODULE 5. INTERACTIVE TUTORIAL : 2D PORTAL FRAME (LOAD, ANALYSIS & RESULT)

- Load Definition: Defining Static Load Cases
- Load Definition: Element Beam & Nodal Loads
- Load Definition: Trapezoidal Line Beam Load
- Results: Deformations
- Results: Beam Diagrams
- Results: Beam Forces
- Results: Reactions
- 2D Portal Frame Tutorial & Model File

MODULE 6. PROJECT APPLICATION – PSC BOX GIRDER BRIDGE: LOADING AS PER IRC 6 & ANALYSIS AS PER IRC 112

- Overview & Initial Settings
- Material & Section Definition
- Geometric Modelling
- Group Definition
- Boundary Definition
- Static & Prestress Load Definition
- Construction Stage Definition
- Temperature Load Definition
- Moving Load Definition
- Moving & Construction Stage Analysis Control
- Defining Reinforcement
- Analysis & Result

MODULE 7. TASK TO BE COMPLETED FOR CERTIFICATION

- General Instruction for Task to be completed for Certification
- Assessment Q & A for Academy Beginners Course
- Task: Single Span PSC Box Bridge Tutorial
- Supporting Files

CERTIFICATION COURSE

1) Beginners: Let's Do It!

#Course Curriculum

midas Civil for Intermediate: Not so tough

MODULE 1. INTRODUCTION

- midas Civil for Intermediate: Course Overview
- Why Learn midas Civil?
- What to Expect from the midas Civil Intermediate Course?
- midas Civil Installation & License

MODULE 2. PSC BOX GIRDER BRIDGE: LONGITUDINAL ANALYSIS

- Longitudinal Analysis: Overview
- Fundamentals of PSC Box Girder Bridge
- Bridge Project Overview
- Material and Section Properties Definition
- Geometry Generation
- Section Assignment
- Why Construction Stage Analysis?
- Construction Stage Group Definition
- Boundary Definition
- Load Calculation as per IRC 6
- Static Load Definition
- Prestress Load Definition
- Temperature Load Definition
- Understanding Moving Load Analysis
- Moving Load Definition
- Construction Stage Formulation
- Result Interpretation

MODULE 3. PSC BOX GIRDER BRIDGE: TRANSVERSE ANALYSIS

- Transverse Analysis: Overview
- Introduction & Need
- Model Generation
- Result Interpretation

MODULE 4. PSC BOX GIRDER BRIDGE: ULTIMATE LIMIT STATE DESIGN IRC 112

- Ultimate Limit State Design: Overview
- Load Combination as per IRC 6
- Ultimate Limit State: Flexure
- Ultimate Limit State: Shear
- Ultimate Limit State: Torsion

MODULE 5. PSC BOX GIRDER BRIDGE: SERVICEABILITY LIMIT STATE DESIGN IRC 112

- Serviceability Limit State Design: Overview
- Stress for Cross Section at CS & Service Load
- Stress for Tendons & Principal Stresses
- Crack Control and Deflection Checks

MODULE 6. PSC BOX GIRDER BRIDGE: SUBSTRUCTURE MODELLING

- Substructure Modelling: Overview
- Geometric Model of Pier & Pile Foundation
- Soil Structure Interaction with Pile Springs
- Critical Loads for Substructure
- Result Interpretation

MODULE 7. PSC BOX GIRDER BRIDGE: SUBSTRUCTURE DESIGN IRC 112

- Substructure Design IRC 112: Overview
- Design of Pier : Biaxial Check
- Design of Pier: Irregular Section
- Design of Pile in midas Civil

MODULE 8. TASK TO BE COMPLETED FOR COURSE CERTIFICATION

- General Instruction for Task to be completed for Certification
- Assessment Q & A for Academy Intermediate Course
- Task: 3 Span PSC Box Girder Bridge Tutorial
- Supporting files

2) Intermediate: Not So Tough!

CERTIFICATION COURSE

#Course Curriculum

midas Civil for Proficient: That was Easy

MODULE 1. INTRODUCTION

- midas Civil for Proficient: Course Overview
- Why Learn midas Civil?
- What to Expect from the midas Civil Proficient Course?
- midas Civil Installation & License

MODULE 2. PSC COMPOSITE I GIRDER BRIDGE: GEOMETRIC MODELLING

- Geometric Modelling: Overview
- Structure Overview & Material Definition
- Why Time-dependent material properties
- Section Property
- Model setup & geometry generation
- Defining groups & boundary conditions

MODULE 3. PSC COMPOSITE I GIRDER BRIDGE: STATIC & BRIDGE SPECIFIC LOADS

- Static & Bridge Specific Loads: Overview
- Generating Load Cases & Defining Dead Load
- Tendon Prestress Load Uniform & Gradient Temperature
- Wind Load
- Moving Load Definition
- Seismic Load Definition

MODULE 4. PSC COMPOSITE I GIRDER BRIDGE: CONSTRUCTION STAGE (CS) SEQUENCE WITH COMPOSITE DECK ACTION

- Construction Stage (CS) Sequence with Composite Deck Action: Overview
- Significance of Construction Stage
- Sequence of Construction for composite I girder bridge

MODULE 5. PSC COMPOSITE I GIRDER BRIDGE: RESULT INTERPRETATION

- Result Interpretation

MODULE 6. PSC COMPOSITE I GIRDER BRIDGE: DESIGN-IRC 112

- PSC Composite I Girder Design-IRC 112: Overview
- Design Load Combination: IRC 6
- Design Parameters & Design Data

MODULE 7. PSC COMPOSITE I GIRDER BRIDGE: MANUAL VS MIDAS CIVIL VERIFICATION

- Manual Method Vs midas Civil Verification: Overview
- Verification: Stress in Composite Section
- Verification: Temperature Gradient

MODULE 8. PSC Composite I Girder Bridge: Task to be completed for Certification

- General Instruction for Task to be completed for Certification
- Assessment Q & A for Academy Proficient Course
- Task: PSC Composite I Girder Tutorial
- Supporting files

CERTIFICATION COURSE

3) Proficient: That was Easy!

#3 Career Benefits

Distinguish your profile by earning a **Rewarding Certification**

Open doors to **Opportunities** demanding specialization

Become Eligible for most in-demand Analytical Skills

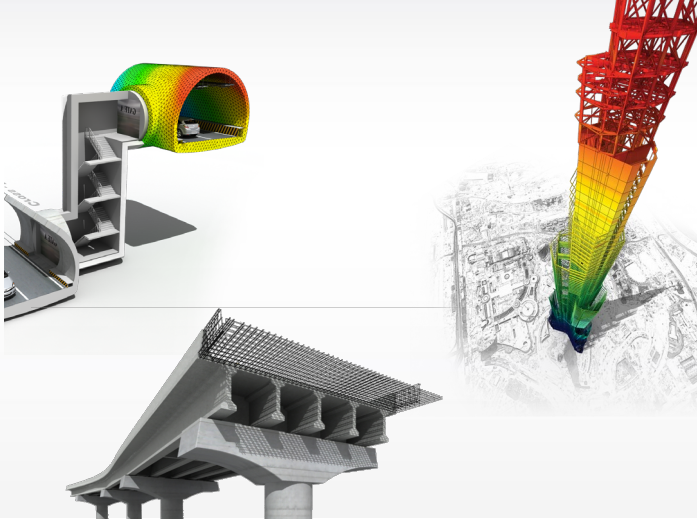
For further details, please visit http://academy.midasuser.in or contact us at academy@midasit.com

COMPANY INFORMATION
1001, 10floor, Cyberone Tower, Sector 30, Vashi, Navi Mumbai.
Maharashtra 400703

We analyze and design the future

MIDAS EDUCATIONAL PROGRAM

We strongly believe Midas programs will enhance the level of productivity and efficiency in the field of academic & research.



User List

MIDAS Users India (Partial List)

AECOM	Louis Berger Group	ADB Jharkhand	Nagarjuna Construction	Satish Marathe Consultants
AFCONS	Mott MacDonald	CDM Smith	Naiknavare	Shrikande Consultants
ARCADIS	Mouchel	CDO Jharkhand	Phiske Consultant	Softskill Consultants
ARUP	SMEC	CES	Pragati Consultants	Structus Consultants
ATKINS	Thornton Tomasetti	Comten Engineers	PWD, Navi Mumbai	STUP Consultants
CH2M HILL	WSP Group	DCIPL	R& B Gandhinagar	Sunil Mutalik
COWI		J+W Consultants	RDSO	Tandon Consultants

MIDAS Educational Users (Partial List)