Autodesk Robot Structural Analysis Professional

Training details

DESCRIPTION

Autodesk Robot Structural Analysis Professional software provides structural engineers with advanced building simulation and analysis capabilities for large and complex structures. The structural analysis software offers a smoother workflow and interoperability with Autodesk Revit Structure software to extend the Building Information Modeling (BIM) process, enabling engineers to more quickly perform comprehensive simulation and analysis of a variety of structures.

OBJECTIVES:

This course covers the following:

- Using exceptionally powerful FEA analysis, Autodesk Robot Structural Analysis calculates a wide range of structural models.
- Using a comprehensive collection of design codes, results are delivered in minutes, not hours.
- Seamless workflow with 3D bidirectional links to Autodesk companion products: provide a scalable, country-specific analysis solution for many different types of structures.

TRAINING STRUCTURE:

Autodesk Robot Structural Analysis Professional	12 class x 2.5 hours = 30 hours

COURSE TEXTBOOKS AND OTHER READING MATERIALS

We recommend the following resources:

Web Resources:

- Robot Structural Analysis overview
- Robot Structural Analysis Professional Documentation
- Simulation Community

PREREQUISITES:

- Basic knowledge and skills about using computers.
- Structure background is recommended

COURSE GRADING:

Attendance 40% Assignments (workshop + 2 projects)
60% To pass the course and receive both Autodesk certificate & CAD MASTERS certificate you should:

- Attend at least 80% of course hours.
- Score more than 70% as a total score.

AUTODESK ROBOT STRUCTURAL ANALYSIS PROFESSIONAL – COURSE OUTLINE

This course including the following:

Unit 1:

- Robot in BIM
- Robot modules
- Robot screen layout
- Basic configuration of the program (Units-Codes-Databases)
- Navigation techniques
- Methods of working with Robot interface

Unit 2:

- Analyzing 2D Frames Concrete/Steel.
- Design of Beams/Columns/Foundation
- Reinforcement Generation
- Calculation Notes
- Analyzing 2D Steel Trusses

Unit 3:

- Analyzing 3D Frames
- Frame Generator.
- Design of Steel connection
- Working with Wind Loads

Unit 4:

- Working with plate design
- Concrete Slabs
    - Solid Slab.
    - Flat Slab.
    - Ribbed/Waffle Slab.
- RAFT Foundation

Unit 5:

- 3D Concrete Building

Unit 6:

- CAD Import
- Concrete Building
- Earthquakes Loads

Unit 7:

- Integration with Revit Structure.
  - Export Revit model to Robot
  - Structure Analysis in Robot
  - Modification of the Structure in Robot
  - Update Revit Model from Robot
- Integration with Excel.
- Calculation Reports