NEXTGEN INSTITUTE OF CONSTRUCTION ENGINEERING PRIVATE LIMITED

SACS TRAINING CONTENT

STAGE I

Determine the system capabilities & the new features of SACS & be able to explain its system configuration

- Platform Concepts
- Analysis techniques
- Codes and Standards
- Materials specifications
- SACS Software Modules
- Module arrangement
- Global Settings
- File naming convention
- Setting up project, run files etc.
- Precede, Data Generator and Editor

STAGE II

Creating Structural models with SACS using the graphical Interface and be able to demonstrate the method of creating a new model using the wizard & also inputting the Member properties. Also understand the user-defined loading & be able to input environmental loading from waves, wind, and current etc.

- Using Precede
- Members, offsets
- Wish bones
- Main piles, skirt piles
- Conductor Modeling
- Inputting Material Properties
- Dead Load
- Wave, Wind and Current Load
- Applied Loads – Joint and Member loads
- Marine growth
- Over rides (Member and Group)
- Simulation of non-structural elements such as anodes, walkways, stairs etc.

STAGE III

Performing the Inplace Analysis, Lift analysis based on the model that has been created. Loading & Combinations. Also understand about the various factors to be considered for doing the in place analysis& also the calculation of the COG shift for conducting the Lift analysis.

- Hydrostatic Collapse check
- Joint Check Options

- Dynamic Load Factors (API Vs. Noble Denton)
- Deterministic Lift
- 75/25 Lift load distribution
- Incorporation of COG shift factor
- Analysis and review of results

STAGE IV

Performing the Transportation analysis, Load out analysis of the model that has been prepared. Also understand about the various steps involved in the creation of the Tow input file. Also understand about the Gap element concept for Load out analysis.

- Typical Motion Parameters
- Tow input file
- Single stage method
- Two stage Method
- Review of results
- Discussions
- Load out sequence
- Gap element concept
- Review of results
- Model Preparing
- Launch Parameters
- Typical launch sequence
- Review of results
- Post Launch load extraction

STAGE V

Performing the Dynamic analysis & Deterministic fatigue analysis of the model that has been prepared. Also understand about the various aspects of Dynamic & Fatigue analysis like Added Mass, SCF, and Cyclic Stresses etc.

- Super Element Simulation
- Mass Modeling
- Added Mass and entrapped fluid
- Dynamic Analysis
- Review of results
- Wave Load specification
- SCF and S-N Curves
- Generation of Cyclic Stresses
- Fatigue Damage Calculations
- Deterministic Analysis
- Wave Selection
- Cyclic Stresses Generation
- Review of results