



SACS Offshore Platform Structural Analysis and Design Training Course

SACS Offshore Platform Structural Analysis and Design Training Course

Overview

SACS Offshore Platform Structural Analysis and Design Training Course is a one-week professional course for offshore structural engineers, marine engineers, analysts, project engineers, and reviewers, who leave with a Fixed Platform Design Pack. The course connects SACS model setup, environmental loads, static analysis, code checks, pile-soil interaction, fatigue concepts, result interpretation, and reporting in one traceable engineering workflow. Agile Leaders Training Center presents the course on fixed offshore platform analysis and design.

Who Should Attend

- Teams responsible for fixed offshore structural models and design bases
- Functions responsible for wave, wind, current, and operational load definition
- Specialists responsible for member, tubular joint, and foundation verification
- Teams responsible for offshore engineering reviews and design assurance
- Leaders responsible for structural deliverables and project interfaces

The course assumes participants work with structural mechanics, steel design, offshore facilities, or engineering calculations and leaves out introductory statics, software installation, and general marine operations.

Departments and Industries

The course supports fixed-platform engineering decisions across offshore energy and marine infrastructure.

- Offshore structural engineering departments
- Marine and civil design consultancies
- Oil and gas project engineering teams
- Offshore wind foundation functions
- Fabrication and construction engineering groups
- Asset integrity and design assurance departments

Learning Objectives

By the end of this course, participants will be able to:



- Build a controlled SACS fixed platform model
- Apply environmental and operational load definitions
- Analyze linear static response and load combinations
- Evaluate member, tubular joint, and foundation checks
- Compare fatigue and dynamic assessment evidence
- Diagnose results and assemble design review records

Course Agenda

Day 1: SACS Model Basis and Geometry

- Fixed Platform Design Basis Register
- SACS Precede Model Configuration Workflow
- Jacket Geometry and Connectivity Model
- Material and Section Property Library
- Model Quality Control Checklist

Day 2: Environmental Actions and Load Cases

- SACS Seastate Wave Load Definition
- Wind, Current, Buoyancy, and Marine Growth Model
- Operational and Equipment Load Register
- Boundary Condition and Support Model
- Load Case and Combination Matrix

Day 3: Static Analysis and Code Checks

- SACS Linear Static Solver Workflow
- Global Displacement and Reaction Review
- Member Utilization and Steel Code Check
- Tubular Joint Classification and Check
- Analysis Exception and Sensitivity Log

Day 4: Foundations, Fatigue, and Review

- Pile-Soil Interaction Analysis Model
- Foundation Demand and Capacity Review
- Wave Fatigue Screening Method
- Dynamic Response Assessment Framework
- ISO 19902 Design Review Checklist



Day 5: Fixed Platform Design Practice

- SACS Geometry and Model Audit Exercise
- Environmental Load and Combination Exercise
- Member, Joint, and Foundation Check Exercise
- Fatigue Evidence and Result Interpretation Exercise
- Fixed Platform Design Pack Capstone Exercise

Practical Exercises

The course uses suggested activities to practice fixed offshore platform analysis and design decisions.

- Suggested activity: build and audit a jacket geometry, property, connectivity, and support model in SACS.
- Suggested activity: define environmental actions, operational loads, load cases, and governing combinations.
- Suggested activity: interpret member, joint, reaction, foundation, fatigue, and sensitivity evidence.
- Suggested activity: compile a Fixed Platform Design Pack with assumptions, checks, exceptions, and review records.

FAQs

Who suits SACS offshore platform analysis training and what does it assume?

SACS offshore platform analysis training suits engineers, analysts, and reviewers working with fixed offshore structures. It assumes structural mechanics and engineering calculation experience and does not teach introductory statics or software installation.

How does SACS offshore platform design training differ from general steel design training?

SACS offshore platform design training centers on jacket geometry, hydrodynamic actions, tubular joints, pile-soil interaction, fatigue evidence, and offshore load combinations. General steel design training addresses broader building or industrial framing without this fixed-platform workflow.

How are wave, wind, and current loads represented in SACS offshore analysis?

Environmental actions are represented through defined metocean inputs, member hydrodynamic properties, directions, load cases, and combinations. Engineers then review generated loads, reactions, displacements, member forces, and governing utilization evidence.



What role does pile-soil interaction play in SACS fixed platform design?

Pile-soil interaction connects foundation stiffness and resistance with the structural response of the jacket. The model helps engineers examine load transfer, support behavior, pile demand, and the sensitivity of platform results to foundation assumptions.

How is fatigue considered in SACS offshore platform analysis?

Fatigue assessment considers repeated environmental loading, stress ranges, joint behavior, and accumulated damage evidence. The course introduces fatigue screening and result interpretation while keeping detailed project acceptance criteria within the applicable design basis.

Conclusion

Participants take a Fixed Platform Design Pack back to work. It connects the SACS model basis, environmental actions, analysis combinations, structural checks, foundation behavior, fatigue evidence, and review records. It changes isolated model outputs into traceable engineering assumptions, interpreted results, documented exceptions, and a structured design decision trail.



Training Course Categories

Agile PM and Project Management Training Courses

Agribusiness & Food Security Training Courses

Aviation Management and Operations Training Courses

Certified Courses By International Bodies

Communication and Public Relations Training Courses

Crisis Management and Business Continuity Training Courses

Data Analytics Training and Data Science Courses

Digital Government & Public Service Training Courses

Education and Learning Development Training Courses

Environment & Sustainability Training Courses

Facilities and Real Estate Training Courses

Finance and Accounting Training Courses

Governance, Risk and Compliance Training Courses

Healthcare Management Training Courses

Heritage Conservation and Museum Management Training Courses

Hospitality and Tourism Training Courses

Human Resources Training and Development Courses

IT Security Training & IT Training Courses

Leadership and Management Training Courses

Legal Training, Procurement and Contracting Courses

Maintenance Training and Engineering Training Courses

Marketing, Customer Relations, and Sales Courses

NGO, Humanitarian and Development Management Training Courses

Occupational Health, Safety and Security Training Courses

Oil & Gas Training and Other Technical Courses

Personal & Self-Development Training Courses



Training Course Categories

Quality and Operations Management Training Courses

Secretarial and Administration Training Courses

Shipping, Maritime and Ports Training Courses

Training Cities

Abu Dhabi UAE	Accra Ghana	Addis Ababa Ethiopia
Amman Jordan	Amsterdam Netherlands	Athens Greece
Baku Azerbaijan	Bali Indonesia	Bangkok Thailand
Barcelona Spain	Berlin Germany	Cairo Egypt
Cape town South Africa	Casablanca Morocco	Chicago USA
Doha Qatar	Dubai UAE	Frankfurt Germany
Geneva Switzerland	Istanbul Turkey	Jakarta Indonesia
Johannesburg South Africa	Kuala Lumpur Malaysia	Kuwait Kuwait
Lagos Nigeria	Langkawi Malaysia	Lisbon Portugal
London UK	Madrid Spain	Manama Bahrain
Marbella Spain	Milan Italy	Montreux Switzerland
Munich Germany	Muscat Oman	Nairobi Kenya



Training Cities

New York

USA

Nice

France

Paris

France

Phuket

Thailand

Port Louis

Mauritius

Porto

Portugal

Prague

Czech Republic

Rome

Italy

San Diego

USA

Seoul

South Korea

Sharm El-Sheikh

Egypt

Singapore

Singapore

Tashkent

Uzbekistan

Tbilisi

Georgia

Tokyo

Japan

Toronto

Canada

Trabzon

Turkey

Vienna

Austria

Zanzibar

Tanzania

Zoom

Online Training

Zurich

Switzerland