COURSE OVERVIEW OE0097
Mastering Offshore Execution - Installation and Hookup

Course Title
Mastering Offshore Execution - Installation and Hookup

Course Date/Venue
Session 1: May 25-29, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: September 22-26, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
OE0097

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of Mastering Offshore Execution - Installation and Hookup. It covers the importance of offshore installation and hookup in oil and gas projects including offshore platforms and facilities; the offshore execution planning and logistics and engineering and design considerations for offshore installation; the offshore safety and risk management, offshore jacket and substructure installation and topsides and module installation; and the pipeline and riser installation and subsea equipment and tie-back installation.

During this interactive course, participants will learn the mooring and anchoring systems for floating units, hookup process and methodologies and structural and mechanical hookup; the electrical and instrumentation hookup, piping and process system hookup and HVAC and utility systems hookup; the pre-commissioning and testing, system integration and control testing; the dynamic commissioning and performance testing; the health, safety, and environmental (HSE) considerations in commissioning; and the flare and vent system commissioning and troubleshooting common offshore installation issues.

Course Objectives

Upon the successful completion of this course, each participant will be able to:

- Apply and gain an in-depth knowledge on mastering offshore execution - installation and hookup
- Discuss the importance of offshore installation and hookup in oil and gas projects including offshore platforms and facilities
- Carryout offshore execution planning and logistics and discuss engineering and design considerations for offshore installation
- Apply offshore safety and risk management, offshore jacket and substructure installation and topsides and module installation
- Employ pipeline and riser installation and subsea equipment and tie-back installation
- Recognize mooring and anchoring systems for floating units, hookup process and methodologies and structural and mechanical hookup
- Discuss electrical and instrumentation hookup, piping and process system hookup and HVAC and utility systems hookup
- Carryout pre-commissioning and testing, system integration and control testing
- Apply dynamic commissioning and performance testing and discuss health, safety, and environmental (HSE) considerations in commissioning
- Employ flare and vent system commissioning and troubleshooting common offshore installation issues

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of mastering offshore execution - installation and hookup for offshore engineers and technicians, project managers and supervisors in offshore operations, installation and hookup personnel, marine and subsea engineers, contractors and vendors in offshore projects, safety and risk management professionals and those who involved in the planning, execution, and management of offshore installation and hookup activities.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:-

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Luis Manuel, is a **Senior Offshore & Inspection Engineer** with over **35 years** of extensive and practical experience within the **Oil**, **Gas**, **Petrochemical** and **Petroleum** industries. His expertise includes **Oil & Gas Marine Terminals**, **Vessel Hull & Machinery Survey**, Oil & Gas Fields **Terminal** Operations, **Seamanship**, **Shipping** Overview, **Marine Fire Fighting** Equipment, **Hull Damage** Control, **Vessel Rescue**, **Life Saving**, **Safety Process**, **Offshore Marine** Operation Management, **Offshore** Survey, Oil & Gas Terminals Loading & Discharging, Performance Monitoring of Offshore Structures, **Offshore** Pipeline Global Buckling, **Offshore** Modular Units, **Offshore** Structure Design & Construction, **Offshore** Project Management, **Tanker Vetting** for Terminals, **Loading Master** Certification for Oil & Gas Terminals, **Port Terminals** Crisis Management & Major Emergency Response. Further he is also well versed in **ASME Post Construction Code**, **Inspection Planning**, **Fitness-for-Service** (**FFS**) (**API 579**), **Design**, **Inspection**, **Repair**, **Maintenance**, **Alteration** and **Reconstruction** of **Steel Storage Tanks** (**API-653**), **Positive Material Identification** (**API RP 578**), **Pressure Equipments** and **Pressure Vessels** (**ASME VIII & API-510**); **Tanker & Marine Terminals**, **Offshore Rig Inspection**, **Pipelines** & **Piping** Design, Inspection & Maintenance (**ASME B31**, **API 579** & **API 580**), **Pipelines & Manifolds System**, **Offshore Structure** Engineering, Single Buoy Mooring (**SBM**), **Underwater Inspection by ROV**, **Subsea Pipeline Engineering**, Integrity Assessment, Forensic Analysis, Structural Analysis, Design & Engineering, Naval Architecture, Regulatory Compliance Inspections, **Stress & Fatigue Analysis** using **SACS**, **StruCad**, **Caesar II** and **Finite Element Analysis** simulators. He was the **Technical Advisor** and **Engineering Manager** of a leading international engineering firm where he led all Inspections, Structural Engineering and Pipeline Projects for **Total-ELF**, **Shell** and **Mobil**.

During his career life, Mr. Manuel has gained his thorough practical experience in **multiple engineering disciplines** that includes pipeline/piping inspection and engineering, naval engineering, container cargo lashing, aerospace engineering and offshore structural engineering (oil and gas exploration platforms) through several challenging positions such as the **Senior Pipelines Engineer**, **Senior Piping Engineer**, **Senior & Lead Structural Engineer**, **Staff Engineer**, **Offshore Project Manager**, **Naval Architect** and **Applications Engineer** for various international companies including **Chevron**, **ExxonMobil**, **Addax Petroleum**, **ZAGOC**, **NASSCO**, DWC, Point Engineering, **US ARMY**, W.S. & Atkins, Atlas Engineering, **Heerema Offshore**, Casbarian Engineering Associates (CEA), Textron Marine, Ingalls Shipbuilding and Peck & Hale. Further, he has been heavily involved in the development of fabrication and erection drawings for offshore structures including installation and rigging as well as in the instruction materials as authorized by EDI (**Engineering Dynamic Incorporated**) for the training of engineers on the Structural Analysis Computer System (**SACS**) software.

Mr. Manuel has a **Bachelor's** degree in **Structural & Marine Engineering** from the **State University of New York**. Further, he is a **Certified Internal Verifier/Trainer/Assessor** by the **Institute of Leadership & Management** (**ILM**), a **Certified Instructor/Trainer** and the **author** of the book "**Offshore Platforms Design**" and the "**SACS Software Training Module**".

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee

US$ 8,000 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to Offshore Installation & Hookup*** *Importance of Offshore Installation & Hookup in Oil & Gas Projects • Key Phases of Offshore Construction & Commissioning • Challenges of Offshore Execution (Weather, Logistics, Safety) • Best Practices for Offshore Execution*
0930 – 0945	*Break*
0945 – 1030	***Overview of Offshore Platforms & Facilities*** *Fixed Platforms (Jackets, Gravity-Based, Compliant Towers) • Floating Production Systems (FPSOs, Semi-Submersibles, TLPs) • Subsea Infrastructure & Tie-Backs • Offshore Asset Classifications & Field Development*
1030 – 1230	***Offshore Execution Planning & Logistics*** *Project Planning & Timeline Management • Coordination of Vessels, Barges, & Equipment • Weather Forecasting & Contingency Planning • Logistics Management Strategies*
1230 – 1245	***Engineering & Design Considerations for Offshore Installation*** *Structural Integrity & Weight Management • Material Selection for Harsh Offshore Environments • Pipeline & Riser Design for Offshore Applications • Design Standards for Offshore Projects*
1230 – 1245	*Break*

1245 - 1315	***Offshore Safety & Risk Management*** *Offshore Safety Protocols & Regulatory Compliance • Hazard Identification & Risk Assessment (HIRA) • Safety Equipment & Emergency Response Planning • Offshore Safety Guidelines*
1315 - 1420	***Case Studies on Offshore Installation & Hookup Projects*** *Success Stories & Lessons Learned • Challenges Encountered in Offshore Execution • Approach to Offshore Installation Best Practices • Future Trends in Offshore Execution & Installation*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2

0730 – 0830	***Offshore Jacket & Substructure Installation*** *Pre-Installation Site Preparation & Seabed Surveys • Piling & Foundation Installation Methods • Jacket Launching, Lifting, & Positioning • Jacket Installation Procedures*
0830 – 0930	***Topsides & Module Installation*** *Lift Planning & Execution for Topsides & Modules • Use of Heavy-Lift Vessels & Crane Barges • Aligning & Securing Modules to Jackets • Guidelines for Topside Installations*
0930 – 0945	*Break*
0945 – 1100	***Pipeline & Riser Installation*** *Pipeline Trenching, Laying, & Burial Techniques • Riser & J-Tube Installation • Pipeline Integrity Testing & Commissioning • Pipeline Installation Specifications*
1100 – 1230	***Subsea Equipment & Tie-Back Installation*** *Subsea Templates & Manifold Installation • Umbilical & Flexible Flowline Laying • Subsea Connection & Testing Procedures • Subsea Equipment Deployment Standards*
1230 – 1245	*Break*
1245 – 1330	***Mooring & Anchoring Systems for Floating Units*** *Types of Mooring Systems (Spread Mooring, Single-Point) • Anchor Deployment & Tensioning Procedures • Dynamic Positioning for Floating Installation • Mooring Installation Requirements*
1330 - 1420	***Case Studies on Offshore Installation Execution*** *Challenges in Heavy-Lift Operations • Pipeline Installation Success Stories • Lessons Learned from Offshore Project Failures • Key Offshore Project Execution Improvements*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3

0730 – 0830	***Hookup Process & Methodologies*** *Definition & Importance of Offshore Hookup • Key Phases of Hookup Execution • Mechanical Completion vs. Pre-Commissioning • Guidelines for Offshore Hookup*
0830 – 0930	***Structural & Mechanical Hookup*** *Aligning & Securing Offshore Components • Welding & Bolting Procedures for Offshore Environments • Integrity Testing of Mechanical Systems • Structural Hookup Procedures*
0930 – 0945	*Break*
0945 – 1100	***Electrical & Instrumentation Hookup*** *Installation of Offshore Electrical Panels & Switchgear • Cable Pulling, Termination, & Testing Procedures • Instrumentation Calibration & Function Testing • Electrical Hookup & Commissioning Standards*
1100 – 1230	***Piping & Process System Hookup*** *Pipe Welding, Flange Connections, & Bolt Torqueing • Hydrostatic & Pneumatic Testing Procedures • Leak Detection & Pressure Testing • Standards for Process Piping Hookup*
1230 – 1245	*Break*
1245 – 1315	***HVAC & Utility Systems Hookup*** *HVAC System Installation & Air Balancing • Firefighting & Emergency Shutdown System Hookup • Potable Water & Sewage System Connections • Offshore Utility Hookup Specifications*
1315 - 1420	***Case Studies on Offshore Hookup Challenges & Solutions*** *Key Issues Faced During Offshore Hookup • Lessons Learned from Past Projects • Best Practices for Reducing Delays in Offshore Commissioning • Future Trends in Offshore Hookup Execution*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4

0730 – 0830	***Pre-Commissioning & Testing Activities*** *Overview of Pre-Commissioning Requirements • Functional Testing of Mechanical & Electrical Systems • Leak Testing & Flushing Operations • Pre-Commissioning Protocols*
0830 – 0930	***System Integration & Control Testing*** *Loop Checks & Control System Verification • SCADA, DCS, & PLC Testing for Offshore Systems • Interface Testing Between Different Offshore Modules • Integration Testing Requirements*
0930 – 0945	*Break*
0945 – 1100	***Dynamic Commissioning & Performance Testing*** *Energization & First Startup Procedures • Rotating Equipment Commissioning (Pumps, Compressors, Turbines) • Process System Testing & Optimization • Guidelines for Startup & Performance Validation*
1100 – 1230	***Health, Safety, & Environmental (HSE) Considerations in Commissioning*** *Identifying Hazards in Offshore Startup Operations • Emergency Shutdown (ESD) & Flare System Testing • Environmental Impact Assessment & Mitigation Strategies • HSE Compliance for Offshore Projects*
1230 – 1245	*Break*

1245 – 1420	***Flare & Vent System Commissioning*** *Importance of Flare & Venting Systems • Operational Checks for Safe Gas Disposal • Performance Verification & Emission Control • Standards for Flare & Vent System Commissioning*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Case Studies on Offshore Pre-Commissioning & Startup*** *Experience with Startup Failures & Solutions • Best Practices for Ensuring First-Time Startup Success • Challenges in System Integration & Testing • Future Trends in Offshore Commissioning & Performance Testing*
0930 – 0945	*Break*
0945 - 1130	***Offshore Installation and Hookup Best Practices*** *Review of Offshore Equipment and Installation Techniques • Demonstration of Hookup Procedures for Mechanical and Electrical Systems • Simulation of Pipeline and Riser Installation Techniques • Recommended Offshore Execution Workflows*
1130 – 1230	***Practical Session: Testing and Commissioning of Offshore Systems*** *Pressure Testing of Pipelines and Process Systems • Instrumentation Calibration and Functional Testing • Electrical Continuity and Insulation Resistance Testing • Commissioning and Startup Best Practices*
1230 – 1245	*Break*
1245 – 13451	***Troubleshooting Common Offshore Installation Issues*** *Resolving Alignment and Fit-Up Issues in Structural Connections • Diagnosing Pipeline Leaks and Pressure Drops • Addressing Control System Malfunctions in Offshore Modules • Troubleshooting Approach for Offshore Execution*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-

Course Coordinator

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