



# TRAINING CATALOGUE

Academy Korea

## 0001 Introduction to Shipbuilding 3 DAYS

### Contents

- Shipbuilding, Shipping & Operation statistics
- Organization of maritime regime, Rules & Regulations, Class roles, Shipyard position
- Shipbuilding process & Information
- Ships structure & Basic design concept
- Ship's typical damages in operation for each type of ships
- Bulk carriers/Tankers/Containers – structure and details
- Hierarchy of hull structure & Strength
- Steel materials logic
- Navigation & other operational systems
- Information on hull production & inspection
- Certification of equipment & Components

### Objective

Upon completion of this course, the participants will understand general information on ships & shipbuilding, class systematic, ship's operation condition and critical points, ships' general systems & function, hull structure & strength concept, and design basic concept

### Target Group

All engineers newly employed working in shipping /shipbuilding (Design, production, QC & Supervisors)

## 1000 Stability – Concept & Rules 2 DAYS

### Contents

- International rules & Regulations
- Stability basic terms
- Hydrostatics
- Intact stability
- Damage stability calculation (MARPOL, ICLL)
- Probabilistic damage stability (SOLAS)
- Inclining experiment
- Ballast water management
- Tonnage
- Critical cases
- Calculation examples

### Objective

Upon completion of this course, the participants will understand basic ship stability, Rules and regulations, intact/damage stability, inclining test & tonnage calculation and calculation method for light weight & LCG, etc.

### Target Group

- All engineers working in shipping/shipbuilding (Design, production, QC & Supervisors)
- New designers in basic design departments

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 1001 Hull Structure & Strength – Concept & Rules

3 DAYS

### Contents

- Maritime Regime
  - Class Systematic & its role
  - The importance of ship's operational aspects and critical points in designs
  - Organisation of maritime regime and its effect on shipyard
  - Overview & background of various conventions
- Hull strength basic
  - Shipbuilding trend
  - Ship's operation and typical damages
  - Hierarchy of hull structure & strength
  - Strength criteria & requirements
  - Hull steel materials logic
- Practical design aspects
  - Background of prescriptive rule requirement
  - Welding and detail construction design
  - Inspection & N.D.T.

### Objective

Upon completion of this course the participants will understand general information on shipbuilding, Class systematic, ship's operation condition and critical points, hull structure and force flow, strength concept & design points, general hull Rules and the background, etc.

### Target Group

- All engineers working in shipping/shipbuilding (Design, production, QC & Supervisors)
- New designers in basic hull design departments

## 1002 System General & Statutory – Concept & Rules

3 DAYS

### Contents

- Basic principles of accommodation design
- Basic principles of machinery arrangement, piping, ventilation and insulation
- Rules and regulations introduced by IMO, ILO and Class
- General review of machinery outfitting, hull outfitting, piping and accommodation outfitting
- Application of international conventions

### Objective

Upon completion of this course the participants will understand role of Class, purpose of Rules, regulations and recommendations, ship's function, basic concept of system, etc.

### Target Group

- All engineers working in shipping/shipbuilding (Design, production, QC & Supervisors)
- New designers in basic system design departments

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 1003 Electric general - Principles & Rules 2 DAYS

### Contents

- Basic concept of electric systems
- Electrical equipment and the function
- General principles and requirements
- Instrumentation and control systems
- Emergency source

### Objective

Upon completion of this course the participants will understand what are Rules and regulations, electrical systems in principle, alarm & control system and instrumentation in principle, etc.

### Target Group

- All engineers working in shipping/shipbuilding (Design, production, QC & Supervisors)
- New designers in basic electric design departments

## 2001 Bulk carriers - Hull design 2 DAYS

### Contents

- Different type of bulk carriers and their characteristics
- Different type of bulk cargoes and their characteristics
- Bulk carrier operation
- Bulk carrier safety & loading flexibility
- Typical damage of bulk carrier
- Bulk carrier design concept and parameters
- Scantling calculation and strength analysis
- Structural detail & function of bulk carriers
- Theoretical knowledge of beams/loads/strength
- CSR for bulk carriers
- PMA & PSPC

### Objective

Upon completion of this course the participants will understand

- Bulk carrier operation, bulk carrier strength & design, bulk carrier rules background, etc.
- Application of rules for practical design
- CSR application for bulk carriers

### Target Group

Engineers who have attended the basic hull course or Engineers who have more than 2 years experience in hull design.

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 2002 Tankers - Hull design 2 DAYS

### Contents

- General hull structure of tankers
- Tanker design basis
- Newly introduced CSR rule & rule background
- Loads concepts and application of loads
- Buckling / Fatigue
- Tanker design concept and parameters
- Hull girder strength and H-ULS
- Sloshing and impact
- Finite element analysis and guidance for strength analysis
- Prescriptive rules review & scantling requirements
- Material & welding

### Objective

Upon completion of this course the participants will understand tanker structure, tanker strength & design concept, tanker rules background, various loads and loads application on tanker, CSR rule and its application to design, etc.

### Target Group

Engineers who have attended the basic hull course or  
Engineers who have more than 2 years experience in hull Design.

## 2003 Container carriers - Hull design 2 DAYS

### Contents

- General hull structure of container carriers
- Container carrier statistic and market & design trend
- Class Rules and application
- Guidance for strength analysis
- Tensional strength analysis method
- Operational aspects and design concept
- Container ship evolution & current design trend
- Container securing
- Interaction between hull structure & outfitting
- Critical areas for hull structure
- Typical hull damages

### Objective

Upon completion of this course the participants will understand container carrier operation, container carrier strength & design, container carrier rules background, container securing & outfitting and critical areas in design, etc.

### Target Group

Engineers who have attended the basic hull course or  
Engineers who have more than 2 years experience in hull Design.

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 2004 Machinery Piping & Statutory Design 3 DAYS

### Contents

- Design principles
- Ship piping system
- Machinery piping system
- Pipes, pumps, valves, flexible hoses and detachable pipe connections
- Ventilation system
- Fire-fighting system

### Objective

Upon completion of this course the participants will understand applicable class rules and international regulations, machinery & system design in general, oil pollution, drainage of compartment, handling of fuel oil, ventilation, etc.

### Target Group

Engineers who have attended the basic hull course or engineers who have more than 2 years experience in machinery piping design.

## 2006 Piping System & Statutory Design 3 DAYS

### Contents

- Cargo handling system and cargo vessels
- Applicable Class Rules and international requirements
- Design principles of ballast, bilge, air, sounding, deck fire-fighting, fire integrity, load line and ventilation system in cargo area
- Rule background and the application
- Relevant MARPOL, SOLAS, LL and BC code

### Objective

Upon completion of this course the participants will understand ship cargo handling system, applicable class rules & international requirements, design principle of each system, Classification of cargoes, etc.

### Target Group

Engineers who have attended the system general course or engineers who have more than 2 years experience in hull Piping.

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 2007 Accommodation design 2 DAYS

### Contents

- Background of Rules for accommodation and the application
- Relevant regulations of SOLAS and ILO convention
- Arrangement of means of escape
- Ventilation system in accommodation
- Fire insulation/detection/alarm/fight system in accommodation
- General requirements for ship's piping system
- Rules and convention for sanitary and fresh water system

### Objective

Upon completion of this course the participants will understand SOLAS 74 & ILO requirements, fire technical considerations, means of escape, details of construction, accommodation comfort, ventilation system, etc.

### Target Group

Engineers who have attended the system general course or  
Engineers who have more than 2 years experience in accommodation design.

## 2008 Electric design 2 DAYS

### Contents

- General requirements, class & statutory
- Design principles
- Distribution principles & redundancy
- Emergency source
- Control systems
- Instrumentation
- General installation onboard

### Objective

Upon completion of this course the participants will understand applicable Rules & regulations, electrical system in principle, alarm & control system, instrumentation in principle, etc.

### Target Group

Engineers who have attended the electric general course or  
Engineers who have more than 2 years experience in electric Design.

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 2010 Safety of navigation I –Equipment 2 DAYS

### Contents

- SOLAS Chapter V
  - IMO performance standards
- NAUT-class notations
  - additional performance requirements
  - certification requirements
- Interconnection of navigational systems
  - IEC 61162 series of standards
- Integrated Navigation Systems INS
  - IEC standards 61924-2 (INS)
  - IEC standards 61162-450 (LAN)
- NAUT-suffix ICS (integrated computer systems)
- eNavigation
- .

### Objective

Upon completion of this course the participants will understand IMO SOLAS carriage requirements, DNV Rules and application, etc.

### Target Group

Experienced engineers/designers more than 2 years

## 2012 Car Carrier – Hull Design and General 2 DAYS

### Contents

- History of Car carriers
- Market Status and Demands
- Hull Structures
- Stability
- System and Statutory
- RO/RO Equipment

### Objective

Upon completion of this course the participants will take the hull design and general understanding of car carriers.

### Target Group

Engineers for car carriers  
Maker for RO/RO equipment  
QM or Superintendent Performing Relevant Inspection  
Anyone interested in Car carriers

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr



## 2013 Energy Efficiency Design Index(EEDI) 2 DAYS

### Contents

- Introduction of EEDI regulations
- Required EEDI
- Attained EEDI
- Verification process
- Model tank test for EEDI
- Speed trial procedure
- Speed trial correction
- Innovative technologies and their influence on EEDI

### Objective

Upon completion of this course, the participants will get an overview of EEDI regulations, verification scope of model tank test, procedure & correction of speed trial and effects of innovative technologies on EEDI.

### Target Group

Yard engineers who are involved in EEDI-related activities and who want to get a good foundation for EEDI

## 3000 Harmonized CSR 3 DAYS

### Contents

- General hull structure of tanker and bulker
- Design basis
- Load concepts and application of loads
- Hull girder strength
  - Hull girder yield strength, hull girder ultimate strength & hull girder residual strength
- Hull local scantlings
  - Prescriptive requirements
- Direct strength analysis
  - Hold structural strength analysis
  - Local fine mesh structural strength analysis
- Buckling
- Fatigue
- Material & welding
- Ship type specific requirements

### Objective

Upon completion of this course the participants will get an overview of harmonized CSR with reference to hull strength & design concept, technical rule background and differences between harmonized CSR and CSR Tank or CSR Bulk.

### Target Group

Engineers who are familiar with basic hull concepts & design or experienced engineer for CSR Tank and CSR Bulk.

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## **3002-1 Fatigue Assessment I**

### **2 DAYS**

#### **Contents**

- Fatigue damages
- SN-curves and miner summation
- Fatigue assessment for NAUTICUS(Newbuilding), Classification Notes 30.7
- Introduction to fatigue assessment for PULS-1/PULS-2

#### **Objective**

Upon completion of this course the participants will understand fatigue basic, DNV CN for fatigue and the procedure for PULS notations, NAUTICUS software for fatigue strength assessment, etc.

#### **Target Group**

Engineers in hull/outfitting department having more than 2 Years experience.

## **3002-2 Fatigue Assessment II**

### **2 DAYS**

#### **Contents**

- SN-curves and miner summation
- Summary of Classification Notes 30.7 and PLUS1/PLUS-2
- Introduction to wave load analysis and full stochastic fatigue analysis
- Direct calculation method of fatigue assessment

#### **Objective**

Upon completion of this course the participants will understand fatigue basic, DNV CN for fatigue and the procedure for PLUS notations, NAUTICUS software for fatigue strength assessment, direct calculation method etc.

#### **Target Group**

Engineers in hull/outfitting department having more than 2 years experience

---

#### **For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## **3005 Material Technology 3 DAYS**

### **Contents**

- Basic requirements to construction materials
- Basic facts about metallic materials
- Phase diagrams
- Steels, carbon manganese, aluminum, stainless steels and others

### **Objective**

Upon completion of this course the participants will understand materials, application to ships, requirements, etc.

### **Target Group**

Engineers in hull/outfitting design department having more than 2 years experience

## **3006 Noise & Vibration 2 DAYS**

### **Contents**

- Concept of noise & vibration
- 1st step, 2nd step and 3rd step analysis
- Measurements and trouble shooting
- Design recommendations to reduce noise & vibration

### **Objective**

Upon completion of this course the participants will understand concept of noise & vibration, approach method, analysis steps, design against noise & vibration, etc.

### **Target Group**

Engineers having basic knowledge in noise & vibration and in FEA

---

#### **For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

**3007 LNG – Hull  
2 DAYS****Contents**

- Rules and regulations
- Strength analysis
- Temperature analysis and materials

**Objective**

Upon completion of this course the participants will obtain improved understanding of LNG carriers, strength of hull structures, Rules and regulations, material selection for lower temperature cargoes, etc.

**Target Group**

Engineers having basic knowledge in hull design and gas carriers

**3008 LNG – System  
2 DAYS****Contents**

- LNG cargo handling, systems & operation
- Cargo piping
- Cargo tank safety relief valves
- Fire protection
- Personnel protection equipment
- Electric installations in cargo area
- Instrumentation & cargo equipment

**Objective**

Upon completion of this course the participants will understand LNG carriers, cargo containment system, Rules and regulations, etc.

**Target Group**

Engineers having basic knowledge in system design and gas carriers

**For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 3012 Offshore – Hull General 2 DAYS

### Contents

- FPSO Hull design
- DNV offshore standard and recommended practices for offshore ships
- Direct analysis of wave bending moments and shear forces
- FPSO design by DNV Software
- Preliminary section scantlings
- Design of FPSO specific details

### Objective

Upon completion of this course the participants will understand structure design of FPSO units from the initial design phase to the detail design phase, etc.

### Target Group

Structural engineers/naval architects with basic knowledge of structural design of ship and/or offshore structures

## 3013 Offshore – System General 2 DAYS

### Contents

- General introduction to modern offshore technology
- Conversion and subsea systems
- Principles of area classification
- Emergency Shut Down (ESD) Systems
- Fire and Gas (F&G) detection systems
- Fire integrity

### Objective

Upon completion of this course the participants will understand the basic principles of modern offshore technology, special features and requirements for a FPSO compared to a conventional tanker, DNV Offshore Standards and applicable recognized international standards, etc.

### Target Group

System engineers with basic knowledge of system design of ship and/or offshore structures

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## **3014 LPG – Hull 2 DAYS**

### **Contents**

- Basic properties of gas carriers
- LPG carriers – Tank type A and type C
- Rules and regulations
- Design loads
- Material selection for lower temperature cargoes
- Strength of hull structure and cargo tanks
- Critical details

### **Objective**

Upon completion of this course the participants will obtain improved understanding of LPG carriers, strength of hull structures, Rules and regulations, material selection for higher and lower temperature cargoes, etc.

### **Target Group**

Engineers having basic knowledge in hull design and gas carriers

## **3015 LPG – System 2 DAYS**

### **Contents**

- Applicable rules & regulations, Type of cargoes
- Damage stability & cargo tank location
- Ship arrangement
- Cargo containment
- Cargo handling systems I & II
- Design of pressure vessel type cargo tanks
- Design of prismatic type cargo tanks

### **Objective**

Upon completion of this course the participants will understand LPG carriers, cargo containment system, Rules and regulations, etc.

### **Target Group**

Engineers having basic knowledge in system design and gas carriers

---

#### **For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 3019 Drillship Hull 2 DAYS

### Contents

- Basic principles of drilling vessel design
  - Drilling semi-submersible
  - Drill ship's
  - Self-elevating units
- Rules, Regulations, Classification of drillship
- Hull Girder Capacity (yield, buckling)
- Fatigue Assessment
- Structural design for structural categories (special/primary/secondary)
- Hull interface (moonpool area, substructure)

### Objective

Upon completion of this course the participants will understand basic design concept of drillship's hull, differences between standard ship design and drillship design and how to apply the DNV standards for hull design

### Target Group

All engineers working in offshore/drillship segment (design, production, QC & supervisors)

## 3020 Drillship System 2 DAYS

### Contents

- The basic principles of modern drilling system technology
- Rules, Regulations and Classification of drillship
- Special features of a drillship
- Drilling systems
- Safety related aspects
- System interfaces
  - Risk analysis

### Objective

Upon completion of this course the participants will understand the basic principles of modern drillship technology, special features of drilling units and an overview of production systems, drilling systems, layout and rules & regulations etc.

### Target Group

All engineers working in offshore/drillship segment (design, production, QC & supervisors)

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 3021 FLNG Hull 2 DAYS

### Contents

- Basic design concept and design philosophy of FLNG
  - General arrangement and layout
  - Material selection
  - Structural strength
  - Stability
- Rules, Regulations to be applied
- Scope of DNV Classification
- Use of Risk Assessment in FLNG design
  - Collisions
  - Sloshing
  - Stability and Buoyancy hazards

### Objective

Upon completion of this course the participants will understand basic design concept of FLNG, strength criteria & requirements and maintenance/inspection philosophies of FLNG

### Target Group

All engineers working in LNG FPSO & FSRU segment (design, production, QC & supervisors)

## 3022 FLNG System 2 DAYS

### Contents

- Basic design concept and design philosophy of FLNG
  - Process descriptions and process flow diagrams
  - Operation/Safety philosophy
- Conceptual level design
  - Safety systems
  - Emergency shutdown
  - Electric systems
  - Mechanical systems
- Rules & Regulations to be applied
- Use of Risk Assessment in FLNG design
  - Loss of well containment for LNG production installations
  - Gas release into confined space
  - Release of toxic on other hazardous substance
  - Loss of mooring, propulsion, station keeping

### Objective

Upon completion of this course the participants will understand basic design concept of FLNG's safety, novel aspects and application in LNG transfer, conceptual system design

### Target Group

All engineers working in LNG FPSO & FSRU segment (design, production, QC & supervisors)

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr



## 4101 Welding in Structure & Piping 2 DAYS

### Contents

- p-WPS
  - Welding metallurgy
  - Rule requirements
- Welding Procedure Specification
  - Essential Valuable  
(ASME,AWS,ISO,NORSOK &DNV GL)
- Welder qualification
- Rule interpretation

### Objective

Upon completion of this course the participants will understand general information on general requirements of code and DNV GL rule, Welder qualification procedure and how to establish WPS

### Target Group

Welding Engineers or QC person working for manufacturers supplying structures or steel products manufacturers

## 4103 Casting Technology 2 DAYS

### Contents

- Basic of metallurgy
- Steel making technologies
- Heat treatment technologies
- Casting making
- Mechanical Testing
- NORSOK-M122
- Approval of manufacturer

### Objective

Upon completion of this course the participants will understand general information on Welding & NDT, updated technology in Welding & NDT and how to improve productivity

### Target Group

All engineers who are involved in the service areas of welding & NDT

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## **4104 Forging Technology 2 DAYS**

### **Contents**

- Basic of metallurgy
- Steel making technologies
- Heat treatment technologies
- Forging making
- Mechanical Testing
- NORSOK M-123
- Approval of manufacturer

### **Objective**

Upon completion of this course the participants will understand general requirements for materials, manufacture, inspection, certification and testing procedures

### **Target Group**

All engineers who are working for manufacturers supplying forging and casting to the shipyards

## **4107 Navigation Lights Arrangement 1 DAY**

### **Contents**

- COLREG General
- Steering & Sailing Rules
- Lights and Shapes
- Sound and Light Signals
- Positioning and Technical Details of Lights and Shapes
- Relevant Performance Standards
- Installation and Inspection

### **Objective**

Upon completion of this course the participants will understand COLREG and how to arrange and test the navigation lights.

### **Target Group**

Engineer for Navigation Lights Arrangement  
Maker for Navigation Lights, Whistles and Etc.  
QM or Superintendent Performing Relevant Inspection  
Anyone interested in Navigation Lights Arrangement

---

#### **For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## **4108 Pressure Equipment – General & Rules 2 DAYS**

### **Contents**

- General requirement
- Material
- Arrangement
- General design requirement
- Particular design requirements for boilers
- Mounting and fitting
- Instrumentation and automation
- Workmanship and testing

### **Objective**

Upon completion of this course the participants will understand rule requirement for pressure vessels and how to design it.

### **Target Group**

Engineers for Pressure vessels such as boiler, heat exchanger and air receiver

## **4109 Welding Procedure Qualification according to ASME Sec. IX 1 DAY**

### **Contents**

- Contents of WPS-PQR according to ASME Sec. IX
- Essential Variables for WPQT
- Welding Metallurgy
- Welding Defects
- Exercise for preparation of WPS-PQR according to ASME Sec. IX

### **Objective**

Upon completion of this course the participants will understand how to prepare and qualify WPS according to ASME Sec. IX

### **Target Group**

All engineers who are involved in the service areas of welding

---

#### **For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## **4110 Welding Procedure Qualification according to AWS D1.1 1 DAY**

### **Contents**

- Contents of WPS-PQR according to AWS D1.1
- Essential Variables for WPQT
- Welding Metallurgy
- Welding Defects
- Exercise for preparation of WPS-PQR according to AWS D1.1

### **Objective**

Upon completion of this course the participants will understand how to prepare and qualify WPS according to AWS D1.1

### **Target Group**

All engineers who are involved in the service areas of welding

---

#### **For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

[www.dnvgl.co.kr](http://www.dnvgl.co.kr)

## **6002-1 NORSOK Standard - Material 2 DAYS**

### **Contents**

- Basic, Melting and Rolling
- M-001 Material Selection
- M-101 Structural Steel Fabrication
- M-120 Material Data
- M-122 Cast Structural Steel
- M-123 Forged Structural Steel
- M-601 Welding and Inspection of piping
- M-630 Material Data Sheets for piping

### **Objective**

Upon completion of this course the participants will understand the background of the NORSOK Regime and how the standards are developed and maintained

### **Target Group**

All engineers working in offshore plant project

## **6002-2 NORSOK Standard - Safety/Working Environment 2 DAYS**

### **Contents**

- Introduction of S-001, S-002, S-003, S-005, S-006, S-011, S-012
- S-002 Working Environment
- S-012 Health, Safety and Environment (HSE) in construction – related activities
- Rules and Regulations – PSA Regulations

### **Objective**

Upon completion of this course the participants will understand the background of the NORSOK Regime and how the standards are developed and maintained

### **Target Group**

All engineers working in offshore plant project

---

#### **For more information**

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 6002-5 NORSOK projects – Lessons Learned 2 DAYS

### Contents

This course highlights the most challenging areas when applying the NORSOK standards including specific solutions for how these challenges can be effectively addressed

### Objective

Upon completion of this course the participants will have an understanding of typical pitfalls and challenges related to the application of NORSOK and how these can be effectively addressed. The course offers some interactive parts where the participants get the chance to share and reflect upon their own experiences from NORSOK projects.

### Target Group

Project personnel involved in implementing NORSOK standards in design

## 6004 LNG Essential & Liquefaction System 2 DAYS

### Contents

- LNG value chain overview
- LNG facts
- Feed pretreatment
  - Acid gas removal
  - Dehydration / Mercury removal
- LNG liquefaction cycle
  - Cascade cycle
  - Mixed refrigerant cycle (single MR, C3MR and etc)
  - N2 expander cycle
- Evaluation of liquefaction process for FLNG
- Cryogenic equipment for LNG liquefaction
  - Transfer system
  - Compressor / Expander / Heat exchanger

### Objective

Upon completion of this course the participants will understand general information on LNG value chain and LNG liquefaction system including feed treatment system, various liquefaction cycles and FLNG applications etc.

### Target Group

All engineers working in LNG projects and managers and marketing personnel who need to present and profile LNG capabilities

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr

## 6005 Wave Load Analysis for Ship 3 DAYS

### Contents

- Introduction of basis for hydrodynamics
- Overview of ship motion in waves
- Ship motion analysis using HydroD
- Estimation of roll damping using WAVESHIP
- Overview of statistics for sea waves
- Statistical post-processing using POSTRESP

### Objective

Upon completion of this course the participants will understand hydrodynamic basis, ship motion in wave, etc. and will perform ship motions analysis, statistical post-processing using DNV SESAM package

### Target Group

Engineers having basic knowledge in hydrodynamic analysis

## 6011 Dynamic Positioning System 3 DAYS

### Contents

- DP system in general
- Design features - Interpretation of class rules
- ERN and FMEA – concepts and appreciation
- DP – Functionality, redundancy and failure response testing
- Survey requirements in terms of class rules

### Objective

Upon completion of this course the participants will understand the design features, class rules related to DP system, Operational Challenges and Survey / Inspection requirements

### Target Group

All engineers with experience of general ship systems and the fields of instrumentation, automation and electrical engineering

---

#### For more information

Contact Person : Choi, Eun Hye / Tel: +82 51 610 7733

Email : eun.hye.choi@dnvgl.com

www.dnvgl.co.kr