

PROFESSIONAL DEVELOPMENT PROGRAM
ADN Expert – Combined course

Duration: 40 hours

Mode: off-the-job

№	Topics
1	Objectives and structure of ADN
1.1	Introduction. Objectives of the ADN Agreement and its scope. Structure of the ADN regulations
2	Construction and equipment
2.1	Construction and equipment of ships subject to ADN.
2.2	Construction and equipment of tankers.
2.2.1	Aeration and ventilation systems
2.2.2	Loading and unloading systems
2.3	Construction and equipment of dry cargo ships
3	Classification and hazards of dangerous goods.
3.1	Classification of dangerous goods
3.2	Main hazards and damaging effects of dangerous goods.
3.3	Safety data sheet
3.4	Marking of dangerous goods. Labels on packages.
4	Transport and cargo handling
4.1	Transport, including operational requirements
4.2	Loading and unloading operations, including operational requirements.
4.3	Transport documents
5	Measurement methods
5.1	Measurement of toxicity, oxygen content and flammable gas concentration.
5.2	Sampling
5.3	Use of gas indicators, oxygen meters and toxicometers
6	Treatment of holds, cargo tanks and adjacent spaces
6.1	Degassing into the atmosphere and into receiving facilities, cleaning, maintenance
6.2	Ventilation of holds and spaces outside the protected area.
6.3	Heating and cooling of cargo;
6.4	Handling of containers for residual products
7	Vessel stability
7.1	Parameters related to stability
7.2	Examples of stability calculations
8	Fundamentals of explosion protection
8.1	Explosion-proof equipment used
8.2	Selection of appropriate devices and installations
9	Hazards and prevention
9.1	Prevention and general measures to ensure safety.
9.2	Sparkling
9.3	Procedure for determining the composition of the atmosphere of the working area and the concentration of oxygen and toxic substances in it. Entry into closed premises.
9.4	Use of fire-fighting equipment and personal protective equipment. Use of fire extinguishers
Final assessment	