NAUTIS Simulators are DNV certified integrated simulator solutions in compliance with the latest IMO requirements. With a full range of simulators, from desktop trainer to full mission bridge, NAUTIS simulators fulfil the training requirements of watch officers, captains, chief officers, pilots, nautical colleges, naval academies, maritime training centres and individual ship owners.

YOUR CERTIFIED TRAINING, OUR MISSION

NAUTIS Simulators allow training in full compliance with international standards and regulations:
- The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (or STCW)
- IMO Model Courses
- Approved and Certified by DNV - with class notation for Integrated Simulator System, Tug, HSC - to be compliant with the Class A standard for certification of Maritime Simulators No.2.14 January 2011 and compliant with the requirements of the STCW Convention, Regulation I/12.

OUR KEY VALUES FOR YOUR SUCCESSFUL SIMULATOR SOLUTION

Quality - We strive to exceed our customers’ expectations at every point of service delivery, including superior product quality, excellent services and efficient, personal support. VSTEP is an ISO9001:2008 certified company.

Innovation - We continuously push the boundaries of innovation to improve the effectiveness and economic value of our simulators.

Value - We create training simulators for any size of budget to help our customers maximise the value they generate from our products.

Ease of Use - Our simulator products are easy to operate and require low maintenance.
**REQUIRED TYPE OF TRAINING**

- Shiphandling & Manoeuvring
- ECDIS Model Course
- RADAR/ARPA Model Course
- NavAids (GPS, AIS, Echo Sounder, Speed Log)
- AIS Model Course
- VHF Radio Communications
- Officer of the Watch Model Course
- GMDSS Radio Comms Model Course
- Bridge Teamwork 1.22

**SIMULATOR CATEGORY**

- NAUTIS Desktop Trainer
- NAUTIS Console Trainer
- NAUTIS Full Mission Bridge Simulator
- NAUTIS Desktop OSV & DP Trainer
- NAUTIS Full Mission OSV Simulators
- NAUTIS Desktop Tug Trainers
- NAUTIS Full Mission Tug Simulators

**SIMULATOR CATEGORIES**

- **GENERAL**
  - **NAUTIS Desktop Trainers** - Portable simulators for navigation, ECDIS/Radar, Radio comms training.
  - **NAUTIS Console Trainers** - Integrating NAUTIS simulation software with a console set-up offers additional realism to the training experience.
  - **NAUTIS Full Mission Bridge Simulators** - A DNV Class A or Class B certified simulator, based on the latest IMO STCW requirements. The FMBS integrates advanced bridge consoles with a full 240° or 360° simulator experience using either projection or high-end flat screen visualisation technology.

- **OFFSHORE**
  - **NAUTIS Desktop OSV & DP Trainers** - Portable simulators to train Dynamic Positioning and handling of OSVs with different types of propulsion systems during offshore operations.
  - **NAUTIS Full Mission OSV Simulators** - Train DP and handling of OSVs with different types of propulsion systems during offshore operations on board an actual offshore vessel bridge replica.

- **TUG**
  - **NAUTIS Desktop Tug Trainers** - Portable simulators to train the handling of tugs with different propulsion systems during tug operations. Various types of tugs are available with different kinds of propulsion systems, from conventional shaft propellers to ASD and tractor tugs.
  - **NAUTIS Full Mission Tug Simulators** - Train advanced handling of tugs with different propulsion systems during tug operations on board an actual Tug bridge replica.
“ENHANCE YOUR TRAINING CURRICULUM WITH A FULLY COMPLIANT SIMULATOR SOLUTION!”
NAUTIS SIMULATORS - EXCEEDING THE STANDARD

NAUTIS Simulators are unique in many ways. With its focus on Quality, Innovation, Maximising customer value and Ease of use, we guarantee a simulator solution that is fully compliant to today's demanding standards and is fully tailored to meet your specific training requirements. There are many things that set apart NAUTIS from the legacy simulators currently in the market. Here are a few:

360° Class A FMB => 3 PC’s

LESS HARDWARE ALLOWS LOWER COSTS

NAUTIS Simulators are optimised to deliver high quality, certified simulator power, but without the need for lots of expensive pc’s. A complete NAUTIS FMB Simulator needs only a few PC’s to run on, saving hardware costs and making installation and support easier.

HIGH QUALITY SUPPORT, ALWAYS NEAR YOU

VSTEP customer support is supervised from our world headquarters in The Netherlands and coordinated with our strategic partners around the globe, always near you. We provide high-quality support and different service agreements according to your level of support needs. VSTEP customer support makes sure you always receive the help you need, when you need it, quickly and efficiently.

AN OPEN INTERFACE FOR EASY SOFTWARE CUSTOMIZATION

NAUTIS supports an open interface, which allows customers to add their own customised software-developed navigation panels and nautical instruments to a Full Mission Bridge Simulator to make it look and behave exactly like a specific ship. This is a lot more cost effective than buying the real equipment of that ship and making hardware interfaces, which is of course also possible with NAUTIS.

COMPREHENSIVE, USER-FRIENDLY INSTRUCTOR TOOLS

The NAUTIS Instructor Stations are the most comprehensive and user-friendly in maritime simulation, with a complete graphical interface in both 2D and 3D. Whether you like an ECDIS chart view as the main view of the Exercise Manager and a 3D view as a secondary view, the NAUTIS Instructor Station offers it all. Easily drag and drop ships in the environment, connect towing/mooring/replenishment lines, drop anchors, change the dynamics and behaviour of every vessel and view the force vectors acting on a ship...all from the comfort of the actual 3D or 2D view.

“QUALITY”

“INNOVATION”

“VALUE”

“EASE OF USE”
VERSATILE CONFIGURATIONS TO SUIT EVERY CUSTOMER PROFILE

**NAUTIS STANDARD**
- Affordable, cost effective certified solutions for every maritime training purpose

**NAUTIS PROFESSIONAL**
- High quality certified solutions for intensive professional use

**NAUTIS PREMIUM**
- Top of the line certified simulator configurations for high intensity users demanding the pinnacle of maritime simulation

UPGRADE TO
NAUTIS Desktop Trainer Classroom at Korea Institute of Maritime and Fisheries Technology
An Electronic Chart Display & Information System (ECDIS) is a computer-based navigation information system that complies with International Maritime Organization regulations and can be used as an alternative to paper nautical charts. An ECDIS system displays the information from electronic navigational charts (ENC) and integrates position information from the GPS, radar and automatic identification systems (AIS).

The NAUTIS Desktop ECDIS/Radar trainer makes high quality training based on the new IMO Model Course 1.27 affordable and portable. It provides all required components as described by the IMO:

- Type approved ECDIS
- An outside view
- Radar/ARPA data input/overlays
- VHF communications between the instructor and students.

Thanks to the affordable price and small form factor of the NAUTIS Desktop ECDIS/Radar Trainer, high quality certified training becomes a possibility on any location, including on board of ships. Full classroom configurations are also possible.

“COST EFFECTIVE CERTIFIED TRAINING
WITH AN IMO COMPLIANT DESKTOP SOLUTION!”
NAUTIS DESKTOP TRAINER CONFIGURATIONS

STANDARD NAUTIS DESKTOP TRAINER

Training Type
1. Basic Ship Handling & Manoeuvring
2. Basic Radar/ARPA training
3. ECDIS Model Course 1.27
4. VHF Radio Communications

Software Included
- NAUTIS Trainee Station
- NAUTIS Radar Interface Module for radar overlay on ECDIS
- IMO Type-Approved ECDIS
- NAUTIS VHF

Hardware Required
- 1 PC or laptop
- 3 x 24” displays
- Standard control box
- Head set

PROFESSIONAL NAUTIS DESKTOP TRAINER

Training Type
Same as Standard (1-4), plus:
5. Radar/ARPA Model Course 1.07
6. NavAids training (GPS, AIS, Echo Sounder, Speed Log)
7. AIS Model Course 1.34
8. Officer or Navigational Watch Model Course 7.03 (partly)

Software Included
Same as Standard, plus:
- NAUTIS Radar Interface Module
- IMO Type-Approved Radar/ARPA
- NAUTIS Instruments (GPS, AIS, Echo Sounder, Speed Log)

Hardware Required
- 1 PC or laptop
- 3 x 24” and 1 x 27” displays
- Standard control box
- PTT handset
PREMIUM NAUTIS DESKTOP TRAINER

“A DESKTOP SIMULATOR POWERHOUSE WITH 120° OUTSIDE VIEW”

Training Type

Same as Professional (1-8), plus:

9. GMDSS Radio Communications Model Course 1.25, 1.26
10. More advanced ship handling & manoeuvring, including emergency control

Software Included

Same as Professional, plus:

- GMDSS Simulator

Upgrade Options

- Premium Control Box
- Console Trainer (Premium)
- FMB Simulator

Hardware Required

- 2 PCs
- 7 x 24” displays
- Pro control box
- PTT handset

DESKTOP TRAINER CONTROLLER OPTIONS

Desktop Trainers include either the Standard or Pro Control Box and can be upgraded to the Premium Control Box
NAUTIS Desktop Tug Trainer at TOS Training Centre
TOTAL IMMERSION, TOTAL REALISM, FULL MISSION BRIDGE

Realistic training on board actual high quality ship bridge replicas becomes possible with the NAUTIS Full Mission Bridge (FMB) Simulators. These fully certified Full Mission Bridge DNV Class A simulators comply with the Class A requirements as set by DNV’s interpretation of the STCW.

The NAUTIS Certified DNV Class A Full Mission Bridge simulators are fully compliant with the Class A DNV Standards for Certification No. 2.14 for Maritime Simulator Systems and IMO model courses 1.22 and 1.32. They address all new elements from the newly revised IMO STCW Convention, which entered into force January 2012 and allows realistic training of a wide variety of training courses.

FIELD OF VIEW

NAUTIS FMB Simulators are designed to provide a 240° horizontal field of view and are easily upgradable to a 360° horizontal field of view, providing full surround vision.

INSTRUCTOR STATION

Delivery of a NAUTIS FMB Simulator includes a NAUTIS Instructor Station. The NAUTIS Instructor Station is a mandatory element of the DNV Class A certified simulators. Under the STCW guidelines, the instructor must be located in a separate room and be able to visually follow the proceedings of an exercise. The NAUTIS Instructor Station includes duplicates of the student’s navigation screens as well as the instructor’s control panels. This way, the instructor can follow the trainee’s decisions and actions in detail.
NAUTIS FULL MISSION BRIDGE SIMULATOR CONFIGURATIONS

STANDARD NAUTIS FMB SIMULATOR

Training Type
1. Ship Handling & Manoeuvring
2. ECDIS Model Course 1.27
3. VHF Radio Communications
4. Radar/ARPA Model Course 1.07
5. Radar/ARPA, Bridge Teamwork and Search & Rescue Radar 1.08
6. NavAids training (GPS, AIS, Echo Sounder, Speed Log)
7. AIS Model Course 1.34
8. VHF Radio Communications
9. Officer of the Navigational Watch Model Course 7.03 (partly)
10. GMDSS Model Course 1.25, 1.26
11. Bridge Team Work 1.22

Software Included
• 3 PCs
• 7 navigation, 2 overhead displays
• 7 x 55” LED displays for a 240° horizontal field of view
• Wooden console with built-in Standard control box

Hardware Required
• NAUTIS Trainee Station
• Radar Interface Module
• IMO Type-Approved ECDIS
• IMO Type-Approved Radar/ARPA GMDSS Simulator
• NAUTIS Instruments (GPS, AIS, Echo Sounder, Speed Log)
• NAUTIS Control Panels (Autopilot, Navlights, Alarms)

PROFESSIONAL NAUTIS FMB SIMULATOR

Training Type
Same as Standard (1-11), plus:
12. Larger teams possible for BRM/BTM training

Software Included
Same as Standard, plus:
• Additional Radar/RPA
• Additional ECDIS

Hardware Required
• 4 PCs
• 9 navigation, 2 overhead displays
• 7 x 65” LED displays for a 240° horizontal field of view
• Projected stern view
• Professional metal console with built-in control box
• Chart table

Upgrade Options
• Professional FMB Simulator
• Premium FMB Simulator
• Chart table
• Virtual binoculars

Upgrade Options
• Professional FMB Simulator
• Premium FMB Simulator
• Chart table
• Virtual binoculars
PREMIUM NAUTIS FMB SIMULATOR

Training Type
1. Ship Handling & Manoeuvring
2. ECDIS Model Course 1.27
3. VHF Radio Communications
4. Radar/ARPA Model Course 1.07
5. Radar/ARPA, Bridge Teamwork and Search & Rescue Radar 1.08
6. NavAids training (GPS, AIS, Echo Sounder, Speed Log)
7. AIS Model Course 1.34
8. VHF Radio Communications
9. Officer of the Navigational Watch Model Course 7.03 (partly)
10. GMDSS Model Course 1.25, 1.26
11. Bridge Team Work 1.22, Large Teams training possible

Software Included
- NAUTIS Trainee Station
- NAUTIS Radar Interface Module
- 2 x IMO Type-Approved ECDIS
- 2 x IMO Type-Approved Radar/ARPA, GMDSS Simulator
- NAUTIS Instruments (GPS, AIS, Echo Sounder, Speed Log)
- NAUTIS Control Panels (Autopilot, Navlights, Sounds, Alarms)

Hardware Required
- 4 PCs
- 9 navigation, 2 overhead displays
- Cylindrical projection system with 7 projectors for a 240° horizontal field of view
- Projected stern view
- Virtual binoculars
- Premium metal console with built-in Premium control box
- Chart table

Upgrade Options
- Increased 360° Field of View
- Helmsman console
- Pelorus

“NAUTIS FMB SIMULATORS PROVIDE TRUE TO LIFE SIMULATION TRAINING IN FULL ACCORDANCE WITH KNOWN DESIGN CRITERIA, CLASS AND IMO REQUIREMENTS.”
NAUTIS INSTRUCTOR STATION

An Instructor Station is a mandatory element of STCW compliant simulators. The Instructor Station allows the instructor to follow the trainee’s decisions and actions in detail during each simulator training session and includes after action review and assessment. The NAUTIS Instructor Station interfaces seamlessly with all NAUTIS Simulators.

The configuration of the Instructor Station consists of displays on which the outside view and navigation screens of the trainee are duplicated in real-time. With the Exercise Manager component, the instructor can also carry out a range of tasks:

• Prepare an exercise. Select a training environment, and add one or more vessels in it, using the easy drag-and-drop interface. Set the weather conditions and time of the day.
• Save exercises for later use
• The NAUTIS Instructor Station has both a 3D bird’s eye view of the environment and a 2D chart view.
• Assign trainees that are logged into the exercise to one of the vessels
• Start, pause, record or stop the exercise.

During an exercise, the instructor can perform the following actions in real-time:

• Change the weather, visibility and time of day
• Show a trail of all the ship movements
• Shift any of the vessels to a different position
• Add new target vessels, and set their speed and direction, or add them to a complex track
• Change the track of the target vessels and helicopters

“A POWERFUL TOOLSET AND EASY TO USE INTERFACE FOR OPTIMAL EXERCISE CONTROL!”
ADVANCED SIMULATOR INSTRUCTOR & MAINTENANCE TRAINING

TRAINING YOU FOR OPTIMAL SIMULATOR USE

Excellent training and support are an important part of operating a simulator. As part of simulator delivery, VSTEP provides basic and advanced training courses for each customer.

• **SIMULATOR TECHNICAL SUPPORT AND MAINTENANCE TRAINING:**
  - Simulator Start up/Shut down
  - Connections and calibration of controls
  - Interfaces check & finetuning for Radar, ECDIS and GMDSS simulator.
  - How to detect / remedy hardware issues
  - Back-up/restoring of configuration files
  - Remote log-in facilities and simulator optimisation

• **SIMULATOR AND INSTRUCTOR STATION TRAINING:**
  - Creation of exercises
  - Exercise Recording and playback / debriefing
  - Initiate/restart an exercise
  - Controlling target vessels during an exercise
  - Introduce ship equipment or sensor faults and failures
  - Change the operating environment during an exercise.
  - Communication with the trainees on relevant comms channels.
  - Visual tracking of an exercise in both 3D screen and chart
  - Setting up a scoring or grading system to assess student performance.

Training is hands-on and provided by experienced VSTEP engineers. After successful training, an official Instructor & Maintenance Certificate is issued to the customer.
ADDITIONAL TRAINING MODULES

NAUTIS Simulators allow integration of specific modules to cover additional training types and standards. These are the modules available for integration into the NAUTIS simulators:

OFFSHORE MODULE

WHAT?
The NAUTIS Offshore Module allows manoeuvring with Offshore Support Vessels and Platform Supply Vessels in proximity to oil platforms and other offshore objects.

TRAINING TYPES:
• Ship navigation, handling and manoeuvring of conventional and azimuth propulsion systems
• Assisting oil rigs / Rig moves
• Joint multi-vessel exercises

FEATURES:
• Library of offshore vessels with different propulsion
• Ship dynamics model based on forces, with 6 degrees of freedom motion
• Adjustable interaction forces
• Advanced rope dynamics system including line elasticity and snap force.
• Option to show all forces as vectors
• Bollard pull visible for instructor
• Instructor control over towing, mooring and anchor winches

FOR WHOM?
• OSV & PSV Captains & Instructors

AVAILABLE FOR SIMULATOR TYPES:
• NAUTIS FMB Simulators - All Types
• NAUTIS Console Trainers - All Types
• NAUTIS Desktop Trainers - All Types

TUG MODULE

WHAT?
The NAUTIS Tug Trainer module allows captains to experience and train the handling of tugs with different propulsion systems during tug operations.

TRAINING TYPES:
• Ship navigation, handling and manoeuvring of conventional and azimuth propulsion systems
• Assisting ships
• Towing / Rig moves
• Equipment familiarization
• Joint multi-vessel exercises

FEATURES:
• Port & Scenario Customization: PSA can be customized for any port, using a realistic 3D model of the desired port and specific vessels.
• Includes a wide range of suspicious and non suspicious scenarios and related objects.
• Editor to create your own custom scenarios.

FOR WHOM?
• Tug Captains & Instructors

AVAILABLE FOR SIMULATOR TYPES:
• NAUTIS FMB Simulators - All Types
• NAUTIS Console Trainers - All Types
• NAUTIS Desktop Trainers - All Types
NAVAL TASK FORCE MODULE

WHAT?
The NAUTIS Naval Task Force module is specifically designed to meet the navigation and seamanship training requirements of navies and coast guards.

TRAINING TYPES:
• Ship handling and maneuvering for current Navy vessels and small craft
• Collision avoidance regulations
• Navigation planning and execution
• Tactical comms with radio, flags & morse lights
• Anti-Piracy Training
• Special Evolutions (RAS, Flight Ops, DIVTACS, Amphib Ops, etc.)
• SAR and MOB
• Replenishment at sea
• Formation steaming
• Amphibious landings
• Helo flight deck operations
• Plane guard / life guard station maneuvering and emergency response procedures

FOR WHOM?
• Navy
• Coast guards

AVAILABLE FOR SIMULATOR TYPES:
• NAUTIS FMB Simulators - All Types
• NAUTIS Console Trainers - All Types
• NAUTIS Desktop Trainers - All Types

PORT SECURITY AWARENESS MODULE

WHAT?
The Port Security Awareness (PSA) module is interactive 3D training software which enables port safety personnel to practice tactics, techniques and procedures in response to suspicious activities. In PSA, the trainee actively sails a law-enforcement vessel or flies a helicopter through the port while observing and appropriately responding to suspicious or non suspicious activity on water and on shore during the patrol.

TRAINING TYPES:
• International Maritime Organization (IMO) and CFR 33 required port and facility security training, drills and exercises.

FEATURES:
• Port & Scenario Customization: PSA can be customized for any port, using a realistic 3D model of the desired port and specific vessels.
• Includes a wide range of suspicious and non suspicious scenarios and related objects.
• Editor to create your own custom scenarios.

FOR WHOM?
• Port Law Enforcement and security personnel

AVAILABLE FOR SIMULATOR TYPES:
• NAUTIS FMB Simulators - All Types
• NAUTIS Console Trainers - All Types
• NAUTIS Desktop Trainers - All Types
The Offshore Incident Management and Shipboard Incident Management software modules offer an innovative solution to train offshore crews and damage control team members through interactive 3D simulation. The simulator is used to improve reaction, communication and knowledge in case of incidents, making actual drills & emergency response much more effective.

**FOR WHOM?**
- Port authorities
- Coast guards
- Offshore Safety officers
- Vessel commanders
- Company incident command teams (dealing with offshore)

**FOR WHOM?**
- Civilian Ship Crews
- Watchstanders
- Naval Commanders
- Damage Control team members
- Navy & Coast guard shipboard personnel

**FEATURES:**
- Train any possible offshore incident, taking place either on board of different types of vessels or on board of oil rigs and offshore platforms.
- A user-friendly instructor tool allows creation of detailed incidents with offshore specific objects, including complete oil rig and gas platform configurations.
- Realistic 3D graphics allow training in a true to life, believable offshore training environment.

**FEATURES:**
- Allows virtual training of any thinkable incident on board of vessels, including shipboard fires and security issues during these emergencies.
- Train integration into the Chain of command with the local emergency services during on-board fires in ports.
- Incidents on both civilian or high security military vessels can be trained.

“ENHANCING PRACTICAL INCIDENT TRAINING THROUGH REALISTIC VIRTUAL TRAINING!”
NAUTIS Maritime Simulation Solutions is a product of virtual training and simulation developer VSTEP, an ISO9001:2008 certified company.