Visit our website
www.warsashacademy.co.uk
for careers guidance and course information on a variety of maritime sectors.
I am delighted to introduce you to Warsash Maritime Academy’s ship handling centre at Timsbury Lake. This is home to Southampton Solent University’s scaled model ship handling training programmes – located near Romsey in the south of England.

The centre provides world-renowned training for masters and officers serving on board ships and large yachts. It also provides specific training for pilots and berthing/mooring masters, which is included within the principles covered by IMO Resolution A960 (23) for the training of maritime pilots.

Timsbury Lake is the only centre of its kind in the UK and one of a very small number worldwide. Our specialised training and assessment for marine pilots, captains and senior officers in ship handling enables mariners to practise and progress their skills through trial manoeuvres in a safe environment.

Please do not hesitate to contact us if you would like further information about our facilities, ship models or ship handling programmes. We look forward to welcoming you to Timsbury Lake in the future.

Captain Syamantak Bhattacharya, Director, Warsash School of Maritime Science and Engineering
ABOUT US

Warsash Maritime Academy has provided first-class education, training, consultancy and research services to the international shipping, commercial yacht and offshore oil and gas industries for over 70 years.

We benefit from a strong organisational and quality assurance infrastructure which enables us to maintain and deliver exceptional standards of service delivery.

We are a world-renowned maritime education and training provider, and part of Solent University’s Warsash School of Maritime Science and Engineering – which includes an extensive portfolio of maritime and engineering qualifications ranging from HND to PhD. The university trains professionals who make a contribution at sea and ashore in ship operations, port management, yacht and powercraft design, maritime business, and logistics.

WHY CHOOSE US

• An unrivalled specialist training facility.
• An expert lecturing team of maritime professionals with significant seagoing experience.
• Consistently high student pass rates.
• We are officially rated ‘outstanding’ as an education provider.
• We offer the most comprehensive range of training programmes available to the global maritime industries.
• We are helping to develop the future leaders of the global maritime industry.
The design and development of this innovative ship handling centre is based upon more than 30 years of ship model operating experience. Combined with a comprehensive understanding of the maritime industry’s requirements, this has enabled the academy to provide world-leading training facilities.

The centre provides a safe and controlled environment to practise and develop ship-handling skills on a number of different vessels, in a wide variety of conditions using a range of facilities:

• Harbour areas and numerous berths offering a wide range of ship handling scenarios
• Buoyed channels, critical bends and turning basins
• Four-mile scale-length canal, with a two-mile straight reach, as well as a major curved section
• Over 50 per cent of the lake area – including the canal and harbour areas – provides an ideal environment for the demonstration of shallow water effects
• Realistic ship-to-ship lightering, FSU, CBM and SBM exercises can be conducted

• Hydrodynamic effects replicating those around a real ship – particularly important when examining the interaction between ship-to-ship and ship-to-berth, banks and shallows.

Training in scaled models and our full mission bridge simulator can be combined to provide real slow-speed ship handling and bridge resource management training.
OUR STAFF

Our lecturers are either highly experienced senior mariners with long command and/or pilotage experience, or they are currently serving pilots.

This means that mariners are assisted throughout their time on the lake by members of staff who have spent many years at sea themselves and have the highest professional qualifications.

Our teaching ratio of one lecturer to every two students on all practical exercises means we are able to provide an exceptional, personalised learning experience throughout every course, which allows our students to achieve their personal development goals.

“The ship handling course is the best training I have had in my 29 years of going to sea. The models, instructors and facilities are outstanding.”

Janet DeCastro, Master, ConocoPhillips
THE FLEET

There are eleven scaled ship models in the fleet, some of which can be reconfigured to represent several ship types. They include a large sixth-generation container vessel, tankers, very large crude carriers (VLCCs), LNG carriers, bulk carriers, car carriers and a roll-on, roll-off ferry.

Five radio-controlled tugs are available to support manoeuvring operations, including a Voith water tractor, two Azimuth stern drives and two Kort nozzles. A jack-up oil rig is also available for specialist offshore training. Each vessel is an accurately scaled model of a real ship, closely replicating the handling characteristics of an actual vessel, including single and twin screw propulsion. Onboard logic systems ensure that engine output, delivery and response times and rudder response times are correctly scaled. This also applies to bow thrusters and the windlass, where fitted.

“There is a model here that is a working model of the ships that I dock, so there is immediate application. I can go from this model and next week dock the real ship.”

Captain Bob Baker, Alaska Pilot

The optimum scale is 1:25, which is used for most vessels. The models are substantial, each measuring between seven and 14 metres long and weighing from five to 12 tonnes. These electrically powered models are ballasted by a combination of water and solid ballast, which can be configured to provide loaded, part-loaded or ballast conditions at different trims.
1:25 scale container vessel (Resolution)

Resolution is a 1:25 scale container ship modelled on a real 365 metre, 13,300 TEU container ship. It is representative of all large modern container ships for the purposes of ship handling training and the size of ships using the new Panama Canal.

The model is more than 14 metres long, displaces 12.5 tonnes, and has twin bow and single stern thrusters, operational anchors controlled from the bridge, electrohydraulic steering and main propulsion systems. Water ballast enables it to operate in light or loaded conditions.

The deck has the ability to configure with a full or partial container load and meets IMO regulations for visibility in relative terms. The model’s hydraulic steering and engine controls are located in an enclosed bridge structure, approximately one third of the way from forward.
1:25 scale Panamax vessel (*Progress*)
Progress is a generic tanker or bulk carrier model, approximately 60,000 DWT. It is a standard single screw conventional vessel used for all aspects of ship handling training. Progress can also be converted to a 225-metre length car carrier fitted with a schilling rudder.

1:25 scale Panamax vessel (*Intrepid*)
Intrepid is a generic tanker or bulk carrier model, approximately 60,000 DWT. It is a standard single screw conventional vessel used for all aspects of ship handling training for students.

1:25 scale Aframax vessel (*Eternity*)
The latest addition to our fleet, *Eternity* is a generic Aframax oil tanker model of 120,000 DWT. It has an equivalent length of 251 metres, breadth of 43.8 metres and loaded draft of 13.6 metres. A standard single-screw conventional vessel used for all aspects of ship handling training, *Eternity* can be configured as either a right-handed or left-handed propeller.

1:25 scale product tanker (*Diligence*)
Diligence is a generic product tanker model, approximately 40,000 DWT. With an equivalent length of 177 metres, it is a standard single screw conventional vessel used for all aspects of ship handling training.

1:15 scale Ro-Ro ferry (*Challenger*)
Challenger is based upon a twin-screw cross-channel ferry and is used in all aspects of twin screw ship handling. It is fitted with twin independent rudders and a twin bow thruster. The twin screws can be adjusted to represent inward or outward-turning propellers. It can be configured to operate with either a passenger or a ro-ro superstructure.
1:30 scale twin screw shuttle tanker (Endeavour)
Endeavour is a 142,000 DWT twin screw shuttle tanker. It is a replica of a class of ship operated by an oil major. It can be configured with inward or outward-turning propellers and is used for specialised twin screw ship handling. It can also be converted to a medium-sized LNG carrier.

1:40 scale Suezmax (Endurance)
Endurance is a 150,000 DWT VLCC. With single screw propulsion, a single balanced rudder and equivalent length of 304 metres, it provides excellent training for this vessel type.

1:40 scale VLCC (Pioneer)
Pioneer is based on a real class of VLCC. It is a single screw model with a single balanced rudder, useful for training in standard ship handling techniques. This ship model equates to a 210,000 DWT VLCC, with a length of 324 metres, a beam of 50 metres and a draft of 19 metres.

1:40 scale ULCC (Venture)
Venture is an ultra large crude carrier (ULCC) used for standard ship handling training. With single screw propulsion and a single conventional rudder, this ship model equates to a 300,000 DWT ULCC, with a length of 344 metres, a beam of 54 metres and a draft of 24 metres.
1:25 scale LNG vessel (Nigeria LNG)

Nigeria LNG Ltd and university staff commissioned Nigeria LNG to join our fleet in July 2016, and the ship model facilitates training in the handling of six new ships built for NLNG. We have a longstanding relationship with NLNG in the training and skills development of personnel manning NLNG vessels. This partnership will also deliver the highest quality ship handling training for their officers and authorised third-party personnel.

Modelled on the 175,000m$^3$ twin-skeg DFDE LNG carriers built in Korea by Samsung Heavy Industries for Bonny Gas Transport Limited (BGT), the scale ship will be used for training senior navigation officers in the BGT fleet and Bonny river pilots. The full-sized ships are twin screw, duel fuel (gas or diesel) diesel-electric ships and are fitted with a bow thruster.

The 1:25 scale model is 11.68 metres long and weighs 7.837 tonnes. It has two fixed inward turning propellers and is fitted with operating anchors and a water ballast system to allow for alterations of trim and draught, replicating different load conditions for training purposes.
OUR COURSES

The ship handling courses are delivered using scaled models, with an emphasis on developing skills and understanding of the behaviour and handling of ships at slow speed. Complex and potentially hazardous manoeuvres can be practised and learnt in a scaled environment, to enhance competence and refresh skills. Training on scaled models is considered to be the next best thing to a real ship, providing a cost-effective environment and contributing to the reduction of ship operating costs.

Scaled models are used to practise the manoeuvring of vessels in a variety of environments and conditions by means of rudders, engines, thrusters, tugs and anchors. Our students are typically senior mariners who want to develop their understanding of the behaviour and handling of ships, with an emphasis on slow speed control.

Timsbury Lake is designed to simulate a range of real-life potential scenarios to test students’ ship handling capabilities as situations and hazards develop. The combination of unexpected wind shifts and gusts, close-quarter situations, the effects of shallow water, bank effect and the demands of complex manoeuvring exercises provides an unrivalled learning environment that directly reflects real life.

With a two-to-one ratio between students and lecturing staff, every course is designed to meet specific training requirements, whether it is an introduction to ship handling, a pre-promotion assessment or refreshing existing skills. Up to eight students can be accommodated on each three or five-day course.

“...I’ve got a far greater appreciation of ship handling now. I want to go back and try out all the techniques I’ve learned here.”

Claire Spencer, Deputy Harbour Master

www.warsashacademy.co.uk
Ship Handling (Manned Models)
Training towards: Master/Deck Officer/Pilot
Course duration: 4.5 days

Our standard ship handling course is recognised by the UK’s Maritime and Coastguard Agency (MCA) as meeting the principles laid down in Sections A-II/2 and B-V/a of STCW95 regarding the training of officers on large ships. The course includes a wide range of practical exercises and lectures, and is particularly suitable for masters/chief officers on conventional ships and pilots who are starting out on their careers. Superyacht officers can also benefit from this training.

Advanced Ship Handling (Manned Models)
Training towards: Master/Deck Officer/Pilot
Course duration: 4.5 days

This advanced ship handling course is suitable for more experienced pilots and mariners who wish to develop their skills and knowledge. It builds on the basics of the standard course to involve more complex and intricate ship handling. Superyacht officers may also wish to further their skills with this training.

Formal Assessment of Ship Handling
Training towards: Master/Deck Officer/Pilot
Course duration: 0.5 days

Formal assessment of competence can be undertaken for companies or individuals on request following completion of the standard ship handling course. This is carried out on a Friday afternoon after the training course. Assessment is made against set performance criteria and based solely on observations made on the scale model assessment exercises at that time.

Ship Handling and Emergency Procedures
Training towards: Master/Deck Officer/Pilot
Course duration: 3 days

This course meets the principles laid down in IMO Resolution A960 Section 5. The aim is to enable participants to develop their skills and understanding of the principles and practices of ship handling, with an emphasis on emergency procedures and manoeuvres, including steering, engine and bow thruster failures.
Pilots Emergency Procedures
Training towards: Pilot/Master/Deck Officer
Course duration: 2.5 days

This specialised course for senior mariners and pilots is designed to enable the ship handler to respond safely to various emergency and developing situations. These will include engine and rudder failures, emergency stopping in confined waters, interaction scenarios and emergency manoeuvring with anchors and escort towage.

Pilots Professional Development
Training towards: Pilot/Master/Deck Officer
Course duration: 2.5 days

This tailor-made course is primarily for experienced pilots who wish to further their knowledge of ship handling techniques, or who want to investigate or experiment with different scenarios. Options may include working with twin screw vessels with either inward- or outward-turning propellers, or the utilisation of tugs in different configurations.

Combined Ship Handling (Manned Models) and Bridge Simulator
Training towards: Pilot/Master/Deck Officer
Course duration: 5 days

Considered to be part of the pilot/mariner professional development programme, this course consists of three days on the lake handling the scaled models. This is followed by two days in one of the bridge simulators at our main campus, where further exercises are practised in a more port-specific location.
Ship Handling Appreciation
Training towards: Senior Shore Management
Course duration: 2 days

This course is aimed at personnel involved in marine operations – perhaps in the shipping, legal or insurance industries – who have little ship handling experience themselves. The aim is to give them an insight into some of the problems that may be encountered when handling ships, creating a better understanding of the tasks that their staff may be asked to perform.
CONTACT US

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Every effort is made to ensure that the information given in this brochure is correct at the time of publication in February 2018 and that the course information accurately describes the courses offered by the university. However, from time to time details change; you should contact the university to verify information, especially if you wish to place particular reliance upon it.

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