



WARSASH MARITIME ACADEMY

**TWIN SCREW VESSEL
MANNED MODEL SHIPHANDLING COURSE
JOINING INFORMATION**

Course and Joining Information

Twin Screw Vessel

Manned Model Shiphandling Course

Duration 20 hours

**IMPORTANT:
You must bring a photo ID.**

TWIN SCREW VESSEL MANNED MODEL SHIPHANDLING COURSE

This booklet contains:

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Joining Information:

Manned Model Shiphandling Course

Location:

Marchwood

Start Time:

0830 on Day 1

Course Administrator:

Jackie Basford, +44 (0)1489 556163

Marchwood Manned Model Facility

+44 (0)2380 871069

Attendance:

Students are requested to report to the relevant classroom in plenty of time. For successful completion 100% attendance is required.

Clothing/Special Requirements:

No special requirements although it is recommended that students bring sunglasses and hats. Personal protective equipment, warm clothing and foul weather gear are all supplied as part of the course.

Refreshments:

Lunch, morning coffee and afternoon tea are provided in the course fee.

Car Parking:

Limited free on-site car parking is available. *Warsash Maritime Academy accepts no responsibility for loss from, or damage to, vehicles parked on the site.*

Local Amenities:

Marchwood village is ½ a mile away and has a cash point, shops and a number of pubs. The nearest banks are in Totton. (4 miles)

Course Approvals:

Upon satisfactory completion of the course, participants will be awarded a “Twin Screw Vessel Manned Model Course” certificate of attendance.

Course Prerequisites:

Participants should bring details of their Licence, Certificate of Competency or Passport. These are required for registration purposes and for inclusion in the individual course certificates, which will be issued at the end of the course

Course Aims

To enable Pilots, Masters and Officers to develop their skills and understanding of the behaviour and handling of twin screw vessels.

This aim will be achieved through a concentrated period of practical exercises in the Manned Models supported by a series of lectures.

Course Objectives

By the end of the course the following practical aspects of twin screw vessel handling will have been addressed.

- a) Twin screw vessel control.
 - (I) Transit of buoyed channels.
 - (II) Controlling speed.
 - (III) Reducing speed under control and maintaining the correct line of approach to a berth.

- b) Turning Manoeuvres
 - (I) Turning onto leading marks.
 - (II) Turning into a buoyed channel.
 - (III) Negotiating critical turns in a buoyed channel.
 - (IV) Turning short round.
 - (V) The effect of shallow water on a turn.

- c) Berthing and Unberthing Manoeuvres
 - (I) Selected berthing manoeuvres to facilitate individual development throughout the course.
 - (II) Entering and leaving an enclosed dock.

- d) The Effect of the Wind upon Shiphandling
 - (I) The natural lay of the ship when stopped.
 - (II) Effects of wind when moving ahead.
 - (III) Effects of wind when making sternway.
 - (IV) Berthing and unberthing in a variety of wind directions.
 - (V) The use of tugs

- e) Bow Thruster Operations
 - (I) Bow thruster design and effectiveness.
 - (II) The effect of head and sternway upon thruster efficiency.
 - (III) The development of lateral motion.
 - (IV) Sternboarding and berthing stern to.
 - (V) Turning and swinging.

Optional Objectives

The optional objectives are available to meet the varied demands of individual participants. Courses will be adapted, where appropriate, in order to address specific techniques and/or areas of specialization. These may include but are not limited to:-

Anchorwork

- (I) Shiphandling limitations based on relative weaknesses in the anchor system.
- (II) The safety parameters that must be maintained to enable the effective use of anchors for ship handling.
- (III) Dredging one anchor to aid berthing.
- (IV) Laying an anchor to aid berthing and departure.

Interaction

- a) Passing
- b) Overtaking
- c) Being overtaken
- d) The effect of the close proximity of banks and shallows
- e) The effect of shallow water and banks during berthing

Course Outline:

Manned Models are a form of simulation and, as such, are subject to some limitations and differences compared with a real ship, which have to be taken into account:-

Time

Due to the scaling factor, shiphandling manoeuvres are carried out in a shorter timescale than the real ship (or a real time ship simulator). This permits each participant on the course to conduct a large number of individual berthing and channel manoeuvres, including re-runs when difficulty has been experienced.

It also means that an individual has to think very quickly and thus the concentration and observation that is important to the ship handler is emphasised.

Speed

The scale of the model also means that speed is low in real terms. An approach speed of 8 knots at 0.5 mile from the berth is approximately 2.1 knots on the model. It is therefore quite normal for course participants to experience problems on the first day in adjusting to this low scaled speed. These problems, however, are overcome relatively quickly as excessive approach speeds are very obvious and the results are often spectacular!

Distance

The need to estimate distance is a fundamental factor in establishing correct approach speed and can be aided by using "ship lengths" as a yardstick.

For example:

for a 1:25 scale model:

8 ship lengths = 1 mile approx.

Wind

The wind cannot be scaled, but the lake has been laid out to give optimum berth and channel protection from various wind directions. Even in gale conditions areas of calm can be found behind screens of trees and hedging and useful exercises conducted. The effect of wind on a ship is an integral objective of a ship handling course and it is not advantageous to work exclusively in calm conditions. Every effort is made however, to start with basic manoeuvres in sheltered waters. As individual participants progress they will be subjected to stronger winds to concentrate on specific objectives in this subject area.

Instructors will endeavour to conduct ship handling operations in the most appropriate scaled wind conditions for a particular objective.

Briefings/Debriefings

All participants will be fully briefed by their instructor before each exercise commences to enable them to formulate an exercise plan. Once an exercise is underway the instructor remains on the jetty (or in an accompanying launch) and does not intercede unless absolutely necessary. This is to avoid breaking the concentration required during the exercise and allows the participant to learn, if necessary, by observing the results of his actions.

When the exercise is completed a comprehensive debriefing is conducted on the quayside to discuss the results. Such debriefs are considered to be a most important part of the course.

Staff

The instructors are all either practising pilots, ex pilots or senior mariners who return frequently to pilotage districts and/or sea for updating experience. Many lecture on other courses within the Section, utilising ships bridge and/or radar simulators. They have amongst them wide experience of maritime training and knowledge of a variety of ship types and marine operations.

The course is, by its nature, generally relaxed, informal and enjoyable as well as instructive. It is hoped that even the most experienced ship handler will find that the time has been useful in improving his knowledge of a highly skilled and necessarily professional task.

The Models

There are two twin screw models available: the first is a 1/15 scale representation of a typical ferry of 161 metres length with outward turning fixed pitch propellers and twin rudders which can be independently operated if required. Two linked bow thrusters are also fitted as are operating anchors to enable different scenarios to be practised.

The second scale model is of a shuttle tanker of 272 metres length also with outward turning propellers and twin independent rudders and bow thruster. Depending on student requirements this model can be reconfigured with inward turning propellers or may be converted, by the addition of a tank structure, to represent the characteristics of a typical Q Flex LNG carrier. Both conventional and KaMeWa controls are fitted with either being selectable by the instructor. There is also a machinery failure system installed whereby failures can be initiated by the instructor by remote control.

Course Assessment:

Upon satisfactory completion of the course, participants will be awarded a "Twin Screw Vessel Manned Model Course" certificate of attendance.

The course content, lectures and any advice given is without prejudice and for guidance only and may vary from one course to another depending on the student requirements.

Course Timetable

(All times are approximate)

Day One

0815	Taxi to Lake.
0830 - 0915	Registration and introduction.
0915 - 1045	Familiarization with Manned Models.
1045 - 1130	Lecture - "Control".
1130 - 1300	Manned Model exercises.
1300 - 1345	Lunch.
1345 - 1445	Manned Model exercises.
1445 - 1515	Lecture - "Thrusters".
1515 - 1715	Manned Model exercises.
1715	Taxi to hotel.

Day Two

0815	Taxi to Lake.
0830 - 0945	Turning
0945 - 1300	Manned Model exercises.
1300 - 1345	Lunch.
1345 - 1415	Lecture - "Effect of Wind".
1415 - 1715	Manned Model exercises.
1715	Taxi to hotel.

Day Three

0815	Taxi to Lake.
0830 - 0915	Optional Objectives (Anchorwork/Interaction).
0915 - 1215	Manned Model exercises.
1215 - 1230	Course debrief.
1230	End of course - taxi as required.

Accommodation

We would normally use the Crown Hotel at Lyndhurst for students which is approximately seven miles from the Marchwood site. Alternative hotel accommodation is available by arrangement.

You will be asked to settle your hotel bill on departure unless advised differently by your company.

Lunch is provided and is usually taken at a local restaurant. The cost is included in the course fee.

Daily Travelling Arrangements

Arrangements will be made for taxis to collect and return participants to their hotel each day.

Taxi pick-up times are in accordance with the course timetable.

Directions to the Manned Model Facility at Marchwood:

Travelling Information

These instructions contain information for travelling to the training facility at Marchwood.

Warsash Maritime Academy at Marchwood

Address:

Warsash Maritime Academy - Southampton Solent University
Central Crescent
Marchwood Industrial Park
Marchwood
Southampton
Hampshire SO40 4BX
UK

By taxi:

By prior arrangement, taxis can be arranged to meet course delegates from airports and railway stations. Please contact the Course Administrator for more details.

By road:

Exit the M27 at junction 3 and take the M271 south towards Southampton until it ends at a roundabout. Take the 2nd exit and join the A35 towards Lyndhurst. Follow this road over a flyover until you reach another roundabout. Take the first exit left onto the A326 towards Hythe and Fawley.

At the first set of traffic lights, turn left into Jacobs Gutter Lane. Follow this road until you come to a roundabout where you should take the first left. After travelling 0.4 of a mile you come to a mini roundabout where you should turn left into Marchwood Industrial Park. Follow the entrance road (North Road) for about 400 yards and then turn right into East Road. After approximately another 400 yards turn right into Central Crescent. Proceed along this road for a short way bearing left at the Y junction where you will see the Manned Model Centre located on your left.

By air:

From Heathrow: From Terminal 4 take the Southwest Trains coach link to Woking and travel by rail from Woking to Southampton Central taking approximately 2hours. Then see ‘By rail’.

From Gatwick: Take a train to Southampton Central. Then see ‘By rail’.

Other airports serving the area include Southampton International Airport (Airport Parkway station) and Bournemouth International Airport, both serving a number of European cities.

By Coach:

National Express operate a direct coach service from The Central Bus Station close to Terminal 1, Heathrow to Southampton approximately every two hours with a journey time of approximately 1hour 45 minutes. Taxis to Marchwood are available from outside the Southampton Coach Station.

By rail:

The easiest way to get to the Marchwood site is via taxi from Southampton Central station. Please pre arrange your taxi via our Course Administrator.

Alternatively:

Nearest station to the Marchwood site is Totton. This is a small-unmanned station available via connection from Southampton Central. There is no taxi rank at Totton station so pre-booking is required.

For train times and information please telephone National Rail Enquiries on 08457 484950 or visit www.rail.co.uk.

