

# School of Management and Postgraduate Studies

Welcome to the 'Guide to Courses' for the School of Management and Postgraduate Studies at Warsash Maritime Academy. This year sees some significant new developments and other changes within the School.

Most notably, Professor Mike Barnett has now relinquished his role as Head of School in order to concentrate on managing our research and consultancy activities and leading the major EU-funded HORIZON research project into the effects of fatigue on bridge watchkeepers. I am therefore very pleased to be stepping in to work with the talented professionals who make up the School.

Our Solent Enterprise Centre for Maritime Management, set up last year, has expanded its activities and developed a strong resource management portfolio aligned to the revised STCW Code.

I have been leading a team within the School to develop an exciting and flexible MSc Shipping Operations, which will run for the first time from January 2011 and be available on-line. We will also be offering individual units and combinations of units from this course as part of our new Professional Development Programme.

Staff have also developed a new Volatile Organic Compound Emission Control course in response to recent amendments to MARPOL Annex VI.

Details of all these courses and the other standard courses we offer can be found in this booklet, along with details of who to contact to book courses or answer your enquiries. We are always happy to discuss your individual requirements and suggest ways in which we can work together to enhance your own education and training programmes.

We hope you will enjoy reading this guide and look forward to hearing from you.



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## MARITIME RESOURCE MANAGEMENT

Maritime Resource Management (MRM) is increasingly recognised as fundamental to safe and efficient ship operations. It incorporates social skills such as leadership and team-working, communication, operating effectively in a multi-cultural environment; planning and coordinating skills to optimise work load management and delivery; and cognitive skills such as problem analysis and solution delivery, well-judged risk aware decision-making, and high level situational awareness.

This suite of courses aims to hone these skills progressively, recognising that such expertise is universally applicable both at sea and on shore, and is part of the life long learning of any seafarer. The courses address the 2010 Manila amendments to the STCW Convention and Code, which highlight the importance of such skills. MRM - sometimes referred to as non-technical skills - is not seen as an optional extra, but intrinsic to professional competence, and essential in delivering commercial success and minimising risk for employers and owners. We see this as an opportunity to work even more closely with the maritime industry.

The courses offer the same fundamental principles carefully tailored to the context in which they are applied - whether this be for the bridge team including pilots, the engine room team, the whole ship or shoreside managers - and the experience and seniority of those attending the courses.

For further information please contact Julie Neilon on +44 (0)1489 556217 or email [julie.neilon@solent.ac.uk](mailto:julie.neilon@solent.ac.uk)

## BRIDGE RESOURCE MANAGEMENT

### COURSE DESCRIPTION

This course will benefit all members of the deck department and course is suitable for personnel serving on all types of vessels including large yachts.

The course addresses the current requirements of STCW 95 section B-VIII-2, Part 3-1 and has been designed to meet the Bridge Resource Management requirements detailed in Table A-II/I of the 2010 Manila amendments to the STCW Convention and Code.

This course will provide opportunities for delegates to consider their role in the working environment and offer a range of tools and techniques aimed at ensuring effective performance.

Subject areas include

- Situational awareness: How to acquire and maintain situational awareness and understand the factors that can result in its decline and its central role in reducing accidents and increasing safety margins.
- Communication: How to recognise and apply best practice in communication, and be aware of barriers to communication and how these may adversely affect situational awareness. Recognition of interpersonal style and the appropriate development of assertiveness in a bridge environment.

- Culture: How to recognise and respond to cultural issues including cultural awareness and bias including national, organisational, departmental and personal cultural approaches.
- Leadership and Team Work: How to identify appropriate leadership styles and effective team working; situational leadership and the understanding of team dynamics.
- Workload: How to understand where your role fits in the shipboard environment and how to manage the priorities that arise from it. Recognising stressors, how stress and fatigue may affect you and your colleagues and identifying coping mechanisms.

Course Code        BRM

Course Duration    3 Days

Pre-requisites     6 months sea time

Teaching Method   Learning is developed through lectures, discussion, case studies and group work.

## ENGINE ROOM RESOURCE MANAGEMENT

### COURSE DESCRIPTION

The main tenets of resource management relate to the non-technical skills associated with the social interaction between team members, situation awareness and decision-making. This is a high fidelity, complex, simulated working environment. The course covers:

- The 'systems approach'
- Safety of Operations
- Environmental issues
- Co-operation and Teamwork
- Situational Awareness Management
- Decision-making
- Human Factors and Human Error
- Crisis Management and Human Behaviour
- Leadership and Workload Management
- Risk Assessment and Risk Management
- Identification of and breaking error chains
- Efficient use of resources and delegation
- Communications
- Planning and Prioritising
- Identification of cause of problem and timely correct response
- Methodical and logical approach to fault diagnosis and problem solving
- Identification and justification of "assumptions"
- Emergency Preparedness
- Contingency Planning

*Note: In June 2010, the IMO Maritime Safety Committee approved amendments to part A of the STCW Code, making Engine Resource Management a mandatory competence for maintaining a safe engineering watch in accordance with Tables AIII/1 and III/3. The learning objectives of the Engine Room Resource Management course delivered at WMA cover all of the requirements of STCW amendments. The course syllabus/material is relevant, current and appropriate and reflects industry best practice.*

The course works best with a team of varied ranks and we recommend a complete engine room team of Chief Engineer, First/Second Engineer, Second/Third Engineer and Third/Fourth Engineer. The course can accommodate a maximum of four officers and a minimum of three.

Course Code	ERRM
Approvals	MCA approved
Course Duration	4 ½ days
Prerequisites	Seagoing Experience as an Engineering Officer
Assessment	Pre-employment or pre-promotion assessments can be undertaken
Teaching Methods	Lectures, simulator exercises, peer reviews, debrief sessions, videos, and case studies

*Note: This course can also be delivered as a 2½ day classroom based course, at any location, utilising tactical decision exercises instead of a simulator.*

#### OTHER COURSES AVAILABLE INCLUDE:

- Practical Total Ship Risk Assessment and Risk Management
- Engineering Officer Performance Assessment
- Marine Surveyors continuing professional development

# CREW RESOURCE MANAGEMENT

## COURSE DESCRIPTION

The purpose of this course is to introduce the main tenets of resource management and to provide a training environment where delegates can develop their non-technical skills in order to enhance the operational safety and efficiency of company vessels. The main topics covered are:

- Co-operation and Teamwork
- Situational Awareness Management
- Decision-making
- Human Factors and Human Error
- Crisis Management and Human Behaviour
- Leadership and Workload Management
- Risk Assessment and Risk Management
- Identification of and breaking error chains
- Communications
- Planning and Prioritising
- Critical Thinking Skills
- Emergency Preparedness
- Contingency Planning

The course is designed for mixed groups of deck and engineering officers. The optimum numbers being four to five officers of each discipline per course.

<b>Course Code</b>	CRMT
<b>Course Duration</b>	5 Days
<b>Pre requisites</b>	Sea going experience
<b>Assessment</b>	Professional Development, Pre-Employment and Pre-Promotion Assessment available on request.
<b>Teaching Methods</b>	Lecture presentations, group workshops, and tactical decision exercises. The course makes intensive use of both bridge and engine room simulators. Some exercises use both simulators in a linked mode of operation giving a total ship simulation-training environment.

## LEADERSHIP FOR JUNIOR OFFICERS

### COURSE DESCRIPTION

The course is designed to introduce the principles of leadership and communication to maritime personnel. This interactive course uses relevant case studies and student experience as a basis for presentations and exercises on the characteristics and different models of leadership, the principles of communication, how to work optimally within a team, and how to recognise and manage stress and fatigue in oneself and others. The delegates will leave the course with a good understanding of the basic principles of leadership and team-working as well as practical strategies for the management of self and others. The course is appropriate for cadets and junior officers and all staff who need an introduction to the subject.

Course Code	LCJO
Course Duration	3 Days
Prerequisites	None
Teaching Methods	Learning is developed through lectures, discussion, case studies and group work.

## LEADERSHIP COACHING FOR SENIOR OFFICERS

### COURSE DESCRIPTION

The course is designed to coach senior officers in aspects of leadership on board. This includes management of self, other people and situations. There are opportunities for role-play, individual coaching sessions and reflective periods, as well as classroom teaching on theories and practical case studies. The delegates will leave the course with a good understanding of the principles of leadership as applied on board their vessels, together with their own individual developments plans - which may be monitored after the course. The course is appropriate for Masters, Chief Engineers and those about to be promoted to these positions.

Course Code	LCSO
Course Duration	5 Days
Prerequisites	None
Teaching Methods	Learning is developed through lectures, discussion, case studies and group work.

## ADVANCED LEADERSHIP

### COURSE DESCRIPTION

This advanced course is designed for senior personnel who are already in positions of senior management on board or ashore. The course focuses on the management and development of other staff and includes appraisals, mentoring and coaching of others. There are opportunities for role-play, individual coaching sessions and reflective periods, as well as classroom teaching on theories and practical case studies. The delegates will leave the course with a good understanding of the principles of emotional intelligence as it applies in a maritime context, together with their own individual development plans. They will also increase their ability to motivate their staff to deliver optimally. The course is appropriate for current Masters, Chief Engineers and shore-based managers.

Course Code	LASM
Course Duration	5 Days
Prerequisites	None, but completion of the Leadership Coaching Course is an advantage
Teaching Methods	Learning is developed through lectures, discussion, case studies and group work.

## STEAM PROPULSION PLANT OPERATIONS

### COURSE DESCRIPTION

Nearly all Steam Turbine propelled vessels are Liquid Natural Gas (LNG) carriers. The problem now is the lack of steam propulsion operational experience, together with the lack of understanding of the utilisation of liquid cargo “boil off” in the propulsion plant.

The Steam Propulsion Simulator at Warsash is a control room which can accommodate four students. The control room is arranged to produce a true working environment with four stations, each station being able to call up any specific part of the system. The simulator can be operated for individual or team training scenarios.

The system depicts a single screw two-stage turbine and double reduction, articulated gearing system and a dual fuel burning system. The simulation can be projected into the classroom and aspects explained to delegates.

Course Code	SPPO
Course Duration	4 ½ days
Prerequisites	Seagoing operational experience in steam or motor vessels
Assessment	Continuous operational performance
Teaching Methods	Simulation/lectures

# OPERATIONS MANAGEMENT

## SECURITY TRAINING

Since the International Ship and Port Facility Code (ISPS) was agreed at IMO in December 2002, the issue of security amongst shipping and port industries has become of paramount importance.

Warsash Maritime Academy, as a leading provider of training to the industry, has been working in close cooperation with the UK designated authority (TRANSEC) and the MNTB to develop a range of courses to meet the requirements of the code.

Both the Ship and Company Security Officer courses have been designed to meet TRANSEC requirements and are formally approved by the MCA (UK). The implementation of European Security Legislation now adds a further dimension to maritime security. We are also able to offer familiarisation courses and are developing security awareness training.

For further information on our Security Training please contact Tina Whitcher (Course Administrator) on +44 (0)1489 556216 or email [tina.whitcher@solent.ac.uk](mailto:tina.whitcher@solent.ac.uk)

## ISPS CODE - FAMILIARISATION

### COURSE DESCRIPTION

This half-day workshop provides an overview of the ISPS Code and an outline of the security arrangements required for vessels and port facilities. The workshop also highlights the roles and responsibilities of CSOs, SSOs and Port Facility Security Officers.

Course Code	ISPSF
Approvals	None
Course Duration	Half Day
Prerequisites	None
Teaching Methods	Lectures including presentations, practical exercises and videos.

# COMPANY SECURITY OFFICER

## COURSE DESCRIPTION

This course is intended to meet the requirements set out in sections A/2.1.7 and A/II of the ISPS Code and corresponding guidance in Part B of the Code and relevant UK legislation.

The course will cover security both onboard the ship and the interface between ship, operating company and port facility.

The background to the ISPS Code and relevant legislation introduce the course. The course then discusses the company security organisation, the roles of the CSO, SSO and PFSO, general security requirements, security administration, ship security assessments, risk management, security threats and patterns with the consideration of persons likely to threaten security.

The preparation of elements of a ship security plan, methods of physical searches, the recognition and detection of weapons and the beneficial use of security equipment and systems are introduced. The need for Training and Drills are addressed including practical measures to achieve implementation. The importance for all personnel to be aware of and adhere to pre-planning emergency procedures is considered together with crowd management techniques. Security contingencies and appropriate responses are discussed and prepared.

<b>Course Code</b>	CSO
<b>Approvals</b>	MCA (UK)
<b>Course Duration</b>	4 days (Monday to Thursday)
<b>Prerequisites</b>	There are no specific prerequisites for this course, but those undergoing training should have sufficient knowledge and practical experience of merchant navy operations to enable them to achieve the objectives of the training and be able, if required, to undertake the duties and responsibilities of a CSO on completion of the training.
<b>Assessment</b>	Delegates will be assessed by oral questions and practical task performance within the workshops throughout the course and during a series of consolidation exercises and an examination on the last morning.
<b>Teaching Methods</b>	Lectures and workshops including presentations, video and security demonstrations.

# SHIP SECURITY OFFICER

## COURSE DESCRIPTION

The course covers security both onboard the ship and the interface between ship, operating company and port facility.

The course commences with an introduction to the background of the ISPS Code and relevant legislation. During the first day, the course will discuss the company security organisation, the roles of the CSO and SSO, security requirements and security administration. Following an explanation of security drills, security exercises and crowd management techniques, the course considers security protection and emergency preparedness.

During the second day, the course concentrates upon ship security assessments, the ship security plan, methods of conducting audits and ship and port facility security measures. The afternoon is devoted to methods of physical searches and how to handle sensitive security related information and communications.

The third morning completes the tuition with descriptions of behavioural patterns of people likely to threaten security, recognition and detection of weapons and the testing and calibration of security equipment and systems.

<b>Course Code</b>	SSO
<b>Approvals</b>	MCA (UK)
<b>Course Duration</b>	3 Days
<b>Prerequisites</b>	"Regulation VI/5"  Mandatory minimum requirements for the issue of certificates of proficiency for ship security officers  Every candidate for a certificate of proficiency as ship security officer shall have approved seagoing service of not less than 12 months or appropriate seagoing service and knowledge of ship operations;  If you are unsure that you can meet this prerequisite, please contact the UK Maritime and Coastguard Agency Seafarer Training and Certification department on 02380 329231.
<b>Assessment</b>	Delegates on the course will be assessed by oral questioning and from practical performance within the workshops during the course concluding with an examination on the final day.
<b>Teaching Methods</b>	Lectures and workshops including presentations, videos and security demonstrations.

## ISM CODE - FAMILIARISATION

### COURSE DESCRIPTION

This one-day course provides a sound background to the ISM code and its specific requirements. The course covers the ISM code, the resolutions that apply to the recognised organisation, the provisions of SOLAS, ISM certification process, the audit process and corrective action and its role in Safety Management.

Course Code	ISM C
Course Duration	1 day

## ISM CODE - INTERNAL AUDITOR

### COURSE DESCRIPTION

The course is designed to meet the requirements of the ISM code. The course will enable delegates to understand the purpose and benefits of internal audit plans, prepare for audits, and produce audit reports. The course also covers effective techniques for preparing audits and details corrective action and follow-up procedures.

Course Code	ISM D
Course Duration	2 days

## ISM CODE & ISO 9001 - AUDITOR / LEAD AUDITOR

### COURSE DESCRIPTION

This course is aimed at practicing and potential auditors of Maritime Management Systems who address safety, pollution prevention and where appropriate, service quality. The course will be of practical benefit to safety professionals, ship owners and ship management professionals amongst others.

This intensive course includes the following main topics: Evolution of the ISM Code, Safety Management Principles and how they apply to safe ship operation, types and methods of audits and planning and preparing for audits.

Course Code	ISM
Course Duration	4 ½ days

For further information on any International Safety Management (ISM) or ISM Code Designated Person course please contact Tina Whitcher (Course Administrator) on +44 (0)1489 556216 or email [tina.whitcher@solent.ac.uk](mailto:tina.whitcher@solent.ac.uk)

## ISM CODE DESIGNATED PERSON

This course has been developed and delivered in collaboration with Regs4ships.

### COURSE DESCRIPTION

This course is aimed at:

Newly promoted DPAs, deputy and alternate DPAs and current DP role holders under the requirements for updating through CPD (Continued Professional Development)

Other shore and sea staff requiring knowledge of the responsibilities, problems and potential liabilities involved with the DP role will also benefit from attendance on this course.

Subject areas covered include:

ISM introduction	Audit requirements and techniques
The external view of the status of the ISM code	DPA - requirements and responsibilities
Human factors and ISM	Issues for the DPA role holder
Performance management and KPIs	Reporting, analysis and actions
Legal issues	Risk assessment
Self preservation	Management of change

The course concludes with a management review exercise

**Course Code** ISMDP

**Approvals** This course is recognised by the MCA (UK) as meeting part 4 of IMO MSC-MEPC.7/Circ.6 'Guidance on the qualifications, training and experience necessary for undertaking the role of the Designated Person under the provision of the ISM Code.'

**Duration** 3 days

**Prerequisites**

1. A qualification from a tertiary institution within a relevant field of management, engineering or physical science, or
2. An STCW management level qualification and seagoing experience as a certified ships officer, or
3. Other formal education combined with not less than 3 years practical senior level experience in ship management operations.

Alternative routes to entry on this course can be discussed with individual students who do not meet the pre-requisites outlined above. Students should contact the course administrator in the first instance (tina.whitcher@solent.ac.uk).

**Assessment** Assessment is based on participation in a Management Review exercise

**Teaching Methods** Learning is developed through lectures, discussion, case studies, group work and presentations.

# RISK MANAGEMENT & INCIDENT INVESTIGATION

## COURSE DESCRIPTION

This is a 3-day course that is suitable for all shore based shipping company managers and all shipboard officers who may be involved in accident or incident investigations and managing risk. The course aims and objectives are directly mapped to the Oil Companies International Marine Forum (OCIMF) Tanker Management and Self Assessment (TMSA) Best Practice Guidance. The course discusses maritime risk management strategy and practice and includes a number of sessions in which delegates gain practical experience in the use of different risk management tools and techniques, including HAZOP, Risk Ranking Matrices, Fault Tree and Event Tree Analysis, and the Integrated Risk Management System. The course also introduces the use of the US Coastguard's Risk Analysis Scenario Methodology.

The issues relating to accident and incident investigation are fully discussed including different investigation methodologies, interview techniques, witness reliability and the production of investigation reports. The course gives practical experience of accident and incident investigation through the use of role play exercises.

The course closes with a review of the Tanker Management and Self Assessment (TMSA) Key Performance Indicators with respect to risk management and incident investigation.

<b>Course Code</b>	RMII
<b>Approval</b>	None
<b>Course Duration</b>	3 days
<b>Teaching Methods</b>	Teaching and learning is developed through lectures, discussion, presentation, videos, case studies and role play.

For further information on our Risk Management and Incident Investigation course please contact Julie Neilon (Course Administrator) on +44 (0) 01489 556217 [julie.neilon@solent.ac.uk](mailto:julie.neilon@solent.ac.uk)

## TRAINING THE INSTRUCTOR (Excluding Teaching Assessment)

### COURSE DESCRIPTION

The purpose of this course (formerly known as Training The Trainer) is to enhance the performance of trainers delivering short training modules. The programme will be run over five days and will consist of lectures and workshops. A practical exercise plan will form part of one of the lectures. Delegates will be expected to give presentations during the course.

The course covers:

- The training programme
- Theories of learning
- Teaching methods
- Planning lectures
- Presentation skills
- Culture
- Preparation of course materials
- Assessment
- Evaluation

Course Code	TTT3
Approvals	Complies with STCW'95
Course Duration	4 ½ days
Prerequisites	None
Assessment	100% attendance, presentations and written
Teaching Methods	Lecture, audio/visual, class participation

For further information on our Train the Trainer please contact Julie Neilon (Course Administrator) on +44 (0) 01489 556217 [julie.neilon@solent.ac.uk](mailto:julie.neilon@solent.ac.uk)

# PETROCHEMICAL MANAGEMENT

Petrochemical training at Warsash covers a wide range of courses designed to meet the safety needs of the industry and to provide mandatory tanker endorsements. Petroleum, chemical and liquefied gas tanker operations are covered, as is the transport of packaged dangerous goods by sea.

Our Liquid Cargo Operations Simulator (LICOS) is used to develop the professional skills of officers who are engaged in the handling of bulk liquid cargoes by simulating all of the cargo operations conducted on a variety of tankers. All aspects of the planning and execution of operations and the solving of problems that may arise can be demonstrated and practised in the safe environment of the simulator.

For further information on any Petrochemical course please contact Tina Whitcher (Course Administrator) on +44 (0)1489 556216 or email [tina.whitcher@solent.ac.uk](mailto:tina.whitcher@solent.ac.uk)

## LNG FAMILIARISATION

### COURSE DESCRIPTION

This course is aimed at personnel who will be involved with LNG or LNG vessels while in port. This might include jetty operators, pilots, tug crews, or ship's agents amongst others. The course can be delivered at the clients' premises and can be tailored to suit individual company needs (by prior arrangement).

### Course Outline

- Background to LNG
- Properties of LNG
- Hazards of LNG
- LNG Ship Overview
- Ship Safety Systems
- Regulations for Gas Carriers
- LNG Cargo Operations
- LNG Emergencies

Course Code	LNGFAM
Course Duration	1 Day
Prerequisites	None
Teaching Methods	Lectures, audio-visual presentations and group discussion

# TANKER FAMILIARISATION COURSE

## COURSE DESCRIPTION

The course is based on the syllabus given at paragraphs 2 to 7 of Section A-V/1 of the STCW Code. At the end of the course the student will have the relevant technical knowledge to serve on a tanker and be assigned specific duties and responsibilities related to cargo or cargo equipment.

Topics covered include:

- Characteristics of cargoes
- Flammability and Volatility
- Basic Toxicity
- Sources of Ignition
- Reactivity
- Tanker Design
- Dangerous Space Entry
- Instrumentation
- Pollution controls and legislation
- Cargo cycle

Course Code	FAM SPEC
Approvals	MCA to STCW'95 Reg. V/1, para 1.2 and Code Section A-V/1 paragraphs 2 to 7
Course Duration	2 days

# SPECIALISED TANKER TRAINING PROGRAMME (LIQUEFIED GAS)

## COURSE DESCRIPTION

The course provides specialist training for senior officers and any person with immediate responsibility for loading, discharging and care in transit or handling of bulk liquefied gas cargoes.

The course complies with the UK Merchant Navy Training Board requirements as satisfying part of the prerequisites for obtaining a Tanker Endorsement from the UK MCA.

The course is also open to terminal and ship management staff or anyone with an interest in the safety and operation of liquefied gas tankers. (Notes that anyone not meeting the prerequisites below will be issued with an attendance certificate rather than an STCW certificate)

## Course Content

- Nature of liquefied gases
- Introduction to common gas cargoes
- Rules regulations and guidance applicable to gas carriers
- Hazards of gas cargoes
- Gas carrier design
- Sources of ignition
- Physics of gases and liquids
- Inert gas systems
- Behaviour of liquids and gasses
- Reliquefaction cycles
- Reliquefaction machinery
- LNG cargo conditioning
- Ship types
- Damage assumptions
- Tank types
- Cargo pumps
- Level measuring systems
- Pressure and temperature gauges, requirements and precautions
- Entry into enclosed spaces
- Gas detection
- Cargo operations
- Personal protective equipment
- Emergency shut down
- Fire fighting

The course takes full account of section A-V/I of the STCW Code adopted by the International Convention on Standards of Training, certification and Watchkeeping for Seafarers 1978, as amended in 1995.

## SPECIALISED TANKER TRAINING PROGRAMME (CHEMICAL)

### COURSE DESCRIPTION

The course provides specialist training in subjects appropriate to the duties of senior officers and any person with immediate responsibility for loading, discharging, care in transit or handling of bulk chemical cargoes.

Tanker terminal and ship management personnel will build on previous experience and gain a detailed appreciation of the safety aspects involved in the handling and carriage of chemicals.

The course complies with the Merchant Navy Training Board requirements as satisfying part of the prerequisites for issue of a Tanker Endorsement by the MCA. (Notes that anyone not meeting the prerequisites below will be issued with an attendance certificate rather than an STCW certificate)

<b>Course Code</b>	MNTB 3C
<b>Approvals</b>	MCA to STCW'95 - A-VI (Para 15-21)
<b>Course Duration</b>	4 ½ days
<b>Prerequisites</b>	Must have attended an MCA approved Tanker Familiarisation Training course, or, have at least 3 months seagoing service on a tanker, or, at least 30 days service (under the supervision of senior officers) on a tanker less than 3000 gt engaged on voyages not exceeding 72 hours.
<b>Assessment</b>	100% attendance and pass two written assessments
<b>Teaching Methods</b>	Lectures, audio-visual presentations and group discussion

## SPECIALISED TANKER TRAINING PROGRAMME (OIL)

### COURSE DESCRIPTION

The course provides specialist training in subjects appropriate to the duties of senior officers and any person with immediate responsibility for loading, discharging, care in transit or handling of bulk oil cargoes.

Tanker terminal and ship management personnel will build on previous experience and gain a detailed appreciation of the safety aspects involved in the handling and carriage of oil cargoes.

The course complies with the Merchant Navy Training Board requirements as satisfying part of the prerequisites for issue of a Tanker Endorsement by the MCA. (Notes that anyone not meeting the prerequisites below will be issued with an attendance certificate rather than an STCW certificate)

<b>Course Code</b>	MNTB 3P
<b>Approvals</b>	MCA to STCW'95 - A-VI (Para 8-14)
<b>Course Duration</b>	4 ½ days
<b>Prerequisites</b>	Must have attended an MCA approved Tanker Familiarisation Training course, or, have at least 3 months seagoing service on a tanker, or, at least 30 days service (under the supervision of senior officers) on a tanker less than 3000gt engaged on voyages not exceeding 72 hours.
<b>Assessment</b>	100% attendance and pass two written assessments
<b>Teaching Methods</b>	Lectures, audio-visual presentations and group discussion

## LIQUID CARGO OPERATIONS SIMULATOR (LICOS)

### COURSE DESCRIPTION

The Liquid Cargo Operations Simulator (LICOS) at Warsash provides real time simulation of the process flow control systems used in the storage and transfer of hazardous bulk liquids from shore to ship and ship to shore (and ship to ship if required).

Warsash use an MPRI simulator, (originally developed at Warsash), which has been approved by DNV as a Class A Maritime Simulator.

The simulator fleet consists of the following models, all of which are based on real vessels:

- Membrane LNG
- Spherical LNG
- Fully Refrigerated LPG
- Double Hull Crude Oil / Products Carrier
- Products / chemical tanker

The simulator can accept a maximum of 6 officers who each operate their own vessel during the course via two high resolution screens which display all of the ships cargo handling pipelines, machinery and associated instrumentation. Class size is limited to 6 officers to ensure each person can be monitored and assisted where necessary, and receive feedback on operational performance. Each officer also has a communication system enabling management of deck personnel and communication with engine room and terminal where appropriate.

LNG training courses can be to the SIGTTO Suggested Competence Standards and these courses are approved by DNV.

<b>Approvals</b>	MCA Simulator - DNV Product Approval - Type A
<b>Course Duration</b>	5 days

## LIQUID CARGO OPERATIONS TO SIGTTO STANDARDS

### COURSE DESCRIPTION

These courses have been developed from the standard LICOS courses using either the Spherical or Membrane LNG vessel as required.

Because the courses require a higher level of understanding of LNG operations, the following prerequisites for entry to the course have been set:

- a. 3 months service on a LNG Tanker as a competent officer (time as a cadet not accepted)
- b. Must hold Tanker Endorsement (Liquefied Gas) or attended a SIGTTO Junior Officer course with IACS or Nautical Institute approval (evidence is required).

# VOLATILE ORGANIC COMPOUND EMISSION CONTROL AND CRUDE OIL WASHING SYSTEMS

## COURSE DESCRIPTION

This course is structured to give ships' officers, tanker terminal and ship management personnel an appreciation of the function and of VOC emission control management planning and Crude Oil Washing Systems.

It relates the operation of these systems to safe tanker practice and illustrates the maintenance requirements of associated equipment. The course consists of two parts, VOC Emission Control the first and Crude Oil Washing Systems finally.

Course Code	VOC / COW
Approvals	VOC Pending as being in accordance with MEPC.1/Cir.680 Section 6 and Section 7.
	COW MCA Non-STCW, Liberian Authorities as being in accordance with IMO Assembly Resolution A.446 (XI)
Course Duration	2 days
Prerequisites	None
Assessments	100% attendance is required for certification
Teaching Methods	Lectures, audio-visual presentations and a visit to a COW equipment manufacturer

# VOLATILE ORGANIC COMPOUND EMISSION CONTROL

## COURSE DESCRIPTION

This course has been developed in response to recent amendments to MARPOL Annex VI requiring tankers carrying crude to have and implement an Administration approved VOC Management Plan. The course covers the purpose of the Plan and the principles of control, monitoring and recording VOC release. The hazards and safety issues associated with the control are also covered.

Course Code	VOC
Approvals	Pending as being in accordance with MEPC.1/Cir.680 Section 6 and Section 7.
Course Duration	1 day
Prerequisites	None
Teaching Methods	Lectures and audio-visual presentations

## CRUDE OIL WASHING SYSTEMS

### COURSE DESCRIPTION

The Crude Oil Washing Course is designed to comply with the training provisions contained in Appendix II of the Revised Specifications for the Design, Operation and Control of Crude Oil Washing Systems, IMO Assembly Resolution A.446 (XI).

<b>Course Code</b>	COW
<b>Approvals</b>	MCA Non-STCW, Liberian Authorities as being in accordance with IMO Assembly Resolution A.446 (XI)
<b>Course Duration</b>	1 day
<b>Prerequisites</b>	None
<b>Assessment</b>	100% attendance is required for certification
<b>Teaching Methods</b>	Lectures, audio-visual presentations and a visit to a COW equipment manufacturer

# TRANSPORT OF PACKAGED DANGEROUS GOODS BY SEA

## COURSE DESCRIPTION

The International Maritime Dangerous Goods (IMDG) Code sets out the requirements to carry dangerous goods by sea in a safe manner to protect personnel, the ship and the environment. The course aims to develop the skills and confidence to use the latest Amendment of the IMDG Code effectively with a clearer understanding of its contents and the obligations it places upon the industry.

The course will provide a practical understanding of the IMDG Code and of the effect that it has on operational safety. At the end of the course, the student will be able to use the IMDG Code to:

- Identify the nature of the hazard
- Classify the dangerous goods
- Document the commodity
- Select the correct labelling
- Recognise correct packaging
- Determine the stowage and segregation requirements
- Ascertain the correct procedures to adopt in the event of any emergency

The course is based on the IMO and IMDG Code training recommendations and the STCW guidance regarding training.

The course meets the requirements of the US DOT Hazmat training regulations and is approved by the MCA.

<b>Course Code</b>	DG
<b>Approvals</b>	MCA (UK)
<b>Course Duration</b>	3 Days
<b>Assessment</b>	Throughout the course programme there will be several exercises to monitor progress.
<b>Teaching Methods</b>	3 days classroom work

## POSTGRADUATE STUDIES

In response to the need for those individuals wishing to pursue career paths in the maritime industries ashore, academic staff in the School are developing a range of postgraduate courses, primarily for seafarers who wish to use their professional experience to gain academic qualifications. These courses should be viewed in the context of the Foundation degrees and undergraduate programmes which Warsash Maritime Academy also offer. Currently, the PGCert (MET) is sponsored by the International Maritime Training Trust (IMTT).

For further information on Postgraduate Studies please contact Claire Pekcan 01489 556145 email [claire.pekcan@solent.ac.uk](mailto:claire.pekcan@solent.ac.uk) .

### MSc SHIPPING OPERATIONS and PROFESSIONAL DEVELOPMENT PROGRAMME in MARITIME MANAGEMENT

Starting in January 2011, the Academy is offering a career development programme specifically designed for senior seafarers. The MSc Shipping Operations and flexible programme of professional development units and awards are unique in UK maritime education because of their specialised content, flexibility, accessibility and work-based applications.

Senior seafarers have a wealth of practical experience and high-level professional qualifications, but may not have the recognised management qualifications to take the next big step up the management ladder. This programme is designed to give participants an edge in competing for senior and specialised positions such as Designated Person Ashore, Fleet Training Manager, Competence Assurance Manager, Ship Manager or Marine Superintendent. It has been developed in consultation with the shipping industry, with the needs of employers firmly in mind.

Successful study on the programme, whether undertaking the full MSc or selected Professional Development Units, means that participants will gain university qualifications at postgraduate level. Applicants need not have a degree to be eligible for entry to the programme.

Extensive use of the University's web-based virtual learning environment means students will be able to study where they are and balance work, personal life and study commitments. The on-line learning materials and activities, assessment tasks and support and communication facilities are designed for mature professionals.

### MSc SHIPPING OPERATIONS

#### COURSE DESCRIPTION

The MSc Shipping Operations is studied by blended learning, a combination of on-line learning and intensive face-to-face residential schools (two one-week schools each year). Most students will study part-time over two years, but a mix of full- and part-time study over a shorter time is also possible.

The course has five core units and two optional stands, each with four specialised units. Each unit carries credit points, where one credit equates to 10 hours of student learning time.

## Core Units

- International Maritime Context 15 credits
- Postgraduate and Self-Managed Study 15
- Business Research Skills 15
- Professional Skills and Practice Portfolio 15
- Project 60

## Option strands

### Managing the Human Element in the Shipping Industry

- Strategic Management of the Human Element 15
- Maritime Talent Management 15
- Performance and Reward Management 15
- Employee Relations and Engagement 15

## Managing Maritime Safety

- Risk and Safety Management 15
- Legal Process 15
- Safety Culture 15
- Accident Investigation and Organisational Learning 15

All of the units are geared towards the maritime and shipping industries. They have been developed and will be delivered by Academy staff who have established subject expertise and research experience in human factors in shipping, maritime safety and maritime education and training.

The units make use of 'real life' case studies and scenarios that are relevant, topical and focus on critical thinking and problem solving. The assessments draw on the students' work experiences and workplace contexts and include work-based projects and investigations. The large Project unit allows students to pursue their own work-based inquiry in depth, supported by both an academic tutor and an industry-based mentor.

## PROFESSIONAL DEVELOPMENT PROGRAMME IN MARITIME MANAGEMENT

Rather than sign up for the whole MSc course, applicants can choose to undertake individual units or groups of units through the Professional Development Programme in Maritime Management. All of the MSc units EXCEPT the 60 credit Project are offered as Professional Development (PD) units. Unlike the MSc, the PD units are studied entirely by e-learning, with no attendance requirements.

The PD programme allows students to decide how much they want to study at any one time, taking study 'gaps' when needed or just choosing one or two units out of the programme. PD units might be taken as part of employer-sponsored continuing professional development, or individuals might want to pay their own way, staging the units to spread the cost and time demands. The units are assessed and carry recognised postgraduate credits (the same as the MSc) which can be 'banked' and built up into Southampton Solent University Professional Development Awards.

## Professional Development Awards

Students who pass units totalling between 30 and 60 credits and decide they do not want to study further can apply for a Professional Development Postgraduate Certificate in Maritime Management; those who complete between 70 and 120 credits can apply for the Professional Development Postgraduate Diploma.

These awards are proof of study achievement, and the credits are portable. So, PD credits and awards can be 'topped up' at Solent University or taken forward as evidence of postgraduate learning in applications for jobs or for courses at Solent or elsewhere. Students with PLD Maritime Management credits could use these to gain entry and exemptions from the full MSc programme.

## Entry requirements

Applicants for the MSc Shipping Operations must be working in or have recently worked in the maritime industries and have one of the following:

- A recognised Honours degree in Maritime Studies, Shipping, Business, Law or other appropriate discipline (normally 2:2 or higher) plus work experience in the maritime industries to a reasonable level of responsibility such as 1<sup>st</sup> or 2<sup>nd</sup> Officer, 2<sup>nd</sup> or 3<sup>rd</sup> Engineer, or equivalent
- A Certificate of Competence as Master or Chief Engineer, Class 1 Master Mariner, Class 1 Engineer, Standards of Training Certificates and Watchkeeping Management Level qualifications, or equivalent, and work experience in the maritime industries to a reasonable level of responsibility (as above)
- A Higher National Diploma or Foundation Degree in an appropriate discipline plus relevant professional qualifications and work experience (as above).

Applicants for Professional Development Units should normally have one of the above.

For further information please contact: Steve Lightbown - telephone +44 (0)1489 556220 or e-mail [steve.lightbown@solent.ac.uk](mailto:steve.lightbown@solent.ac.uk)

## POSTGRADUATE CERTIFICATE (MET)

### COURSE DESCRIPTION

The Postgraduate Certificate in Maritime Education and Training (MET) was developed for maritime lecturers, and is based on the successful PGCert (L&T) already run by Southampton Solent University for our own academic staff. The course aims to enhance the academic management skills and professional development of key maritime college staff. To achieve the standards required of a Master's level degree, there is an emphasis on personal reflection and critical evaluation of teaching and learning theory as well as practice. The course uses portfolio-based work and written assignments as a means of assessing progress. The course is divided into three units, which focus on the principles and theory of teaching and learning, professional development, and teaching practice, as it applies in the MET context.

## RESEARCH AND CONSULTANCY

Warsash Maritime Academy can provide specialist research and consultancy services to the maritime industry, particularly in the field of maritime human factors.

For further information on Research and Consultancy please contact Mike Barnett Associate Director (Research) on +44 (0)1489 556275 or email [mike.barnett@solent.ac.uk](mailto:mike.barnett@solent.ac.uk)

### MARITIME HUMAN FACTORS

The development of maritime human factors research at Warsash Maritime Academy has been in three main areas:

- 1 Research that underpins the Academy's core business of maritime education and training to reduce accidents and improve safety. Core research interests include human error and accident causation, the cultural aspects of maritime safety and human fallibility; decision-making in crisis; and the evaluation of human and organisational performance in a maritime context. UK funded projects have included:
  - The use of simulators in training and assessment (MCA: 1994)
  - The situational awareness skills required during escalating emergencies and crises (MCA: 2000)
  - The mitigation of human error in automated systems (MCA: 2005)
  - The development of non-technical behavioural markers for Merchant Navy Officers (SSU:2010)

The development of non-technical behavioural markers funded by Southampton Solent University in 2010 has received further funding and is being extended to incorporate the validation of non-technical behaviours in bridge, engine room and cargo operations simulators. This work will continue through 2011.

In addition, pedagogical research has been pursued through various EC funded projects. For example, the Centre has contributed to the development of CBT, virtual reality and distance learning systems for seafarers (EC: 1997-2001).

The development of a leading-edge consultancy to the London insurance market in the risk assessment of shipping companies has led to an ongoing interest in organisational behaviour (1997-2002).

- 2 Research in seafarer employment and human resource management issues. A wide-ranging and long-term research programme was commenced in 1997 into the recruitment, selection and retention of seafarers. In addition to shipping company sponsors, the programme has attracted funding from several organisations including MNTB, Trinity House, NUMAST, ECSA, ETF and the ISF. Individual projects have included:
  - The development of retention tools (1998)

- Marketing seafaring careers (2000)
  - Cadet terms and conditions (2002)
  - Alternative manning structures (2002)
  - The training and supply of senior Filipino officers (2002)
  - A national survey of UK cadets (2004) and career path mapping (2005)
- 3 Research and consultancy in the Human Factors analysis of casualties, development of near miss and incident reporting systems. The full mission bridge simulator can be used for reconstructions of collisions and groundings. Often such reconstruction gives insights to the investigation that are not obvious from other evidence sources. Previous customers include individual shipping companies, flag states, government agencies, marine accident investigators, legal firms and Harbour Masters. This work has also involved staff as expert witnesses.

Other consultancy areas include:

## PORT DEVELOPMENT PROJECTS

This work includes examining the operational aspects of changes in a port such as realigning existing berths, examining proposals for new berths, testing against specific combinations of meteorological conditions and investigating tug requirements and techniques. Proposed berths, channels and other elements of a port can be built from drawings to achieve pilot and tug master familiarisation prior to the completion of the infrastructure.

The operational needs and procedures for new ship types and sizes can also be investigated on the simulation.

For further information please contact:

Professor Mike Barnett

Telephone +44 (0)1489 556275 or email. [mike.barnett@solent.ac.uk](mailto:mike.barnett@solent.ac.uk)