

## About the Course

The primary objective of this short course is to provide conversion or refresher training for science and engineering graduates and experienced draughtsmen who hold active line responsibilities in the design of ships and ship systems and in shipbuilding practice. The course is designed in such a way that at the end of the lectures, the person will have a very broad understanding of the behaviour of ships under a variety of loading and operating conditions including DP systems & safety assessment.

The syllabus will include: basic definitions of ships, structural components of the hull girder, general arrangement, ships as functional blocks, hydrostatics, hydrodynamics & structural aspects related to the behaviour of ships at sea.

The course is intended for practising engineers and research scientists who need to understand the concepts behind the behaviour of ships & ships system at sea.

## Who Should Attend

Engineers and scientists involved in the design of ships and ship systems. Personnel from ship management companies, oil companies, classification societies and ship builders will benefit from attending this course. The course is innovative in both content & structure with a careful balance of theory & practice.

## PROGRAMME

### Monday 23 April 2007

09.00 - 10.30 Lecture 1: Naming and locating parts of a ship, introduction to the general arrangement – functional blocks of ship (I E Winkle)

10.30 - 11.00 *Break*

11.00 - 12.30 Lecture 2: Basic definitions, displacement, deadweight, deck load etc. loading conditions, stability and trim, stability book, role of marine agencies (I E Winkle)

12.30 - 13.30 *Lunch*

13.30 - 14.30 Lecture 3: Resistance, powering, fuel consumption, effects of appendages (David L Smith)

14.30 - 15.00 *Break*

15.00 - 17.00 Lecture 4: Hydrodynamics related to wind, wave and current. Wave data, spectra, RAO's (David L Smith)

### Tuesday 24 April 2007

09.00 - 10.30 Lecture 5: Ship capsizing, static stability, worked example on ships (I E Winkle)

10.30 - 11.00 *Break*

11.00 - 12.30 Lecture 6: Water tight integrity and damage stability, water tight doors and bulkheads (I E Winkle)

12.30 - 13.15 *Lunch*

13.15 - 15.15 Lecture 7: Impact of tides whilst in port or at sea, impact of wind, waves and currents, ship motions (David L Smith)

15.15 - 15.30 *Break*

15.30 - 17.00 Lecture 8: Structural limitations, overall strength, local strength, loading conditions (Purnendu Das)

### Wednesday 25 April 2007

09.00 - 10.30 Lecture 9: DP systems; computers, thrusters, propellers, different types; reference systems-1 (Bob McNair)

10.30 - 11.00 *Break*

11.00 - 12.30 Lecture 10: Sea fastenings (John Macsween)

12.30 - 13.30 *Lunch*

13.30 - 15.00 Lecture 11: DP systems; computers, thrusters, propellers, different types; reference systems-2 (Bob McNair)

15.00 - 15.30 *Break*

15:30 - 17:00 Lecture 12: Safety; Task Risk Assessment, Permit to Work, Fire/Explosion risk during welding (Bob McNair)

## REGISTRATION FORM

Name \_\_\_\_\_  
(Please print)

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

I wish to register for the Course at a cost of £650 including Course material, lunches and Course dinner

Please invoice me at the above address

Please send me information on local hotels

Signature \_\_\_\_\_

Date \_\_\_\_\_

The completed form together with a Cheque or Demand Draft in pounds sterling payable to **ASRANet Ltd.** should be sent by **30 March 2007 to:**

Professor P.K. Das  
Dept. of Naval Architecture & Marine Engineering  
Henry Dyer Building, 100 Montrose Street  
Glasgow G4 0LZ  
Scotland

## Course Documentation

Course notes will be available in loose bound file.

## Course Fee

£650 including Course material, lunches and Course dinner

## Venue

Station Hotel  
78 Guild Street  
Aberdeen  
AB11 6GN

## Contact

Professor P.K. Das,  
Course Director  
Direct Tel: 0141 548 3462  
Fax: 0141 552 2879  
Email: p.k.das@na-me.ac.uk

# A 3 DAY

# COURSE

# ON

# ‘SHIPS AT SEA’



## 23-25 April 2007

## Aberdeen, UK