

Online (via Zoom) Course on Design of Ship Structures 21st- 22nd November 2022



ABOUT THE COURSE

This course will deal with the design of ship structures according to the rules and presentation of the underlying principles. Focus will be given on:

- Determination of global and local loads (actions) and determination of scantling according to the rules.
- Verification of design using analytical techniques acceptable by class societies and finite element analysis.
- Serviceability limit state, ultimate limit state, fatigue limit state, accidental limit state. Working stress design vs. load and resistance factor design.

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. Design, assessment and management of a wide range of engineering structures will also benefit from this course.

COST

The registration fee of the workshop will be £595 plus VAT (UK only) which includes course notes

PAYMENT

Payments can be made by cheque (made payable to ASRANet Ltd.), cash or bank transfer. Please enquire for details.

CONTACT

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PROGRAMME

DAY 1

Monday (21st November 2022)

9.00 – 10.30	Lecture 1: Overview of classification codes: Presentation of the Rules for design and constructions, in particular GBS, CSR, URS. Principles: SLS, ULS, FLS, ASL, WSD, LRFD. Structure of the Rules: Loads, Scantlings, Verifications	<i>Dr. Manolis Samuelides</i>
10.30 - 10.45	<i>Break</i>	
10.45 - 12.15	Lecture 2: Loads Determination of loads: global loads, pressures, accelerations. Loading conditions	<i>Dr. Manolis Samuelides</i>
12.15 - 13.30	<i>Lunch</i>	
13.30 - 15.00	Lecture 3: Scantlings Prescriptive rules for the determination of the geometric properties of plates and stiffeners. Building materials, Using of open source codes (MARS)	<i>Dr. Manolis Samuelides</i>
15.00 – 15.30	<i>Break</i>	
15.30 - 17.00	Lecture 4: Verification: yield Verification of design: Yielding check, acceptable limits of stresses, Finite element analysis.	<i>Dr. Manolis Samuelides</i>

DAY 2

Tuesday (22nd November 2022)

9.00 - 10.30	Lecture 5: Verification: buckling Verification of design: Buckling check, utilization factor, Finite element analysis	<i>Dr. Manolis Samuelides</i>
10.30 - 10.45	<i>Break</i>	
10.45 - 12.15	Lecture 6: Verification: fatigue Verification of design: Fatigue check, simplified verification, Finite element analysis.	<i>Dr. Manolis Samuelides</i>

12.15 - 13.30	<i>Lunch</i>	
13.30 - 15.00	Lecture 7: Verification: ultimate strength: Verification of design: Ultimate and residual strength, iterative method, finite element analysis	<i>Dr. Manolis Samuelides</i>
15.00 – 15.30	<i>Break</i>	
15.30 - 17.00	Lecture 8: Requirements related to particular ships Bulk carriers, Containerships, Accidental Limit States Questions and discussion	<i>Dr. Manolis Samuelides</i>

LECTURER CV

Dr. Manolis Samuelides

Dr. Manolis Samuelides is presently working as Professor in the School of Naval Architecture and Marine Engineering, National Technical University of Athens (NTUA) and in European Patent Attorney (self-employed).

From 1975 to 1980 he studied Naval Architecture and Marine Engineering in NTUA, from where he obtained his M.Sc. in June 1980. In September 1980 he started his post-graduate studies in the Department of Naval Architecture and Ocean Engineering of Glasgow University and in May 1984, obtained his Ph.D. His mother tongue is Greek, has excellent knowledge of English, a very good knowledge of French and is good in German as well.

In his professional life he has been active simultaneously in two areas: in Engineering mainly as an Academic and in Intellectual Property.

In 1992 he was elected member of the academic staff in the Dept. of Naval Arch. and Marine Engineering of NTUA, initially as a lecturer, later as an Assistant Prof. (1996), Associate Prof. (2004) and Professor (Nov. 2010) in the area of Dynamic Strength of Ship's Structures. Besides lecturing, he served in many administrative positions in the Department and the University Administration, such as member of the Senate, member of Finance Committee, Director of the Division for Marine Structures (ac. year 2007-2008, 2018-2020). From 1992 until today he has been participating in numerous European and national research projects in the field of ship structural analysis and design and analysis of marine accidents, either as researcher or as leader of research groups of our School. In the course of his carrier in the University, he has written over 50 papers published in International journals and presented in international conferences and have participated in various international scientific committees. He has also acted as consultant for classification societies and ship companies in technical matters and legal cases.

In April 1987, he started working in the European Patent Office (EPO) in Munich, where he stayed until the end of January of 1992. In EPO he worked as an examiner, with the exception of the last half year, when he was selected to join the Directorate for Recruitment and Training of Examiners. In 1992 he returned to Athens and since then, he has been working privately initially as a consultant on IP and from 1999 until today as a European Patent Attorney. Besides his core business, i.e. representing clients, he have been lecturing in Greece and abroad on IP

and has participated in international projects on various aspects of IP, such as enforcement, technology transfer, best practice. From January 2001 until January 2005 he suspended activities as a European Patent Attorney, because he was nominated Director General of the Organization of Industrial Property of Greece, by the Minister of Development of Greece. In his capacity as Director General he was member of the Greek delegation in the Administrative Council of EPO and the Governing Bodies of the World Intellectual Property Organization. In 2003 he chaired the Working Group IP-Patents of the European Council. Since 2007 he has been a member of the European Patent Practice Committee (EPPC) of the European Patent Institute (epi).