



NAVL3410

SHIP STRUCTURES 1

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1. Staff contact

Contact details and consultation times for course convenor

Dr Mac Chowdhury
Office location: Ainsworth 208B
Tel: (02) 9385 4119
Email: m.chodhury@unsw.edu.au

Consultation concerning this course is available by appointment, or directly by phone contact or email.

Contact details and consultation times for additional lecturers/demonstrators/lab staff

Nil.

2. Course details

Credit points

NAVL3410 is a 6 unit-of-credit (UoC) course, and involves 6 hours per week (h/w) of face-to-face contact.

approximately 25 hours per semester for each UoC, including class contact hours, other learning activities, preparation and time spent on all assessable work. Thus, for a full-time enrolled student, the normal workload, averaged across the 16 weeks of teaching, study and examination periods, is about 37.5 hours per week.

This means that you should aim to spend about 9 h/w on this course. The additional time should be spent in making sure that you understand the lecture material, completing the set assignments, and further reading.

There is no parallel teaching in this course.

Contact hours

	Day	Time	Location
Lectures/Tutorials	Monday	12 noon - 3 pm	BUS205

Summary of the course

This course focusses on three main areas of ship structures:

The process of structural design and construction of ships is summarised during the first two weeks.

The major portion of the course deals with the calculations of loading and response of the ship hull girder and major components. These calculations are based on first-principles analysis. The method of rule-based ship structural design is also introduced. The last three weeks are devoted to fatigue and fracture of ship structural joints using both S-N curve and fracture-mechanics approaches. The analysis of hull girder vibrations is also introduced.

Aims of the course

The main aim of this course is to develop a clear understanding of the methods of analysis of ship structures and structural components based on first principles.

3. Teaching strategies

The material for this course will be presented through a combination of lectures and tutorials.

Lectures are designed to cover the methodology of ship structural analysis. These are mostly the theories of structural mechanics applied to ship structures. Lectures will be further developed by practical application in tutorial classes.

Tutorials are designed to provide you with feedback and discussion on the assignments, and to investigate problem areas in greater depth.

9	2/5/16	Application of extended beam theory to the analysis of open-deck vessels	BUS205
	3/5/16	Application of extended beam theory to the analysis of open-deck vessels	BUS232

Assessment	Weight	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Marks returned
1	4%	1	Ship construction details	Tue 15/3/16, hard copy	One week after submission
2	6%	2, 3	Rational design calculations 1	Tue 5/4/16, hard copy	One week after submission
3	12%	2, 3	Rational design calculations 2	Tue 26/4/16, hard copy	One week after submission
4	6%	2, 3	Rational design calculations 3	Tue 10/5/16, hard copy	One week after submission
5	6%	4	Bi-linear S-N curves for aluminium catamaran	Tue 17/5/16, Hard copy	One week after submission

6 6% 4,5

All submissions are expected to be neat, and clearly set out. Your results are the pinnacle of

Special consideration and supplementary assessment

Try the following:

ABS www.eagle.org
DNV GL www.dnvgl.com
LR www.lr.org
AMSA www.amsa.gov.au

If plagiarism is found in your work when you are in first year, your lecturer will offer you assistance to improve your academic skills. They may ask you to look at some online resources, attend the Learning Centre, or sometimes resubmit your work with the problem

or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Further information on School policy and procedures in the event of plagiarism is available on the [intranet](#).

