



MECH9420

COMPOSITE MATERIALS AND MECHANICS



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Contact details and consultation times for course convenor

Name: Professor Gangadhara Prusty Office location: Ainsworth Mechanical Engineering Building (G17), Room 208F Tel: (02) 9385 5939 Email: <u>g.prusty@unsw.edu.au</u>

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

Name: Mr. David Lyons Office location: 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, further reading, and revising for any examinations.

Contact hours

Day	Time	Location

- (g) Design of components:
 - ∉ International standards for tests and certification

(h)

4. T T T

Component	Activities					
Lectures	 ∉ Find out what you must learn. ∉ See methods that are not in the textbook. ∉ Follow worked examples. 					
Laboratory/Problem solving class	 # Hear announcements on course changes. # Be guided by course notes and demonstrators. # Ask questions. # Do problems, as set out in the course notes. # Work with colleagues. 					
Private study (including Moodle)	 Review lecture material and textbook. Do set problems and assignments. Discuss with fellow students. Join Moodle discussions of problems. Download materials from Moodle. Keep up with notices and find out marks via Moodle. 					
Assessments (assignments, laboratories and final exam)	 Demonstrate your basic knowledge and skills. Learn from feedback. 					

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Composites 3M: Materials, Mechanics and Manufacturing Problem Solving Class/Laboratory (2 hrBDC 0h

PSS and Laboratory Schedule

	PSS			Automated Composites Lab (ACL)				
Week	Day	Time	Location	Day		Time	Location	Task
3	Wed	4-6 pm	OMB 230	Composites lab tour and demonstration will happen during 12-2 p.m. in L102 & 103, Willis Annexe (Lecture time of this				
		2-4 Ainsworth 201 week only)						•
4 Wed	Wed	4-6 pm	OMB 230					
	nea	2-4 pm	Ainsworth 201					
5 Wed	4-6 pm OMB 230	ТВА	ТВА	ТВА	ACL, Wi Annexe	Assignment 2:		
		2-4 pm	Ainsworth 201				(L102-10	Instron
6 [(A)))Ved		4-6 pm	OMB 230	TBA	ТВА	TBA	ACL, Wi Annexe (L102-10	e Assignment 2:

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Assessment overview

Assessment	Length	Weight	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
Assignment 1	5000 words (10 pages)	15%	1, 2, 3	Understanding of industry specific applications of composites and critical views on the published literature	5 pm Friday in week 4 (17th August)	Week 5	Two weeks after the submission day
Assignment 2	15 pages	20%	1, 2, 5	Use of experiment and Simulation technology for composites. Report writing, communication skills and understanding of experimental procedures	5 pm Friday in week 9 (21 st September)	Week 10	Two weeks after the submission day
Assignment 3	10 pages + 500 words discussion	20%	1, 4, 5	Hands-on sample manufacture, experiments, report writing and			'

held during the University examination periods, which are June for Semester 1 and November for Semester 2.

Provisional Examination timetables are generally published on myUNSW in May for Semester 1 and September for Semester 2

For further information on exams, please see the Exams section on the intranet.

Calculators

You will need to provide your own calculator, of a make and model approved by UNSW, for the examinations. The list of approved calculators is shown at <u>student.unsw.edu.au/exam-approved-calculators-and-computers</u>

It is your responsibility to ensure that your calculator is of an approved make and model, and to obtain an "Approved" sticker for it from the School Office or the Engineering Student Centre prior to the examination. Calculators not bearing an "Approved" sticker will not be allowed into the examination room.

Special consideration and supplementary assessment

For details of applying for special consideration and conditions for the award of supplementary assessment, see the information on UNSW's <u>Special Consideration page</u>.



Reference Texts

- 1. Isaac M. Daniel and Ori Ishai, Engineering Mechanics of Composite Materials, Oxford University Press, 1994.
- 2. Mel M. Schwartz, Composite Materials, Vol 2, Prentice Hall, New Jersey, 1997.
- 3. R. A. ShentM0.7(o -1.CTJ 0)]TJ 0 Tc ()Tj EMCh.hai0.7(9be76 w (p-1.8(s)-1.7(of C)1.7(o)5.ou)6

maintained. Prior to that, improvements included moving to a single platform for online content delivery and assessment.

9. AT l, T, T, T, T, T, I

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism: <u>student.unsw.edu.au/plagiarism</u> The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

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 fixed. However more serious instances in first year, such as stealing another student's work 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 Miścomáduct Procedures ark available Åere: s,(ti)-Á(ti)DdqšsD-2(tis).(B\Batl/pla) 1 &(tea.8(ondu)5ts)-1.7/d[(pÅ)C

- ∉ Computing Facilities
- ∉ <u>Assessment Matters</u> (including guidelines for assignments, exams and special consideration)
- ∉ <u>Exams</u>
- ∉ <u>Approved Calculators</u>
- ∉ Academic Honesty and Plagiarism
- ∉ Student Equity and Disabilities Unit
- ∉ Health and Safety
- ∉ <u>Student Support Services</u>

44-Stage 1 Competencies for Professional Engineers

Program Intended Learning Outcomes

PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals

PE1: Knowledge and Skill Base