Course Outline

MECH9720

SOLAR THERMAL ENERGY DESIGN

1. Staff contact d

all assessable work.

You should aim to spend about 9 h/w on this course. The additional time should be spent in

Week	Topic	Location	Suggested Readings
4			

6. Assessment

Assessment overview

Assessment	Group Project? (# Students per group)	Length	Weight	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for

You must be available for all tests and examinations. Final examinations for each course are held during the University examination periods: February for Summer Term, May for T1, August for T2, and November/December for T3.

Please visit myUNSW for Provisional Examination timetable publish dates.

For further information on exams, please see the Exams webpage.

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 available at student.unsw.edu.au/exam-approved-calculators-and-computers

It is your responsibility to ensure that your calculator is of an approved make and model, and

Links to solar resources and other supplementary information

Suggested reading

Duffie J.A. & Beckman, W.A. Solar Engineering of Thermal Processes, Wiley 2013 [4th edition available from https://library.unsw.edu.au in the Wiley eBooks Collection]

Cengal, Y.A. and Ghajar, A.J., Heat and Mass Transfer, McGraw Hill, 2011

Academic Journals: Solar Energy, J. Solar Energy Engineering, Applied Energy, Energy Renewable Energy, Renewable and Sustainable Energy Reviews.

UNSW Library website: https://www.library.unsw.edu.au/

Additional materials provided on the Moodle site

The discussion forum in Moodle is intended for you to use with other students enrolled in this course. The course convenor and tutors will regularly read the forum, monitor the language used, and take note of any frequently-asked questions, but may not respond to every question on the forum (particularly if already addressed). If you want help from the course staff on assignments that are more specific, please contact unsw.mech.9720@gmail.com.

Moodle: https://moodle.telt.unsw.edu.au/login/index.php

Recommended internet information

There are many websites giving information in the form of lectures, papers and data on solar technologies…but not all of them are technically and/or economically viable. However, it is worth searching for terms such as “solar thermal”, "solar hot water", "CSP", etc, as you move through the course. YouTube has many entertaining videos related to solar thermal energy, examples of which will be given during lecture.

8. Course evaluation and development

Feedback on the course is gathered periodically using various means, including the UNSW myExperience process, informal discussion in the final class for the course, and the School’s Student/Staff meetings. Your feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

In this course, recent improvements resulting from student feedback include removal of the PG report (additional work for PG students), the addition online quizzes (over a test), resources and feedback (including the adaptive lecture lessons), new laboratory facilities, changes to the assessments, more worked problems during lecture, and additional feedback on progress throughout the course.

Academic honesty and plagiarism

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, visit: student.unsw.edu.au/plagiarism. 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 Misconduct Procedures are available here: www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

10. Administrative matters

All students are expected to read and be familiar with UNSW guidelines and polices. In particular, students should be familiar with the following:

- Attendance
- UNSW Email Address
- Computing Facilities
- Special Consideration
- Exams
- Approved Calculators
- Academic Honesty and Plagiarism
- Student Equity and Disabilities Unit
- Health and Safety
- Lab Access

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	PE1.1 Comprehensive, theory-based understanding of underpinning