

1. Staff

Position	Name	Email	Consultation times and locations	Contact Details
Course Convenor	Prof			

2.2 Course aims

Students will gain an understanding of how the structure of a material can be manipulated through variations in processing conditions and how manipulation of structure leads to variations in materials properties.

2.3 Course learning outcomes (CLO)

4. Course schedule and structure

This course consists of 54 hours of class contact hours. You are expected to take an additional 98 hours of non-class contact hours to complete assessments, readings and exam preparation spread over the term.

Week	Topics	Activity
------	--------	----------

5. Assessment

5.1 Assessment tasks

Assessment task	Description	Weight	Due date
Assignments:	Students are required to submit an online portfolio about several activities in weeks 1-5 on mechanical materials design and 2 home-works	20%	Week 5
Report and Presentation:	Students will be required to conduct research on a topic involving materials, properties, design parameters, performance, and/or failure. Requirements -A formal document, written to professional standard -A formal presentation	20%	Week 10

- Unless otherwise specified in the task criteria, all assignments must be uploaded via Moodle prior to the due date for(u)

Callister, W.D. Jr., Rethwisch, D.G., *Materials Science and Engineering: An Introduction*, 9th Edition, Wiley 2014

Ashby, M.F., 2005. *Materials selection in mechanical design*, third edition. Elsevier.

Ashby, M.F., Cebon, D., 1996. *Case studies in materials selection*. Granta Design.

Ashby, M.F., Johnson, K., 2002. *Materials and design—the art and science of material selection in product design*. Elsevier.

A.V. Srinivasan and D. Michael McFarland, *Smart Structures: Analysis and Design*, Cambridge University Press, 2001

D. Munz, T. Fett, 1999, *Ceramics – Mechanical Properties, Failure Behaviour, Materials Selection*. Springer-Verlag Berlin Heidelberg.

8. Administrative matters

School Office: Room 137, Building E10 School of Materials Science and Engineering

School Website: <http://www.materials.unsw.edu.au/>

Faculty Office: Robert Webster Building, Room 128

Faculty Website: <http://www.science.unsw.edu.au/>

9. Additional support for students

The Current Students Gateway: <https://student.unsw.edu.au/>

Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>

Studenttpin.5 Tc1g186 444g.335 tifact BM125.04 0.72 r- (t34.5 (.)3)4 (w)4.5 (.)n t34.5 t 465.84 75(di)7.5 2 53