



# Course Outline

MATS6111

Processes in Materials Engineering

Materials Science and Engineering

Science

T2, 2022





It is expected that, in addition to attending classes, students read, write, discuss, and are engaged in solving problems on the secondary and advanced processing of materials, and their effects on the mechanical and processing properties of these materials.

Effective learning is supported by a climate of inquiry where students feel appropriately challenged.

- Learning is more effective when students' prior experience and knowledge are recognised and built on.

This course is built on prior knowledge of materials science & engineering and physical metallurgy.

- Students become more engaged in the learning process if they can see the relevance of their studies to professional and disciplinary contexts

Students will be asked to analyse the role of materials processing in understanding various functional, microstructural & mechanical phenomena in materials science and how these properties influence the science and engineering of existing and new advanced materials.

### 3.2 Expectations of students

- x Students must attend at least 80% of all classes with the expectation that students only miss classes due to illness or unforeseen circumstances
- x Students must read through lecture notes and lab sheets prior to class
- x During class, students are expected to engage actively in class discussions
- x Students should work through lecture, tutorial and textbook questions
- x Students should read through the relevant chapters of the prescribed textbook.
- x Students should complete all assessment tasks and submit them on time.
- x Students are expected to participate in online discussions through the Moodle page



## 5. Assessment

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### 5.1 Assessment tasks

Assessment task	Description	Weight	Due date
Assessment 1:	The assignment covers the topics taught in Weeks 1-4, namely recrystallisation and fundamental metal working theories, such as Zener-Hollomon parameter, dynamic restoration processes, slip line field theory etc)	10%	Week 4
Mid-term quiz :	The mid-term exam includes questions pertaining to the material learnt in Weeks 1-4	40%	



## 8. Administrative matters

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

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