



# Course Outline

## 1. Staff

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Position	Name	Email	Consultation times and locations	Contact Details
Course Convenor	A/Prof Runyu Yang	<a href="mailto:r.yang@unsw.edu.au">r.yang@unsw.edu.au</a>	Room 349, Hilmer Building E10, by appointment	Phone: 9385 6787

## Supervisors



## 2.4 Relationship between course and program learning outcomes and assessments

Course Learning Outcome (CLO)	LO Statement	Program Learning Outcome (PLO)	Related Tasks & Assessment
CLO 1		1, 2 & 3	All
CLO 2		1, 3 & 4	All
CLO 3		2	All
CLO 4		1 & 5	All
CLO 5		1, 2 & 3	All

## 3. Strategies and approaches to learning

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### 3.1 Learning and teaching activities

(based on UNSW Learning Guidelines)

- Students are actively engaged in the learning process.

It is expected that, in addition to attending classes, students read, write, discuss, and are engaged in analysing various research topics within the field of materials science and engineering.

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

Problems involving electron theory are challenging; students will be given assignments that will motivate deep analysis of various physical phenomena in materials science and engineering.

- Learning is more effective and built on.

This course is built on prior courses in materials science, nanotechnology, physics and chemistry.

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

## 4. Course schedule and structure

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This course consists of no formal class contact hours. When enrolled in MATS6114 you are expected to allocate 150 hours over each Term to complete all milestones and assessment tasks. When enrolled in MATS6113 you are expected to allocate 300 hours of your time over the Term. The table below lists the areas students should be focusing on throughout the year.

	<b>MATS6114 – Stage 1</b>	

## 5. Assessment

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### 5.1 Assessment tasks

Assessment task	Description	Weight	Due date
<b>Project Management Plan</b>	Students are required to submit a PMP covering the key elements of the project (see requirements below)	10%	Stage 1 Week 4
<b>Literature Review</b>	Students will submit a literature review of their project topic. Students would need to be able to demonstrate competency in understanding the research project and be able to clearly identify the research questions that they seek to investigate.	0%*	Stage 1 Week 10

**Experimental Procedures and Preliminary Results Report**

As part of the thesis writing process students need to submit a

## **5.2 Assessment criteria and standards**

**3. Introduction and Literature Survey**

**Due:** 5:00 pm, Friday, Stage 1 Week 10

**Submission:** Upload to the Moodle course site

**Late Penalty:** Work submitted after the deadline will attract a penalty of 2 marks of the total mark per day (or part thereof) late.

**Details:** Students must submit one copy of the completed Introduction and Literature Review thesis chapters. In particular, the Literature Review is to be properly written and referenced. Students are strongly advised to submit any drafts of these chapters to their supervisor beforehand in order to give the supervisor time to provide feedback and to return the work. The report will not be marked but kept as a record showing



## 6. Progress Report

**Due:** 5:00 pm Friday, Stage 3 Week 4

**Submission:** Upload to Moodle course site

**Late Penalty:** Completion of the thesis progress report form is mandatory to be considered for project extension and explanation of any delays.

### Details:

is recommended that students discuss the contents of the Progress Report form with their supervisors. If there are any unresolved issues the students are asked to contact the course coordinator as soon as possible.

## 7. Final Thesis

**Due:** 5:00 pm Friday, Stage 3 Week 10

**Submission:** Upload to Moodle course site.

**Late Penalty:** Work submitted after the deadline will attract a penalty of 5 marks of the total mark per day (or part thereof) late.

**Details:** Students must upload a completed thesis to the course Moodle site. Refer Theses Guideline for the content and length of these chapters. Students are strongly advised to submit any drafts of the thesis well before this deadline in order to give the supervisor time to read, correct, and return the work.

The thesis is marked by three independent academic staff who are not the thesis supervisor. The marks are then averaged to give the final mark.

Refer below for details concerning requests for extensions to the deadline.

## 5.3 Submission of assessment tasks

See the above assessment task details for submission requirements for each task

UNSW operates under a Fit to Sit/ Submit rule for all assessments. If a student wishes to submit an application for special consideration for an exam or assessment, the application must be submitted prior to the start of the exam or before an assessment is submitted. If a student sits the exam/ submits an assignment, they are declaring themselves well enough to do so. Information on this process can be found here: <https://student.unsw.edu.au/special-consideration>. Medical certificates or other appropriate documents must be included. Students should also advise the lecturer of the situation. It must be noted that merely submitting a request for Special Consideration does not automatically imply the granting of additional assessment or the extension of due date.

## 5.4 Feedback on assessment

Students should consult their supervisor/s throughout the year to determine how they are progressing through the project.

**Project management plan:** The assignment is marked by the course coordinator using a standardised rubric. Written feedback is given by the course coordinator and verbal feedback is given by the student's supervisor.

**Literature Review:** Students are expected to meet with their supervisor/s to discuss their literature review throughout writing it.

**Experimental Procedures and Preliminary Results Report:** Students are expected to meet with their supervisor/s to discuss their literature review throughout writing it.

**Thesis:** Students will receive their final mark.



## Appendix A Thesis Guideline and Marking Criteria

The thesis must be your own work. All references should be properly cited, any plagiarism is forbidden in all parts of the thesis (refer Academic Honesty and Plagiarism Rules). All the theses will be run through a plagiarism-checking program. Any such academic misconduct could result in serious consequences in the assessment of the thesis.

The final thesis should be ~60 pages in total length (excluding references). Guidelines detailing expected formatting of the thesis are given below.

- **Thesis Format**

Page size is A4 with the margins set to 2.5 cm for all the sides. The header should include Chapter Title (left align), and the footer: Must include page number (centre align). Fonts can be Times New

### **Chapter 3 Methodology and Procedure (5 pages max)**

This section should begin by presenting an experimental/numerical plan that will answer the questions raised in the Literature Survey and, hence, achieve the project aims. A working Plan is a very important part of the thesis, although it is usually rather brief.

A brief but concise description of the methods and procedure should then be presented. The procedure should be descriptive to the point that another trained scientist or engineer would be able to repeat the work. It must clearly state the analytical methods used (a theoretical background of the analytical methods is not necessary). It must also specify the variables, which are being explored and state over what range of values.

### **Chapter 4. Results and Analysis (2000-2500 words, 10 pages max)**

This chapter should be brief but complete. Logical organisation is important to achieve brevity. Appropriate use of graphs and/or tables is important to achieve condensation. The use of correct units, scales, magnifications and the specification of errors are essential.

### **Chapter 5. Discussion (2500-3000 words, 15 pages max)**

This chapter is of crucial importance and much of the intellectual content of the thesis will be found within it. The results will have to be interpreted, that is, reasons for the observed behaviour, patterns, correlations, etc. must be advanced and evaluated. Such interpretation will commonly require the use of the information or data presented in the literature survey. If possible, predictions should be made on the basis of any models advanced.

The Discussion must place the results within the context of information summarised in the literature review. Most importantly, the findings must be used in answering the questions posed by the project, that is, in achieving the project aims.

To meet the various requirements, a good discussion will lead in a logical way to the conclusions with which the thesis will end.

### **Chapter 6. Summary and Conclusions (2 pages max)**

This Chapter should be no more than four pages in length. It should summarise both the results and their ramifications. This section represents a brief overview of the findings and their significance.

### **References**

This section lists full citations of literature references used in the thesis. References should use 10 pt fonts. It is recommended that Endnote (free for UNSW students) is used to manage the reference.

**Note:** Students should submit any drafts of work for assessment to their supervisors at least one week before the deadline so the supervisors have time to read, correct, and return the work.

## Marking Sheet MATS6114/MATS6113 (24 UOC)

Student: \_\_\_\_\_

Thesis Title: \_\_\_\_\_

Examiner: \_\_\_\_\_

Signature: \_\_\_\_\_

**Adj. Mark**

### **Abstract, Thesis Format and Presentation**

1. Quality of Abstract .....	/10	
2. English expression and spelling .....	/10	
3. Thesis formatting & general impression .....	/10	
	Mark: _____ /30	_____ /15