



UNSW Course Outline

ZEIT3501 Engineering Materials - 2024

Published on the 11 Feb 2024

General Course Information

Course Code : ZEIT3501

Year : 2024

Term : Semester 1

Teaching Period : Z1

Is a multi-term course? : No

Faculty : UNSW Canberra

Academic Unit : School of Engineering and Technology

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : UNSW Canberra at ADFA

Campus : UNSW Canberra

Study Level : Undergraduate

Units of Credit : 6

Useful Links

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

This course deals with the selection and use of engineering materials for aerospace and mechanical engineering applications. It builds on the scientific and technology basis of the Year 2 prerequisite course in Engineering Materials and Chemistry (ZINT2501) and is the capstone

materials course. The course is structured so as to provide a framework for sound and balanced decision making in the selection and use of these materials. It also provides guidance in the use of Codes and Standards in engineering practice. The course comprises two major topics addressing issues in the selection, use and behaviour of metals, ceramics; and polymers and composites in broad engineering practice. The emphasis is on developing an understanding of the critical inter-relationship between decisions made in the various stages of an engineering project, namely during the design phase, in the selection of materials, and in fabrication. This course interfaces with design courses in Years 3 and 4 of the various engineering programs.

Course Aims

This aims of the course is for students to develop an understanding of the critical inter-relationship between decisions made in the various stages of an engineering project, namely during the design phase, in the selection of materials, and in fabrication.

Relationship to Other Courses

The course builds on the scientific and technology basis of the Year 2 prerequisite course in Engineering Materials and Chemistry (ZINT2501) and is the capstone materials course. This course interfaces with design courses in Years 3 and 4 of the various engineering programs.

Course Learning Outcomes

Course Learning Outcomes	Engineers Australia - Professional Engineer (Stage 1)
<p>CLO1 : On successful completion of this course, the student will be able to explain the principles of the materials selection and decision making in design and fabrication</p>	<ul style="list-style-type: none"> • PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline • PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline • PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline • PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline • PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE2.3 : Application of systematic engineering synthesis and design processes • PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain • PEE3.1 : Ethical conduct and professional accountability • PEE3.2 : Effective oral and written communication in professional and lay domains • PEE3.3 : Creative, innovative and pro-active demeanour • PEE3.4 : Professional use and management of information
<p>CLO2 : On successful completion of this course, the student will be able to investigate the problems related to the use and behaviour of metals, ceramics, polymers, and composites</p>	<ul style="list-style-type: none"> • PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline • PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline • PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline

	<ul style="list-style-type: none"> • PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline • PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE2.3 : Application of systematic engineering synthesis and design processes • PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain • PEE3.1 : Ethical conduct and professional accountability • PEE3.4 : Professional use and management of information • PEE3.5 : Orderly management of self, and professional conduct • PEE3.6 : Effective team membership and team leadership
<p>CLO3 : On successful completion of this course, the student will be able to apply theory and knowledge of engineering materials to the solution of the practical engineering problems</p>	<ul style="list-style-type: none"> • PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline • PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline • PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline • PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline • PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE2.3 : Application of systematic engineering synthesis and design processes • PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain

	<ul style="list-style-type: none"> • PEE3.1 : Ethical conduct and professional accountability • PEE3.4 : Professional use and management of information
CLO4 : On successful completion of this course, the student will be able to undertake research including the utilization and integration of a range of technical resources	<ul style="list-style-type: none"> • PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline • PEE1.2 : Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline • PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline • PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline • PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline • PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE2.3 : Application of systematic engineering synthesis and design processes • PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain • PEE3.1 : Ethical conduct and professional accountability • PEE3.2 : Effective oral and written communication in professional and lay domains • PEE3.3 : Creative, innovative and pro-active demeanour • PEE3.4 : Professional use and management of information • PEE3.5 : Orderly management of self, and professional conduct • PEE3.6 : Effective team membership and team leadership

Course Learning Outcomes	Assessment Item
CLO1 : On successful completion of this course, the student will be able to explain the principles of the materials selection and decision making in design and fabrication	<ul style="list-style-type: none"> • Assignments x 2 • Test 1 • Final examination x 2 hours • Tutorial work
CLO2 : On successful completion of this course, the student will be able to investigate the problems related to the use and behaviour of metals, ceramics, polymers, and composites	<ul style="list-style-type: none"> • Assignments x 2 • Test 1 • Final examination x 2 hours • Tutorial work
CLO3 : On successful completion of this course, the student will be able to apply theory and knowledge of engineering materials to the solution of the practical engineering problems	<ul style="list-style-type: none"> • Assignments x 2 • Test 1 • Final examination x 2 hours • Tutorial work
CLO4 : On successful completion of this course, the student will be able to undertake research including the utilization and integration of a range of technical resources	<ul style="list-style-type: none"> • Assignments x 2 • Tutorial work

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

The Learning Management System

Moodle is the Learning Management System used at UNSW Canberra. All courses have a Moodle site which will become available to students at least one week before the start of semester.

Please find all help and documentation (including Blackboard Collaborate) at the [Moodle Support](#) page.

UNSW Moodle supports the following web browsers:

» Google Chrome 50+

» Safari 10+

** Internet Explorer is not recommended

** Addons and Toolbars can affect any browser's performance.

Operating systems recommended are:

Windows 7, 10, Mac OSX Sierra, iPad IOS10

For further details about system requirements click [here](#).

Log in to Moodle [here](#).

If you need further assistance with Moodle:

For enrolment and login issues please contact:

IT Service Centre

Email: itservicecentre@unsw.edu.au

Phone: (02) 9385-1333

International: +61 2 9385 1333

For all other Moodle issues please contact:

External TELT Support

Email: externalteltsupport@unsw.edu.au

Phone: (02) 9385-3331

International: +61 2 938 53331

Opening hours:

Monday – Friday 7:30am – 9:30 pm

Saturday & Sunday 8:30 am – 4:30pm

Other Professional Outcomes

Developing Graduate Capabilities

This course contributes to the following Engineers Australia Stage 1 Competencies:

1.1 Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline.

1.4. Discernment of knowledge development and research directions within the engineering discipline.

1.5. Knowledge of contextual factors impacting the engineering discipline.

2.1. Application of established engineering methods to complex engineering problem solving.

2.2. Fluent application of engineering techniques, tools and resources.

2.3. Application of systematic engineering synthesis and design processes.

3.2. Effective oral and written communication in professional and lay domains.

3.3. Creative, innovative and pro-active demeanour.

Additional Course Information

The course is structured around a series of lecture-style presentations and tutorial discussions on specialist topics. The course notes, which form the basis of the presentations, are supplemented by commercial and technical resource materials and relevant Standards which will be available on the MOODLE site for the course.

Reference to these resources is recommended when preparing the assignment(s) and in preparation for the examination(s). Students' ability to utilize and integrate a range of technical resources in the assessment tasks will be a major criterion for superior performance in the course. Reference to these supplementary resources will greatly enhance their understanding of the various topics and develop an appreciation of the many types and formats of reference material which they may expect to be exposed to, and make use of, in their professional life.

Information about referencing styles is available at: <https://guides.lib.unsw.adfa.edu.au/c.php?g=472948&p=3246720>

Student's active participation in the presentations is highly valued and will contribute significantly to the overall benefit and outcomes of the course.

Study at UNSW Canberra

<https://www.unsw.adfa.edu.au/study>

Study at UNSW Canberra has lots of useful information regarding:

- Where to get help
- Administrative matters
- Getting your passwords set up
- How to log on to Moodle
- Accessing the Library and other areas.

Additional Information as required

CRICOS Provider no. 00098G

The University of New South Wales Canberra.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Engineers Australia - Professional Engineer (Stage 1)
Assignments x 2 Assessment Format: Individual	30%	Start Date: Assignment 1 (Metals and Ceramics) 28 February; Assignment 2 (Polymers and Composites) 4 April Due Date: Assignment 1 (Metals and Ceramics) 20 March; Assignment 2 (Polymers and Composites) 24 May Post Date: 21/03/2024 12:00 AM	<ul style="list-style-type: none">• PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline• PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline• PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline• PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline• PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline• PEE2.1 : Application of established engineering methods to complex engineering problem solving• PEE2.2 : Fluent application of engineering techniques, tools and resources• PEE3.1 : Ethical conduct and professional accountability• PEE3.2 : Effective oral and written communication in professional and lay domains• PEE3.3 : Creative, innovative and pro-active demeanour• PEE3.5 : Orderly management of self, and

			professional conduct
Test 1 Assessment Format: Individual	30%	Start Date: 28/03/2024 12:10 AM Due Date: Not Applicable Post Date: 28/03/2024 02:10 PM	<ul style="list-style-type: none"> • PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline • PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline • PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline • PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline • PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE3.1 : Ethical conduct and professional accountability • PEE3.2 : Effective oral and written communication in professional and lay domains • PEE3.3 : Creative, innovative and pro-active demeanour • PEE3.4 : Professional use and management of information • PEE3.5 : Orderly management of self, and professional conduct
Final examination x 2 hours	35%	Start Date: Exam period Due Date: Exam period	<ul style="list-style-type: none"> • PEE1.1 : Comprehensive, theory based understanding

Assessment Format: Individual			<p>of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline</p> <ul style="list-style-type: none"> • PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline • PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline • PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline • PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE3.1 : Ethical conduct and professional accountability • PEE3.2 : Effective oral and written communication in professional and lay domains • PEE3.3 : Creative, innovative and pro-active demeanour • PEE3.4 : Professional use and management of information • PEE3.5 : Orderly management of self, and professional conduct
Tutorial work Assessment Format: Individual	5%	<p>Start Date: Not Applicable Due Date: Not Applicable Post Date: 28/02/2024 09:00 AM</p>	<ul style="list-style-type: none"> • PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to

			<p>the engineering discipline</p> <ul style="list-style-type: none"> • PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline • PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline • PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline • PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE3.1 : Ethical conduct and professional accountability • PEE3.2 : Effective oral and written communication in professional and lay domains • PEE3.3 : Creative, innovative and pro-active demeanour • PEE3.4 : Professional use and management of information • PEE3.5 : Orderly management of self, and professional conduct • PEE3.6 : Effective team membership and team leadership
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Assessment Details

Assignments x 2

Assessment Overview

The assignments are an opportunity for students to research and report on a topic of interest related to the course. This will enhance their understanding of the course topics, broaden their engineering competencies, and develop their skills in independent research, investigation and report writing. The assignments address the learning outcomes LO1, 2, 3, & 4. The feedback is provided using the rubrics developed for each assignment.

Course Learning Outcomes

- CLO1 : On successful completion of this course, the student will be able to explain the principles of the materials selection and decision making in design and fabrication
- CLO2 : On successful completion of this course, the student will be able to investigate the problems related to the use and behaviour of metals, ceramics, polymers, and composites
- CLO3 : On successful completion of this course, the student will be able to apply theory and knowledge of engineering materials to the solution of the practical engineering problems
- CLO4 : On successful completion of this course, the student will be able to undertake research including the utilization and integration of a range of technical resources

Detailed Assessment Description

Assignments 1 and 2 are written papers (1500 – 2000 words + appendices) to be submitted in electronic form (pdf format) through MOODLE.

Assignment 1 (Metals and Ceramics): Weight 15%; Due date: 20 March

Students will get the written feedback of assignment 1 by the census date (24 March).

Assignment 2 (Polymers and Composites): Weight 15%; Due date: 24 May

The assignments could be completed either individually or by self-forming groups of up to 4 students. Students can indicate each group member's contribution to the work (in % terms). However, if this information is absent, it will be assumed that each member will be awarded the same mark.

Specific details of these assignments will be provided at appropriate times during the Session.

Grading of the assignments will be based on:

Technical content	60%
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Engineering relevance 20%

Referencing and use of

additional resources 10%

Editorial quality 10%

Assessment Length

Assignments 1 and 2 are written papers (1500 – 2000 words + appendices)

Submission notes

Assignments 1 and 2 are written papers (1500 – 2000 words + appendices) to be submitted in electronic form (pdf format) through MOODLE.

Assessment information

N/A

Assignment submission Turnitin type

This is not a Turnitin assignment

Test 1

Assessment Overview

Test 1 (closed book) covers the Metals and Ceramics topics. The test addresses the learning outcomes LO1, 2, & 3.

Course Learning Outcomes

- CLO1 : On successful completion of this course, the student will be able to explain the principles of the materials selection and decision making in design and fabrication
- CLO2 : On successful completion of this course, the student will be able to investigate the problems related to the use and behaviour of metals, ceramics, polymers, and composites
- CLO3 : On successful completion of this course, the student will be able to apply theory and knowledge of engineering materials to the solution of the practical engineering problems

Detailed Assessment Description

Class Test 1 (closed book) covers the Metals and Ceramics topics. The test addresses the learning outcomes LO1, 2, & 3.

Assessment Length

2 hours

Submission notes

Hand written only

Assessment information

Additional information will be provided in class

Assignment submission Turnitin type

Not Applicable

Final examination x 2 hours**Assessment Overview**

The final examination (closed book) covers the polymers and composites topics and addresses the learning outcomes LO1, 2, & 3.

Course Learning Outcomes

- CL01 : On successful completion of this course, the student will be able to explain the principles of the materials selection and decision making in design and fabrication
- CL02 : On successful completion of this course, the student will be able to investigate the problems related to the use and behaviour of metals, ceramics, polymers, and composites
- CL03 : On successful completion of this course, the student will be able to apply theory and knowledge of engineering materials to the solution of the practical engineering problems

Detailed Assessment Description

The final examination (closed book) covers the polymers and composites topics and addresses the learning outcomes LO1, 2, & 3.

Assessment Length

2 hours

Submission notes

Hand written only

Assessment information

N/A

Assignment submission Turnitin type

Not Applicable

Tutorial work

Assessment Overview

The tutorial work will be assessed for Metals and Ceramics part of the course.

Course Learning Outcomes

- CL01 : On successful completion of this course, the student will be able to explain the principles of the materials selection and decision making in design and fabrication
- CL02 : On successful completion of this course, the student will be able to investigate the problems related to the use and behaviour of metals, ceramics, polymers, and composites
- CL03 : On successful completion of this course, the student will be able to apply theory and knowledge of engineering materials to the solution of the practical engineering problems
- CL04 : On successful completion of this course, the student will be able to undertake research including the utilization and integration of a range of technical resources

Detailed Assessment Description

Students' in-class participation in the tutorial sessions (Metals and Ceramics) (weeks 2 - 5) will be assessed by the lecturer. Each tutorial in the Metals and Ceramics component of the course features a short task to be done during the tutorial (for example, answering a quiz question on Moodle). The tasks are designed to encourage active participation in the tutorials and the application of the concepts learned.

Assessment Length

N/A

Submission notes

N/A

Assessment information

N/A

Assignment submission Turnitin type

Not Applicable

General Assessment Information

Late Submission of Assessment

Unless prior arrangement is made with the lecturer or a formal application for special consideration is submitted, a penalty of 5% of the total available mark for the assessment will apply for each day that an assessment item is late up to a maximum of 5 days (120 hours) after

which an assessment can no longer be submitted and a grade of 0 will be applied.

Use of Generative AI in Assessments

It is prohibited to use any software or service to search for or generate information or answers. If its use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Grading Basis

Standard

Requirements to pass course

The overall passing mark is 50%

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 26 February - 1 March	Lecture	Wednesday 09:00 -10:50, LTN 09 Metals & Ceramics - Zinovieva
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Metals & Ceramics - Zinovieva
	Lecture	Thursday 12:10 - 14:00, LTN 06 Metals & Ceramics - Zinovieva
	Tutorial	Friday 12:10 - 13:00, rm 152, Bld 15-16 Metals & Ceramics - Zinovieva
Week 2 : 4 March - 8 March	Lecture	Wednesday 09:00 -10:50, LTN 09 Metals & Ceramics - Zinovieva
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Metals & Ceramics - Zinovieva
	Lecture	Thursday 12:10 - 14:00, LTN 06 Metals & Ceramics - Zinovieva
	Tutorial	Friday 12:10 - 13:00, rm 152, Bld 15-16 Metals & Ceramics - Zinovieva
Week 3 : 11 March - 15 March	Lecture	Wednesday 09:00 -10:50, LTN 09 Metals & Ceramics - Zinovieva
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Metals & Ceramics - Zinovieva
	Lecture	Thursday 12:10 - 14:00, LTN 06 Metals & Ceramics - Zinovieva
	Tutorial	Friday 12:10 - 13:00, rm 152, Bld 15-16 Metals & Ceramics - Zinovieva
Week 4 : 18 March - 22 March	Lecture	Wednesday 09:00 -10:50, LTN 09 Metals & Ceramics - Zinovieva Due date of Assignment 1 (Metals and Ceramics)
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Metals & Ceramics - Zinovieva
	Lecture	Thursday 12:10 - 14:00, LTN 06 Metals & Ceramics - Zinovieva
	Tutorial	Friday 12:10 - 13:00, rm 152, Bld 15-16 Metals & Ceramics - Zinovieva
Week 5 : 25 March - 29 March	Lecture	Wednesday 09:00 -10:50, LTN 09 Metals & Ceramics - Zinovieva
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Metals & Ceramics - Zinovieva
	Assessment	Class Test 1 Thursday 12:10 - 14:00, LTN 06 Metals & Ceramics - Zinovieva
Week 6 : 1 April - 5 April	Lecture	Wednesday 09:00 -10:50, LTN 09 Polymers and Composites - Morozov
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Polymers and Composites - Morozov
	Lecture	Thursday 12:10 - 14:00, LTN 06 Polymers and Composites - Morozov
	Tutorial	Friday 12:10 - 13:00, rm152, Bld 15-16 Polymers and Composites - Morozov
Week 7 : 22 April - 26 April	Tutorial	Friday 12:10 - 13:00, rm152, Bld 15-16 Polymers and Composites - Morozov
Week 8 : 29 April - 3 May	Lecture	Wednesday 09:00 -10:50, LTN 09 Polymers and Composites - Morozov
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Polymers and Composites - Morozov
	Lecture	Thursday 12:10 - 14:00, LTN 06 Polymers and Composites - Morozov
	Tutorial	Friday 12:10 - 13:00, rm152, Bld 15-16 Polymers and Composites - Morozov
Week 9 : 6 May - 10 May	Lecture	Wednesday 09:00 -10:50, LTN 09 Polymers and Composites - Morozov
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Polymers and Composites - Morozov
	Lecture	Thursday 12:10 - 14:00, LTN 06 Polymers and Composites - Morozov
Week 10 : 13 May - 17 May	Lecture	Wednesday 09:00 -10:50, LTN 09 Polymers and Composites - Morozov
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Polymers and Composites - Morozov
	Lecture	Thursday 12:10 - 14:00, LTN 06 Polymers and Composites - Morozov
	Tutorial	Friday 12:10 - 13:00, rm152, Bld 15-16 Polymers and Composites - Morozov
Week 11 : 20 May - 24 May	Lecture	Wednesday 09:00 -10:50, LTN 09 Polymers and Composites - Morozov
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Polymers and Composites - Morozov
	Lecture	Thursday 12:10 - 14:00, LTN 06 Polymers and Composites - Morozov
	Tutorial	Friday 12:10 - 13:00, rm152, Bld 15-16 Polymers and Composites - Morozov Due date for Assignment 2 (Polymers and Composites)
Week 12 : 27 May - 31 May	Lecture	Wednesday 09:00 -10:50, LTN 09 Polymers and Composites - Morozov
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Polymers and Composites - Morozov
	Lecture	Thursday 12:10 - 14:00, LTN 06 Polymers and Composites - Morozov
	Tutorial	Friday 12:10 - 13:00, rm152, Bld 15-16 Polymers and Composites - Morozov
Week 13 : 3 June - 7 June	Lecture	Wednesday 09:00 -10:50, LTN 09 Polymers and Composites - Morozov
	Tutorial	Thursday 10:00 - 10:50, Sem 04 Polymers and Composites - Morozov
	Lecture	Thursday 12:10 - 14:00, LTN 06 Polymers and Composites - Morozov

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

The attendance at all classes is compulsory.

Course Resources

Prescribed Resources

Compulsory Texts

Metals and Ceramics

Callister WD, Rethwisch DG *Materials Science and Engineering – An Introduction*, 1st Australia & New Zealand Ed, Wiley, ISBN: 978-0-730-38283-6, 2020

Polymers and Composites

Baker AA, Scott ML *Composite Materials for Aircraft Structures*, 3rd Ed, AIAA Educational Series, ISBN 978-162-410326-1, 2016

Recommended Resources

Recommended Readings

Hazell PJ *Armour: Materials, Theory, and Design*, 2nd Ed, CRC Press, ISBN: 1000655873/1003322719, 2023

Vasiliev VV, Morozov EV *Advanced Mechanics of Composite Materials and Structural Elements*, Elsevier, ISBN: 978-0-08-098231-1, 2013.

Additional Costs

N/A

Course Evaluation and Development

One of the key priorities in the 2025 Strategy for UNSW is a drive for academic excellence in

education. One of the ways of determining how well UNSW is progressing towards this goal is by listening to our own students. Students will be asked to complete the myExperience survey towards the end of this course.

Students can also provide feedback during the semester via: direct contact with the lecturer, the “On-going Student Feedback” link in Moodle, Student-Staff Liaison Committee meetings in schools, informal feedback conducted by staff, and focus groups. Student opinions really do make a difference. Refer to the Moodle site for this course to see how the feedback from previous students has contributed to the course development.

Important note: Students are reminded that any feedback provided should be constructive and professional and that they are bound by the Student Code of Conduct Policy

<https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf>

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Evgeny Morozov		Room 208, Building 17	+61 2 5114 5185	Consultation at any time in working hours. Appointment by email preferred to avoid clashes.	Yes	Yes
Lecturer	Olga Zinovieva		Room 129, Building 17	+61 2 5114 5177	Consultation at any time in working hours. Appointment by email preferred to avoid clashes.	No	No

Other Useful Information

Academic Information

Course Evaluation and Development

One of the key priorities in the 2025 Strategy for UNSW is a drive for academic excellence in education. One of the ways of determining how well UNSW is progressing towards this goal is by listening to our own students. Students will be asked to complete the myExperience survey towards the end of each course.

Students can also provide feedback during the semester via: direct contact with the lecturer, the “On-going Student Feedback” link in Moodle, Student-Staff Liaison Committee meetings in schools, informal feedback conducted by staff, and focus groups (where applicable). Student opinions really do make a difference. Refer to the Moodle site for your course to see how the

feedback from previous students has contributed to the course development.

Important note: Students are reminded that any feedback provided should be constructive and professional and that they are bound by the Student Code of Conduct.

<https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf>

Equitable Learning Services (ELS)

Students living with neurodivergent, physical and/or mental health conditions or caring for someone with these conditions may be eligible for support through the Equitable Learning Services team. Equitable Learning Services is a free and confidential service that provides practical support to ensure your mental or physical health conditions do not adversely affect your studies.

Our team of dedicated **Equitable Learning Facilitators (ELFs)** are here to assist you through this process. We offer a number of services to make your education at UNSW easier and more equitable.

Further information about ELS for currently enrolled students can be found at: <https://www.student.unsw.edu.au/equitable-learning>

Academic Honesty and Plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to this principle of academic integrity. All students are expected to adhere to UNSW's Student Code of Conduct. Find relevant information at: [Student Code of Conduct \(unsw.edu.au\)](https://www.student.unsw.edu.au/student-code-of-conduct)

Plagiarism undermines academic integrity and is not tolerated at UNSW. It is defined as using the words or ideas of others and passing them off as your own, and can take many forms, from deliberate cheating to accidental copying from a source without acknowledgement.

For more information, please refer to the following:

<https://student.unsw.edu.au/plagiarism>

Submission of Assessment Tasks

Special Consideration

Special Consideration is the process for assessing and addressing the impact on students of short-term events, that are beyond the control of the student, and that affect performance in a specific assessment task or tasks.

Applications for Special Consideration will be accepted in the following circumstances only:

- Where academic work has been hampered to a substantial degree by illness or other cause;
- The circumstances are unexpected and beyond the student's control;
- The circumstances could not have reasonably been anticipated, avoided or guarded against by the student; and either:

(i) they occurred during a critical study period and was 3 consecutive days or more duration, or a total of 5 days within the critical study period; or

(ii) they prevented the ability to complete, attend or submit an assessment task for a specific date (e.g. final exam, in class test/quiz, in class presentation)

Applications for Special Consideration must be made as soon as practicable after the problem occurs and at the latest within three working days of the assessment or the period covered by the supporting documentation.

By sitting or submitting the assessment task the student is declaring that they are fit to do so and cannot later apply for Special Consideration (UNSW 'fit to sit or submit' requirement).

Sitting, accessing or submitting an assessment task on the scheduled assessment date, after applying for special consideration, renders the special consideration application void.

Find more information about special consideration at: <https://www.student.unsw.edu.au/special/consideration/guide>

Or apply for special consideration through your [MyUNSW portal](#).

Late Submission of assessment tasks (other than examinations)

UNSW has a standard late submission penalty of:

- 5% per day,

- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Electronic submission of assessment

Except where the nature of an assessment task precludes its electronic submission, all assessments must be submitted to an electronic repository, approved by UNSW or the Faculty, for archiving and subsequent marking and analysis.

Release of final mark

All marks obtained for assessment items during the session are provisional. The final mark as published by the university following the assessment review group meeting is the only official mark.