UNSW Course Outline

ZEIT2501 Mechanical and Electronic Design - 2024

Published on the 11 Feb 2024

General Course Information

Course Code : ZEIT2501
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 aims to develop sound design practice through participation in the Warman Design and Build Project and Competition, which is a small-group, semester-long, authentic project-based learning activity. The project is unique each year but mechatronic in nature, and students

will be exposed to the broad principles of mechanical and electronic design in a professional context including requirements analysis, concept development, detailed design, fabrication, testing and evaluation, teamwork and reporting. The lectures, design studio and workshop sessions will deliver the relevant material and scaffolding for the successful completion of the project.

Course Aims

The aims of this course are to develop sound design principles through participation in the Warman Design and Build Competition, which is a small-group, project-based learning activity.

Relationship to Other Courses

This course builds on basic understanding and competence in engineering mathematics, physics, mechanics; and some basic practical workshop skills and competencies. The course will explicitly build on the materials presented in ZEIT1504 and ZEIT1501 (such as communication of engineering information including sketching and CAD, systems engineering principles, material choice and manufacturing considerations).

Course Learning Outcomes

Course Learning Outcomes	Engineers Australia - Professional Engineer (Stage 1)
CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition	• PEE1.2 : Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering 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
CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)	• PEE2.1 : Application of established engineering methods to complex engineering problem solving
CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system	• PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE2.3 : Application of systematic engineering synthesis and design processes
CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.	• PEE3.4 : Professional use and management of information • PEE3.5 : Orderly management of self, and professional conduct
CLO5 : Critically reflect on personal and group/ team performance, particularly in task management and teaming issues.	• PEE3.1 : Ethical conduct and professional accountability • PEE3.6 : Effective team membership and team leadership

Course Learning Outcomes	Assessment Item
CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition	• Conceptual Design Report • Reflection Report • System Design Review • Competition • Final Report • Log Book
CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)	• Conceptual Design Report • Reflection Report • System Design Review • Competition • Final Report • Log Book
CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system	• Electronics Laboratories • Conceptual Design Report • Reflection Report • System Design Review • Competition • Final Report • Log Book
CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.	• Conceptual Design Report • Reflection Report • System Design Review • Competition • Final Report • Log Book
CLO5 : Critically reflect on personal and group/team performance, particularly in task management and teaming issues.	• Reflection Report • System Design Review • Final Report • Log Book

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

Design is learnt through doing and the Warman design and build competition provides the core project-based learning experience for this 2nd year course. All students will participate in groups/teams of normally 4 students and engage in developing and communicating their design in a number of ways (formal reporting, oral discussion, prototype demonstration).

The group/team winning the local UNSW Canberra campus competition would normally go on to represent at the Warman Competition National Final in September/October. However, the

decision as to who goes forward to represent the class ultimately rests with the Course Coordinator following a class discussion and is based on selecting the team “most likely to succeed” at the National Final.

It is noted that students may not be armed with all the analytical skills and tools available to fully assess their designs as they enter 2nd year but the project through reflection provides a vehicle for understanding the importance of good planning and a systematic approach to design (mechanical and electronic) and the inherent decision making. System design in general involves solving an open problem with incomplete information and within constraints of time and available resources. The course aims to model this reality and engage students in it.

In subsequent courses, the mechanical and aero student streams diverge to address discipline based materials. While general aspects of design theory and methodology are presented in these courses, technical topics include aspects of component and machine design for mechanical students and aircraft design for the aeronautical students.

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

Additional Course Information

Referencing

In this course, students are required to reference following the APA 7 / Chicago NB referencing style. Information about referencing styles is available at: https://guides.lib.unsw.adfa.edu.au/c.php?g=472948&p=3246720

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

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Engineers Australia - Professional Engineer (Stage 1)
Conceptual Design Report Assessment Format: Group	10%	Start Date: 01/03/2024 12:00 AM Due Date: 12/03/2024 10:00 AM Post Date: 19/02/2024 12:00 AM	• PEE1.2 : Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline • PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.3 : Application of systematic engineering synthesis and design processes • PEE3.3 : Creative, innovative and pro-active demeanour
Reflection Report Assessment Format: Individual	10%	Start Date: 01/03/2024 12:00 AM Due Date: 12/03/2024 10:00 AM Post Date: 19/02/2024 12:00 AM	• PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain • PEE3.1 : Ethical conduct and professional accountability • PEE3.5 : Orderly management of self, and professional conduct • PEE3.6 : Effective team membership and team leadership
System Design Review Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Week 7: 22 April - 26 April Post Date: 19/02/2024 12:00 AM	• 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 • PEE3.6 : Effective team membership and team leadership
Electronics Laboratories Assessment Format: Individual	10%	Start Date: Not Applicable Due Date: Submitted in labs	• PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE2.2 : Fluent application of engineering techniques, tools and resources
Competition Assessment Format: Group	10%	Start Date: Not Applicable Due Date: Week 12: 27 May - 31 May Post Date: 19/02/2024 12:00 AM	• PEE3.5 : Orderly management of self, and professional conduct • PEE3.6 : Effective team membership and team leadership
Final Report Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: Interviews will be schedules in exam period Post Date: 19/02/2024 12:00 AM	• PEE1.2 : Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering 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 • PEE3.3 : Creative,

			innovative and pro-active demeanour • PEE3.6 : Effective team membership and team leadership
Log Book Assessment Format: Individual	10%	Start Date: Week 2 Due Date: Logbooks will be assessed weekly from the end of week 2	• PEE2.1 : Application of established engineering methods to complex engineering problem solving • PEE3.5 : Orderly management of self, and professional conduct • PEE2.2 : Fluent application of engineering techniques, tools and resources • PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain

Assessment Details

Conceptual Design Report

Assessment Overview

n/a

Course Learning Outcomes

- CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition
- CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)
- CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system
- CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.

Detailed Assessment Description

Please see assignment sheet in Moodle

Assessment Length

10 pages

Assessment information

Maps to Course Learning Outcomes:

LO1 Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition

LO2 Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)

LO3 Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system

LO4 Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.

Referencing

In this course, students are required to reference following the APA 7 referencing style. Information about referencing styles is available at: https://guides.lib.unsw.adfa.edu.au/c.php?g=472948&p=3246720

Group Assessment

All group members will receive the same grade.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Reflection Report

Assessment Overview

n/a

Course Learning Outcomes

- CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition
- CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)
- CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system
- CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.
- CLO5 : Critically reflect on personal and group/team performance, particularly in task management and teaming issues.

Detailed Assessment Description

Please see assignment sheet in Moodle

Assessment Length

No more than 2 pages

Assessment information

This maps to course learning outcomes:

LO1 Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition

LO2 Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)

LO3 Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system

LO4 Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.

LO5 Critically reflect on personal and group/team performance, particularly in task management

and teaming issues.

Referencing

In this course, students are required to reference following the APA 7 referencing style.

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

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

System Design Review

Assessment Overview

n/a

Course Learning Outcomes

- CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition
- CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)
- CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system
- CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.
- CLO5 : Critically reflect on personal and group/team performance, particularly in task management and teaming issues.

Detailed Assessment Description

Please see assignment sheet in Moodle

Assessment Length

12 minute presentation and questions

Assessment information

This maps to course learning outcomes:

LO1 Analyse, evaluate and create a hardware solution to an open engineering problem as posed

within the context of the Warman Design and Build Competition

LO2 Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)

LO3 Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system

LO4 Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.

LO5 Critically reflect on personal and group/team performance, particularly in task management and teaming issues.

Referencing

In this course, students are required to reference following the APA 7 referencing style. Information about referencing styles is available at: https://guides.lib.unsw.adfa.edu.au/c.php?g=472948&p=3246720

Assignment submission Turnitin type

This is not a Turnitin assignment

Electronics Laboratories

Assessment Overview

n/a

Course Learning Outcomes

- CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system

Detailed Assessment Description

Please see laboratory sheet in Moodle

Assessment Length

NA

Submission notes

Submitted during lab sessions

Assessment information

This assessment maps to course learning outcome

LO3 Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic systemLO3 Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system

Referencing

In this course, students are required to reference following the APA 7 referencing style. Information about referencing styles is available at: https://guides.lib.unsw.adfa.edu.au/c.php?g=472948&p=3246720

Assignment submission Turnitin type

This is not a Turnitin assignment

Competition

Assessment Overview

n/a

Course Learning Outcomes

- CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition
- CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)
- CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system
- CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.

Detailed Assessment Description

Please see assignment sheet in Moodle

Assessment Length

NA

Assessment information

This assessment mapps against learning outcomes:

LO1 Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition

LO2 Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)

LO3 Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system

LO4 Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.

Referencing

In this course, students are required to reference following the APA 7 referencing style. Information about referencing styles is available at: https://guides.lib.unsw.adfa.edu.au/c.php?g=472948&p=3246720

Group Assessment

All group members will receive the same grade.

Assignment submission Turnitin type

Not Applicable

Final Report

Assessment Overview

n/a

Course Learning Outcomes

- CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition
- CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)
- CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system
- CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.
- CLO5 : Critically reflect on personal and group/team performance, particularly in task management and teaming issues.

Detailed Assessment Description

Please see assignment sheet in Moodle

Assessment Length

15 pages + appendicies

Assessment information

This assessment mapps against learning outcomes:

LO1 Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition

LO2 Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)

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management and teaming issues.

Referencing

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Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Log Book

Assessment Overview

n/a

Course Learning Outcomes

- CLO1 : Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition
- CLO2 : Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)
- CLO3 : Apply an understanding of the basic principles of mechanical, electrical and electronic technology through developing a mechatronic system
- CLO4 : Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.
- CLO5 : Critically reflect on personal and group/team performance, particularly in task management and teaming issues.

Detailed Assessment Description

Please see assignment sheet in Moodle

Assessment Length

NA

Submission notes

Logbooks will be assessed weekly and the best 10 out of the 12 marks will apply

Assessment information

This assessment mapps against learning outcomes:

LO1 Analyse, evaluate and create a hardware solution to an open engineering problem as posed within the context of the Warman Design and Build Competition

LO2 Apply an understanding of the basic context and theory of design as a process involving art and science. This should include applying analytical and decision making skills using current yet incomplete knowledge (eg., applying basic calculations and reasoning, for performance estimating and trade-off studies)

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LO4 Communicate verbally and through documents appropriate design information using words, mathematics and drawings and the language of the discipline. This will be demonstrated specifically through the development of a design portfolio and progress reports.

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Referencing

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Assignment submission Turnitin type

This is not a Turnitin assignment

General Assessment Information

Individual feedback by week 4

Labs will run in week 2, 3 and 4 with grades provided in the lab and solutions at the end of the week. The the Conceptual Design and Reflection reports due in week 3 will be assessed with grades and feedback by the end of week 4. Logbook feedback will be provided weekly from week 2.

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

You can use generative AI software in this assessment to the extent specified in the assessment instructions. Any output of generative software within your assessment must be attributed with full referencing.

If the outputs of generative AI such as ChatGPT form part of your submission and is not appropriately attributed, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

* To cite: OpenAI (Year Accessed). ChatGPT. OpenAI. https://openai.com/models/chatgpt/

* Please note that the outputs from these tools are not always accurate, appropriate, nor properly referenced. You should ensure that you have moderated and critically evaluated the outputs from generative AI tools such as ChatGPT before submission.

Grading Basis

Standard

Requirements to pass course

Achieve a composite mark of at least 50 out of 100.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 26 February - 1 March	Lecture	Course Intro and Systems Engineering (Doolan) This lecture will introduce topics that will be covered and discuss how the course will run. This will be followed by a short recap on System Engineering.
	Laboratory	Group Formation and Warman Intro (Doolan)
Week 2 : 4 March - 8 March	Lecture	Systems Engineering (Doolan) This lecture will cover the System Engineering information that you will be expected to apply to this course.
	Laboratory	First Electronics Lab (Tahtali) This lab will provide a short introduction to the electronics components and includes a short assessment at the end of the lab.
Week 3 : 11 March - 15 March	Laboratory	2nd Electronics Lab (Tahtali) This lab will work with the kits from week one, building on the previous knowledge, and again have a short assessment item.
	Assessment	Conceptual Design Report The conceptual design report is the first assessment for the assignment. This is a group report.
	Assessment	Reflection Report Each student will need to submit a reflection report to accompany the Conceptual Design Report.
Week 4 : 18 March - 22 March	Lecture	Design (Doolan) This lecture will introduce some different design concepts and principles inclyuding estimation and approximation.
	Laboratory	3rd Electronics Lab (Tahtali)
Week 5 : 25 March - 29 March	Lecture	Design Lecture 2 (Doolan) This lecture will cover more detailed design concepts such as degrees of freedom, points of failure and design for X.
	Laboratory	4th Electronics Lab (Tahtali) This is the final electronics lab but please note that due to Good Friday on the 29th of March, students in the Friday lab will complete this lab in week 6 (5th of April).
Week 6 : 1 April - 5 April	Laboratory	4th Electronics lab for Friday class (Tahtali)
Week 7 : 22 April - 26 April	Assessment	System Design Review The system design review will be scheduled closer to the allocated time.
	Workshop	All groups are expected to be in the workshops building their robots.
Week 8 : 29 April - 3 May	Workshop	All groups are expected to be in the workshops building their robots.
Week 9 : 6 May - 10 May	Workshop	All groups are expected to be in the workshops building their robots.
Week 10 : 13 May - 17 May	Workshop	All groups are expected to be in the workshops building their robots.
Week 11 : 20 May - 24 May	Workshop	All groups are expected to be in the workshops building their robots.
Week 12 : 27 May - 31 May	Assessment	Competition All teams must attend the competition with their robots.
Week 13 : 3 June - 7 June	Assessment	Final Report and Jury Teams will each submit a final report and there will be individual interviews with each team member to be scheduled during exam period.
	Assessment	Logbook Each student will be required to submit their logbook.

Attendance Requirements

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

General Schedule Information

The first half of the semester students will be delivered the material to guide their design. During

the second half of the semester students will apply this knowledge to build their device and compete in the Warman competition.

Due to military training and public holidays the following classes will be missed:

1. 11th March lecture
2. 29th March Laboratory
3. 1st April Lecture
4. 24th and 25th April Workshop
5. 10th May Workshop

Course Resources

Prescribed Resources

All students should have access to a 3DExpereince licence. This licence will allow you to install this software on your personal computer and 3dExperience is available in selected computer labs within the School.

If you do not have a licence for 3Dexperience please email the course convenor.

Recommended Resources

Standards Australia, Australian Engineering Drawing Handbook SAA HB7 – 1993

Faulconbridge, R., Systems Engineering Practice

Culley, R, Fitting & Machining

(Some of these texts were prescribed texts for ZEIT 1504 and 1501 and will also be used in other subsequent design stream courses.)

Additional Costs

Specific materials and components for the build are to be generally sourced and funded by each student group/team. Direct funding from the School will not be provided. However, some electrical / electronic items will be available from a SEIT loan pool (e.g., microcontroller boards, motors). Free access to select sheet and “scrap / offcut” materials will also be available in the student workshop as will a variety of fasteners from the SEIT Mechanical workshop (contents of Cabinet 14 (wood screws, grub screws, roll pins etc.) and Cabinet 17 (M2-M10 nuts and bolts)).

Tools will be available in the student workshop areas in accordance with the School policies and procedures.

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	Matthew Doolan		R209 Building 17	5114 5176	Usually available during working hours but please contact prior to avoid disappointment	Yes	Yes
Lecturer	Murat Tahtali		R204 Building 17	5114 5210	Usually available for consultation during normal working hours. Please phone or email to make an appointment.	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 Equitible 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 Plagarism

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)

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.