UNSW Course Outline

# ZEIT3804 Aviation Science Project - 2024

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## General Course Information

**Course Code :** ZEIT3804
**Year :** 2024
**Term :** Semester 2
**Teaching Period :** Z2
**Is a multi-term course? :** No
**Faculty :** UNSW Canberra
**Academic Unit :** UC Science
**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 is the “capstone” thesis course in aviation. It consolidates findings and the skills developed and refined throughout the program. It affords the opportunity to take these skills and knowledge from other courses in the program and forge a valuable contribution by research to

the discipline. You will take significant ownership of a minor body of research, your aviation science project. To facilitate this you will learn about relevant research methodologies, how to plan a research project, how to conduct a critical review of relevant published material, and how to write and present research findings. Through your aviation science project, you should gather suitable data for analysis to a suitable standard, and present your findings to your peers, academic supervisors, and industry representatives when possible.

## Course Aims

The course is intended to give an opportunity to the students to do independent research on a topic of interest in aviation to enhance the research, technical writing and communication aspects. The course aims to introduce students to empirical aviation research. Aviation research encompasses a wide range of disciplines (human factors, ergonomics, economics, management, psychology, technology, sustainability, to name a few).

## Relationship to Other Courses

This course is the “capstone” thesis course in aviation. It consolidates findings and the skills developed and refined throughout the program.

## Course Learning Outcomes

| Course Learning Outcomes |
| --- |
| CLO1 : Describe key requirements of research, methodologies, and data analysis |
| CLO2 : Execute an independent research project at a possessional level using the skills gained in this course |
| CLO3 : Analyse the relevant scientific literature applicable to an independent research project |
| CLO4 : Synthesise research objectives and findings into an original work to be communicated to a professional audience |

| Course Learning Outcomes | Assessment Item |
| --- | --- |
| CLO1 : Describe key requirements of research, methodologies, and data analysis | |
| CLO2 : Execute an independent research project at a possessional level using the skills gained in this course | |
| CLO3 : Analyse the relevant scientific literature applicable to an independent research project | |
| CLO4 : Synthesise research objectives and findings into an original work to be communicated to a professional audience | |

# Learning and Teaching Technologies

Moodle - Learning Management System

# Learning and Teaching in this course

This course aims to provide a variety of reference material to enable students to develop an understanding of scientific research. Because this course will be the first research project undertaken by most aviation students, the first six weeks of the course introduces objective scientific research, such that students will understand exactly “what research is”; this introduction will also cover the common research methodologies utilised in aviation science and technology and how to collect and analyse data. Assessments for the first six weeks focus on cementing this new knowledge, which will then be extensively utilised in the remainder of the course.

Following the six week introduction, students will work almost exclusively by themselves, with guidance from the course coordinator, and other potential academic and industry based supervisors. Student will also be encouraged to join teams based on the core methodological themes for aviation research, such that peer support and discussion is available to help students with their individual project.

# Additional Course Information

**Program Learning Outcomes**

*This course contributes to the following Program Learning Outcomes of the Bachelor of Science:*

*PLO1. Demonstrate a broad and deep theoretical and technical knowledge of their scientific disciplines.*

*PLO2. Demonstrate the technical skills required by their discipline including problem solving, field work, and experimental laboratory work.*

*PLO3. Be able to create new concepts and understanding through the process of scientific inquiry, critical analysis, problem solving, and research.*

*PLO9. Make appropriate and effective use of information and information technology relevant to their discipline.*

*PLO10. Effectively communicate scientific concepts and results to broad and diverse audiences*

# Assessments

## Assessment Structure

| Assessment Item | Weight | Relevant Dates |
|---|---|---|
| Final Paper<br>Assessment Format: Individual | 30% | Start Date: Not Applicable<br>Due Date: 02/11/2024 12:01 AM |
| Presentations<br>Assessment Format: Individual | 20% | Start Date: Not Applicable<br>Due Date: Not Applicable |
| Weekly Progress<br>Assessment Format: Individual | 20% | Start Date: Not Applicable<br>Due Date: Not Applicable |
| In-class Activities<br>Assessment Format: Individual | 30% | Start Date: Not Applicable<br>Due Date: Not Applicable |

## Assessment Details

### Final Paper

#### Assessment Overview

You will draft a professional academic journal article summarising the research, including the research question and answer, the extensive literature review, methodology, and data analysis, including data presentation.

#### Detailed Assessment Description

Draft a professional academic journal article summarising the research, including the research question and answer, the extensive literature review, methodology, and data analysis, including data presentation. The journal article will be approximately 10,000 words, plus or minus 20%. A journal article template will be provided for use, along with detailed instructions of sections and material to be included.

#### Assessment Length

10000 words

#### Submission notes

Typed, using the template.

#### Assessment information

All additional information, including the template, will be provided through Moodle.

**Assignment submission Turnitin type**

This is not a Turnitin assignment

## Presentations

**Assessment Overview**

You will be required to give two in class presentations. The first covers a research proposal, which is to ensure you have understood what is required of you to complete your minor research project, and specifically that you understand the difference between reporting and research. The second is a final presentation where you will present your research findings at the completion of your research project.

**Detailed Assessment Description**

The in-class presentations in this course will utilise peer review and peer assessment.

Proposal:

To ensure you have understood what is required of you to complete your minor research project, and specifically that you understand the difference between reporting and research, it is essential that a clear proposal of your research project is submitted. As part of this you will be expected to demonstrate an understanding of what data you will use, how you will gather the data, and how you will analyse the data, based on the methodology selected which is most appropriate to your chosen topic. This will be an oral presentation with approximately 5 PowerPoint slides. The presentation will be made to the class as an in-class activity in week 7.

Final Presentation:

The final oral presentation will be a poster conference, where work will be presented as a single page (up to A1 in size), where examiners can talk to students individually and ask critical questions after the student has spoken about their work for a couple of minutes, using the poster as a visual reference to key information.

**Assessment Length**

10 minutes

**Submission notes**

PowerPoint

Assessment information

Additional information available through Moodle.

Assignment submission Turnitin type

Not Applicable

## Weekly Progress

Assessment Overview

To ensure you are on track to complete your major research project in the allotted 12 weeks, it is essential that your progress be reported and tracked. As such you will be expected to provide a detailed summary of the tasks completed in the previous week, outlining critical aspects of the proposal and final paper along the way, as well as details of literature searches and reviews.

Detailed Assessment Description

To ensure you are on track to complete your major research project in the allotted 12 weeks, it is essential that your progress be reported and tracked. As such you will be expected to provide a detailed summary of the tasks completed in the previous week, outlining critical aspects of the proposal and final paper along the way, as well as details of literature searches and reviews.

The details of the exact submission requirements are provided in each weekly discussion forum. Additional, literature requirements in terms of the number of new scholarly references found and existing sources reviewed are described in the weekly discussion forum.

These items will be marked first thing on Monday morning, following the submission. This will ensure suitable time to take feedback and make improvements.

Assessment Length

Varies

Submission notes

Post in Weekly Forum

Assessment information

All details for each weekly submission will be provided in each forum in Moodle.

Assignment submission Turnitin type

Not Applicable

## In-class Activities

**Assessment Overview**

This assessment will cover the course work for the first six weeks of the course. Each weekly lecture will have an associated quiz to ensure you have understood the key learning outcomes of that week. Each laboratory/practical session will have a corresponding worksheet to be submitted demonstrating the completion of the activities.

**Detailed Assessment Description**

This assessment will cover the course work for the first six weeks of the course. Each weekly lecture will have an associated quiz to ensure you have understood the key learning outcomes of that week (each worth 2%). Each laboratory/practical session will have a corresponding worksheet to be submitted demonstrating the completion of the activities (each worth 3%). This assessment item will provide weekly feedback and will represent the “early assessment” requirement, with 20% of the 30% total being covered in the first 4 weeks, prior to the Census date.

**Assessment Length**

Varies

**Submission notes**

As noted

**Assessment information**

All worksheets for the lab/prac activities will be available through Moodle.

**Assignment submission Turnitin type**

Not Applicable

# General Assessment Information

**Marks:**

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.**

**Early Assessments:**

By week 4, students will have marks and feedback for the first research forum, 3 of the in class

quizzes, and the first lab activity.

**Generative AI:**

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 : 15 July - 19 July | Module | Ch 1 and 2 |
| Week 2 : 22 July - 26 July | Module | Ch 3 and 4 |
| Week 3 : 29 July - 2 August | Module | Ch 5 and 13 |
| Week 4 : 5 August - 9 August | Module | Ch 6 and 7 |
| Week 5 : 12 August - 16 August | Other | Lost |
| Week 6 : 19 August - 23 August | Module | Ch 9 and 10 |
| Week 7 : 9 September - 13 September | Module | Ch 8, 11, and 12 |
| Week 8 : 16 September - 20 September | Assessment | Proposal Presentations |
| Week 9 : 23 September - 27 September | Project | Work on individual project. |
| Week 10 : 30 September - 4 October | Project | Work on individual project. |
| Week 11 : 7 October - 11 October | Project | Work on individual project. |
| Week 12 : 14 October - 18 October | Project | Work on individual project. |
| Week 13 : 21 October - 25 October | Assessment | Final Presentation |

## Attendance Requirements

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

## General Schedule Information

Each week for the first 6 weeks will contain a module that covers two or three chapters from the text book. The topic content will be covered in the lecture, which will be summaried with tutorial questions for student reflection and self assessment.

Tuesday of Wk 5 is lost.

# Course Resources

## Prescribed Resources

*Practical Research: Planning and Design, Global Edition, 11th Edition*, by Paul D. Leedy, Jeanne Ellis Ormrod (2015), from Pearson, ISBN 9781292095875.

## Recommended Resources

None.

## Additional Costs

None.

## 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 | Graham Wild | | B26 Rm119 | 0251145221 | email | No | Yes |