



## UNSW Course Outline

# AVIA3710 Aviation Research Methods - 2024

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## General Course Information

Course Code : AVIA3710

Year : 2024

Term : Term 1

Teaching Period : T1

Is a multi-term course? : No

Faculty : Faculty of Science

Academic Unit : School of Aviation

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 6

### Useful Links

[Handbook Class Timetable](#)

## Course Details & Outcomes

### Course Description

Basic research skills are important to the aviation industry. The course coaches students through a basic research and report writing process in the context of aviation. Each student undertakes a structured, supervised research project on an aviation safety issue, with specific

reference to human, organisational and technical factors.

## Course Aims

The aim of this course is to provide students with an understanding of the fundamentals of good ethical research within the aviation industry. These include the critical appraisal of research literature, development of a research project and report writing skills. In addition, students will be given the opportunity to develop an advanced understanding of their chosen aviation research issue.

## Course Learning Outcomes

Course Learning Outcomes
CL01 : Demonstrate an understanding of the research process as applied to aviation
CL02 : Display an advanced understanding of a specific aviation issue.
CL03 : Critically evaluate reports of research.
CL04 : Describe the main principles of research ethics.
CL05 : Develop a research proposal on a specific aviation issue.

Course Learning Outcomes	Assessment Item
CL01 : Demonstrate an understanding of the research process as applied to aviation	<ul style="list-style-type: none"><li>• Research Question</li><li>• Mid-term test</li><li>• Research proposal</li></ul>
CL02 : Display an advanced understanding of a specific aviation issue.	<ul style="list-style-type: none"><li>• Research Question</li><li>• Mid-term test</li><li>• Research proposal</li></ul>
CL03 : Critically evaluate reports of research.	<ul style="list-style-type: none"><li>• Research Question</li><li>• Research proposal</li></ul>
CL04 : Describe the main principles of research ethics.	<ul style="list-style-type: none"><li>• Research proposal</li></ul>
CL05 : Develop a research proposal on a specific aviation issue.	<ul style="list-style-type: none"><li>• Research proposal</li></ul>

## Learning and Teaching Technologies

Moodle - Learning Management System

# Assessments

## Assessment Structure

Assessment Item	Weight	Relevant Dates
Research Question Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: 15/03/2024 04:59 PM
Mid-term test Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: 02/04/2024 02:00 PM
Research proposal Assessment Format: Individual	50%	Due Date: 19/04/2024 04:59 PM

## Assessment Details

### Research Question

#### Assessment Overview

You are required to write a brief description of your identified research problem and specific research question. This should be no longer than one page (at least 1.5 spaced, 12 point font). The description should include an argument for the research problem, a statement of the research question, and a brief plan on how to address it.

You will receive individual written feedback within 10 working days after the submission date. General feedback about the assessment will also be discussed in the following week's tutorial.

#### Course Learning Outcomes

- CL01 : Demonstrate an understanding of the research process as applied to aviation
- CL02 : Display an advanced understanding of a specific aviation issue.
- CL03 : Critically evaluate reports of research.

#### Detailed Assessment Description

You are required to write a brief description of your identified research problem and specific research question. This should be no longer than one page (at least 1.5 spaced, 12 point font). The description should include an argument for the research problem, a statement of the research question, and a brief plan on how to address it.

You will receive individual written feedback within 10 working days after the submission date. General feedback about the assessment will also be discussed in the following week's tutorial.

#### Assessment Length

One page

### Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

## **Mid-term test**

### Assessment Overview

You will be required to complete an in-class mid-term test held in week 8. It is a closed-book test comprised of multiple-choice questions that cover the topics taught throughout the first 7 weeks of the term. You will be given 30 minutes to complete the test. You will receive your mid-term test mark within 10 working days after the test is complete, and you will have the opportunity to discuss the feedback during the course convenor's consultation hours. The test and its suggested solutions will also be discussed in the following week's tutorial.

### Course Learning Outcomes

- CL01 : Demonstrate an understanding of the research process as applied to aviation
- CL02 : Display an advanced understanding of a specific aviation issue.

### Detailed Assessment Description

You will be required to complete an in-class mid-term test held in week 8. It is a closed-book test comprised of multiple-choice questions that cover the topics taught throughout the first 7 weeks of the term. You will be given 30 minutes to complete the test. You will receive your mid-term test mark within 10 working days after the test is complete, and you will have the opportunity to discuss the feedback during the course convenor's consultation hours. The test and its suggested solutions will also be discussed in the following week's tutorial.

### Assessment Length

30 minutes

### Assignment submission Turnitin type

Not Applicable

## **Research proposal**

### Assessment Overview

For the research proposal, which is the major assessment of this course, you will be required to write a formal research proposal of no longer than 2,000 words not including references.

*Literature Review: Critically review at least 5 journal articles relevant to the identified research*

problem and present an argument that justifies the research question. This section should end with a statement of your research aim and objective(s)

***Proposed Methods and analysis:*** Describe the research methods you will undertake to answer your research question. This section should include information on the study design, participants, equipment or data, procedure to be used to conduct the study and data analysis plan.

***Expected results and interpretation of findings:*** Provide a short description of how you will interpret your findings depending on what your results show and the potential impact of your findings on this area of research

***References:*** List here all of the journal articles you used for your literature review, and any other literature you cite in the Proposal. These should be well-considered, relevant and reputable.

As this is the last assessment, students only receive an overall mark at the end of the course; no individual feedback will be provided.

#### **Course Learning Outcomes**

- CL01 : Demonstrate an understanding of the research process as applied to aviation
- CL02 : Display an advanced understanding of a specific aviation issue.
- CL03 : Critically evaluate reports of research.
- CL04 : Describe the main principles of research ethics.
- CL05 : Develop a research proposal on a specific aviation issue.

#### **Detailed Assessment Description**

For the research proposal, which is the major assessment of this course, you will be required to write a formal research proposal of no longer than 2,000 words not including references.

***Literature Review:*** Critically review at least 5 journal articles relevant to the identified research problem and present an argument that justifies the research question. This section should end with a statement of your research aim and objective(s)

***Proposed Methods and analysis:*** Describe the research methods you will undertake to answer your research question. This section should include information on the study design, participants, equipment or data, procedure to be used to conduct the study and data analysis plan.

***Expected results and interpretation of findings:*** Provide a short description of how you will interpret your findings depending on what your results show and the potential impact of your

findings on this area of research

**References:** List here all of the journal articles you used for your literature review, and any other literature you cite in the Proposal. These should be well-considered, relevant and reputable.

As this is the last assessment, students only receive an overall mark at the end of the course; no individual feedback will be provided.

#### Assessment Length

2000 words

#### Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

## General Assessment Information

### UNSW Aviation's decision for Short Extension Policy

The School of Aviation has carefully reviewed its range of assignments and projects to determine their suitability for automatic short extensions as set out by the UNSW Short Extension Policy. After careful consideration of our course offerings and our current structure, we have determined that our current deadline structures already accommodate the possibility of unexpected circumstances that may lead students to require additional days for submission.

**Consequently, the School of Aviation has decided to not adopt the Short Extension provision for all its courses and has reassured that flexibility is integrated into our assessment deadlines.** The decision is subject to revision in response to the introduction of new course offerings. Students may still apply for Special Consideration via the usual procedures.

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UNSW grading system: <https://student.unsw.edu.au/grades>

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

#### Grading Basis

Standard

#### Requirements to pass course

Students must achieve a composite mark of 50 out of 100 to pass the course.

# Course Schedule

| Teaching Week/Module               | Activity Type  | Content                                                                 |
|------------------------------------|----------------|-------------------------------------------------------------------------|
| Week 1 : 12 February - 18 February | Lecture        | Introduction to the research process                                    |
|                                    | Group Activity | Group work about the basics of the research process                     |
| Week 2 : 19 February - 25 February | Lecture        | Demonstrate an advanced understanding of a specific aviation issue.     |
|                                    | Other          | Individual work on literature searching using relevant search engines.  |
| Week 3 : 26 February - 3 March     | Lecture        | Formulating a research Issue/question/hypothesis                        |
|                                    | Group Activity | Identifying components of a research study through in class exercises.  |
| Week 4 : 4 March - 10 March        | Lecture        | Developing a research design.                                           |
|                                    | Group Activity | Group work on advantages and limitations of various research designs    |
| Week 5 : 11 March - 17 March       | Lecture        | Data collection: methods of collecting information                      |
|                                    | Other          | Individual activity on the design of an instrument for data collection. |
| Week 6 : 18 March - 24 March       | Other          | Flexi Week                                                              |
| Week 7 : 25 March - 31 March       | Lecture        | Data collection: selecting a sample                                     |
|                                    | Other          | Individual activity on sampling methods                                 |
| Week 8 : 1 April - 7 April         | Lecture        | Processing, analysing and displaying data                               |
|                                    | Other          | Individual exercises on displaying and analysing data                   |
|                                    | Other          | Mid-term test                                                           |
| Week 9 : 8 April - 14 April        | Lecture        | Research Ethics                                                         |
|                                    | Group Activity | Group exercises and discussions on ethical issues in research           |
| Week 10 : 15 April - 21 April      | Lecture        | Writing/publishing a research report                                    |
|                                    | Other          | Q&A session: Research case studies presented by aviation academics.     |

## Attendance Requirements

Please note that lecture recordings are not available for this course. Students are strongly encouraged to attend all classes and contact the Course Authority to make alternative arrangements for classes missed.

## General Schedule Information

### UNSW Aviation's decision to not release Lecture Recordings:

The School of Aviation prides itself on offering education that supports students in their personalised learning journey. This involves providing opportunities for students to engage with academics and key aviation experts to identify and address learning gaps, develop core skills and knowledge, and foster an environment of collaboration and meaningful discussion with the UNSW Aviation community. To support this vision, UNSW Aviation has decided to require students to attend all synchronous lectures (in-person or online) and not release class recordings to the student cohort. If students cannot attend a class and require learning support due to unforeseen circumstances, they should contact their Course Coordinator or Program Coordinator to discuss options for support and making up for missed class time.

# Course Resources

## Prescribed Resources

### Required Text:

Kumar, R. (2019). Research Methodology: A Step-by-Step Guide for Beginners (6th Edition).  
London: SAGE Publications Ltd

### Required Readings:

Other required readings will be provided via Moodle

## Recommended Resources

### Recommended Internet Sites

[www.atsb.gov.au](http://www.atsb.gov.au) Australian Transport Safety Bureau (ATSB)

[www.casa.gov.au](http://www.casa.gov.au) Civil Aviation Safety Authority (CASA)

[www.arc.nasa.gov](http://www.arc.nasa.gov) National Aeronautics and Space Administration (NASA)

[www.faa.gov](http://www.faa.gov) Federal Aviation Authority (FAA)

[www.nts.gov](http://www.nts.gov) National Transportation Safety Board (NTSB)

[www.icao.int](http://www.icao.int) International Civil Aviation Organization (ICAO)

[www.aaib.gov.uk](http://www.aaib.gov.uk) Air Accidents Investigations Branch (AAIB)

## Course Evaluation and Development

The myExperience Survey is designed to collect student feedback which creates a culture of continuous improvement by identifying, responding to, and acting on student feedback.

The course survey will open towards the end of Term. Students are encouraged to participate in the survey via Moodle, myUNSW, or through the direct myExperience link.

Please provide constructive feedback and focus on your learning experience in relation to the course material. While the survey is confidential, it is not anonymous. Comments that breach the Student Code of Conduct, that are hurtful, racist, sexist or ill natured, may lead to disciplinary

action.

Informal student feedback on all aspects is welcome anytime!

# Staff Details

| Position | Name             | Email | Location                                            | Phone         | Availability                       | Equitable Learning Services Contact | Primary Contact |
|----------|------------------|-------|-----------------------------------------------------|---------------|------------------------------------|-------------------------------------|-----------------|
| Convenor | Soufiane Boufous |       | Room 215, Old Main Building, UNSW Kensington Campus | +6140595 6430 | Tuesdays after tutorials (4-5 PM). | No                                  | Yes             |

# Other Useful Information

## Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University’s conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University’s reputation and good standing.

For more information, visit the [UNSW Student Code of Conduct Website](#).

## Academic Honesty and Plagiarism

**Referencing** is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

**Academic integrity** is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect,

responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The [Current Students site](#),
- The [ELISE training site](#), and
- The [Use of AI for assessments](#) site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>

## Submission of Assessment Tasks

### Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

***Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.***

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

### Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: <https://student.unsw.edu.au/special-consideration>

**Important note:** UNSW has a “fit to sit/submit” rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

## Faculty-specific Information

### Additional support for students

- [The Current Students Gateway](#)
- [Student Support](#)
- [Academic Skills and Support](#)
- [Student Wellbeing, Health and Safety](#)
- [Equitable Learning Services](#)
- [UNSW IT Service Centre](#)
- Science EDI Student [Initiatives](#), [Offerings](#) and [Guidelines](#)

### School Contact Information

#### Email:

aviation@unsw.edu.au

#### Telephone:

Undergraduate Courses - +61 2 9385 5756 (Katie Wang)

Postgraduate Courses - +61 2 9385 5787 (Michelle Lee)