



## UNSW Course Outline

# AVIA2011 Advanced Human Factors - 2024

Published on the 03 Sep 2024

## General Course Information

Course Code : AVIA2011

Year : 2024

Term : Term 3

Teaching Period : T3

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

This course will provide students a detailed understanding about 'why individuals behave the way that they do', from a safety perspective. This will be achieved by providing students with an advanced-level of understanding of current theories, and key conceptual and applied models

relating to human performance and decision-making. This information will be used in a variety of applied settings (i.e., aviation, road, maritime, and research laboratories) to understand the safety implications of human behaviour, and importantly methods to prevent and or reduce the implications of unsafe acts.

## **Course Aims**

This course aims to provide students with advanced-level understanding about human behaviour in relations to safety practices. Students will learn about how they perceive, attend, and store information they are exposed to, and how this information is used to formulate decision that impact their wellbeing and safety. The outcomes of these decisions will be examined from an operational perspective, focusing on intentional and unintentional actions and outcomes. The role of performance moderators will be examined, as well as the design of systems and processes to reduce their impact on safety.

# Course Learning Outcomes

Course Learning Outcomes
CL01 : Understand how individuals process information and formulate decisions, including associated theories
CL02 : Understand the cognitive processes that lead to unsafe acts, including the impact of moderating factors
CL03 : Classify human performance based on various applied taxonomies
CL04 : Assess the viability and utility of methods to reduce unsafe acts
CL05 : Apply and demonstrate advanced learning, writing and communication skills consistent with graduate attributes

Course Learning Outcomes	Assessment Item
CL01 : Understand how individuals process information and formulate decisions, including associated theories	<ul style="list-style-type: none"><li>• Multiple Choice Quiz</li><li>• Human Factors Essay</li><li>• Human Performance Group Presentation</li><li>• Final Examination</li></ul>
CL02 : Understand the cognitive processes that lead to unsafe acts, including the impact of moderating factors	<ul style="list-style-type: none"><li>• Multiple Choice Quiz</li><li>• Human Factors Essay</li><li>• Human Performance Group Presentation</li><li>• Final Examination</li></ul>
CL03 : Classify human performance based on various applied taxonomies	<ul style="list-style-type: none"><li>• Multiple Choice Quiz</li><li>• Final Examination</li></ul>
CL04 : Assess the viability and utility of methods to reduce unsafe acts	<ul style="list-style-type: none"><li>• Human Factors Essay</li><li>• Human Performance Group Presentation</li><li>• Final Examination</li></ul>
CL05 : Apply and demonstrate advanced learning, writing and communication skills consistent with graduate attributes	<ul style="list-style-type: none"><li>• Human Factors Essay</li><li>• Human Performance Group Presentation</li><li>• Final Examination</li></ul>

## Learning and Teaching Technologies

Moodle - Learning Management System

# Assessments

## Assessment Structure

Assessment Item	Weight	Relevant Dates
Multiple Choice Quiz Assessment Format: Individual	0%	Start Date: Not Applicable Due Date: Not Applicable
Human Factors Essay Assessment Format: Individual	30%	Start Date: 17/09/2024 Due Date: 08/10/2024 10:00 AM
Human Performance Group Presentation Assessment Format: Group	20%	Start Date: 08/10/2024 Due Date: 05/11/2024 12:00 PM
Final Examination Assessment Format: Individual	50%	Start Date: UNSW Exam Period Due Date: UNSW Exam Period

## Assessment Details

### Multiple Choice Quiz

#### Assessment Overview

The multiple choice quiz is formative and will comprise of multiple choice questions, focusing on course content presented in Weeks 1 - 3 (inclusive). The quiz will be conducted in class during the Week 4 tutorial. Answers will be provided immediately after completion of the online quiz. Although this quiz is formative and does not contribute to your grade, it is expected that you will attempt it with serious intent. The assessment is designed to help you determine your understanding of early course material and areas for improvement.

#### Course Learning Outcomes

- CL01 : Understand how individuals process information and formulate decisions, including associated theories
- CL02 : Understand the cognitive processes that lead to unsafe acts, including the impact of moderating factors
- CL03 : Classify human performance based on various applied taxonomies

#### Assignment submission Turnitin type

This is not a Turnitin assignment

#### Generative AI Permission Level

##### No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see [here](#).

## Human Factors Essay

### Assessment Overview

You are required to write a maximum 2,500 word essay on a Human Factors (HF) issue with reference to appropriate scholarly literature and submit your assessment in Week 5. It is expected that you will consider and discuss HF from both a cognitive and social psychology perspective, and consider the application of both perspectives in the context of aviation safety. Details will be provided in Week 2. Feedback will be provided within 10 working days of the submission deadline.

### Course Learning Outcomes

- CL01 : Understand how individuals process information and formulate decisions, including associated theories
- CL02 : Understand the cognitive processes that lead to unsafe acts, including the impact of moderating factors
- CL04 : Assess the viability and utility of methods to reduce unsafe acts
- CL05 : Apply and demonstrate advanced learning, writing and communication skills consistent with graduate attributes

### Assessment Length

2,500 words

### Assignment submission Turnitin type

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

### Generative AI Permission Level

#### Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.

If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see [here](#).

# Human Performance Group Presentation

## Assessment Overview

In groups of four to five students (maximum), you will be required to collaborate and prepare a short video regarding one advanced Human Factors issue covered in this course. The video should focus on clearly explaining the issue, providing examples of the issue in application, and focusing on methods to reduce or control the impact of the issue affecting safety. The video will be presented by your group in Week 9 during class, followed by a Q&A session. Details of the assignment including group allocation will be provided in Week 5. Written feedback will be provided within 10 working days after the video presentation.

## Course Learning Outcomes

- CL01 : Understand how individuals process information and formulate decisions, including associated theories
- CL02 : Understand the cognitive processes that lead to unsafe acts, including the impact of moderating factors
- CL04 : Assess the viability and utility of methods to reduce unsafe acts
- CL05 : Apply and demonstrate advanced learning, writing and communication skills consistent with graduate attributes

## Assignment submission Turnitin type

This is not a Turnitin assignment

## Generative AI Permission Level

**Not Applicable**

Generative AI is not considered to be of assistance to you in completing this assessment. If you do use generative AI in completing this assessment, you should attribute its use.

For more information on Generative AI and permitted use please see [here](#).

## Final Examination

### Assessment Overview

You will be asked to complete a final examination comprised of essay questions, covering all content presented in the Advanced Human Factors course. This assessment item will occur during the final examination period in person and you will be provided with 2 hours to complete the examination. Feedback is available upon enquiry with the course convenor.

### Course Learning Outcomes

- CL01 : Understand how individuals process information and formulate decisions, including

associated theories

- CLO2 : Understand the cognitive processes that lead to unsafe acts, including the impact of moderating factors
- CLO3 : Classify human performance based on various applied taxonomies
- CLO4 : Assess the viability and utility of methods to reduce unsafe acts
- CLO5 : Apply and demonstrate advanced learning, writing and communication skills consistent with graduate attributes

#### Assessment Length

2 hours duration with 15 mins reading time

#### Generative AI Permission Level

##### **No Assistance**

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see [here](#).

## **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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**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. The preferred referencing style within this course is APA referencing.

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.<sup>1</sup> 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 and plagiarism can be located at:

- The Current Students site <https://student.unsw.edu.au/plagiarism>, and
- The ELISE training site <http://subjectguides.library.unsw.edu.au/elise/presenting>

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

### Grading Basis

Standard

## Course Schedule

| Teaching Week/Module                 | Activity Type | Content                                                                                                        |
|--------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------|
| Week 1 : 9 September - 15 September  | Blended       | Topic: Introduction to Human Factors<br>Tutorial: Introduction to Human Factors                                |
| Week 2 : 16 September - 22 September | Blended       | Topic: The Effects of Stressors on Performance<br>Tutorial: The Importance of Recognising Fatigue              |
| Week 3 : 23 September - 29 September | Blended       | Topic: Accidents Involving the PCM and DM<br>Tutorial: Group Think on Prevention Ideas                         |
| Week 4 : 30 September - 6 October    | Blended       | Topic: Automation in The Cockpit and Beyond<br>Tutorial: Essay Review                                          |
| Week 5 : 7 October - 13 October      | Assessment    | Topic: The Psychological Design of the Cabin<br>Tutorial: Group Project + Essays Due (30%)                     |
| Week 6 : 14 October - 20 October     | Other         | Flexibility week.                                                                                              |
| Week 7 : 21 October - 27 October     | Blended       | Topic: Errors and Training<br>Tutorial: Cabin Design                                                           |
| Week 8 : 28 October - 3 November     | Blended       | Topic: Social Psychology and Aviation<br>Tutorial: Motivation in Aviation                                      |
| Week 9 : 4 November - 10 November    | Blended       | Topic: Advanced Visual Perception, Illusions and Spatial Disorientation<br>Tutorial: Group Presentations (20%) |
| Week 10 : 11 November - 17 November  | Blended       | Topic: Communication<br>Tutorial: Recap of Course                                                              |

## 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**

Prescribed readings will be provided on a weekly basis.

## **Course Evaluation and Development**

UNSW Aviation highly values student feedback as a way to constantly improve course offerings, teaching excellence and the student experience. In AVIA2011, students are provided with opportunities, both informal feedback, via direct correspondence with the course convenor, face-to-face during lectures and tutorials; and formal feedback, via myExperience Surveys. The availability of this feedback 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.

# Staff Details

| Position | Name                | Email | Location | Phone | Availability                                                     | Equitable Learning Services Contact | Primary Contact |
|----------|---------------------|-------|----------|-------|------------------------------------------------------------------|-------------------------------------|-----------------|
| Lecturer | Belinda Din<br>nell |       |          |       | School of Aviation, 2nd Floor, Old<br>Main Building upon request | 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)