UNSW Course Outline

AVIA3111 Air Transport Flight Planning - 2024

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General Course Information

Course Code : AVIA3111
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 : Bankstown
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course introduces students to the aeronautical knowledge training required by the Civil Aviation Safety Regulations 1998 Part 61 Manual of Standards to achieve the competencies of Air Transport Flight Planning, specifically the Air Transport Pilot Flight Planning - Common and

Air Transport Pilot Flight Planning - Aeroplane units of competency. The course explores key concepts of air transport flight planning, with consideration of the various factors that contribute to effective flight planning, and the need to accurately extract and interpret performance data to inform key planning decisions. A combination of synchronous learning and discussion is used to teach key concepts, knowledge and skills, and homework and class quizzes are also provided to students to assess retention and understanding of their learning.

Course Aims

The aim of this course is to help students achieve the aeronautical knowledge requirements in relation to operations, performance and planning for the issue of an Australian Air Transport Pilot Licence. The course aims to support students to build skills in interpreting and extracting relevant data from the performance handbook, including the critically important fuel reserves policy. In addition, the course aims to provide a variety of opportunities for students to construct accurate and detailed flight plans considering normal and emergency operations. Through demonstrations by the instructor, students will be able to see how flight plans in various scenarios are constructed. Students are also given numerous opportunities during the course to practise and refine the skills learnt, to feel confident when constructing flight plans, and well-prepared to demonstrate these skills in their examination.

The standards achieved are to meet or exceed those laid down by the Civil Aviation Safety Authority as per the UNSW Operations Manual.

Relationship to Other Courses

Pre-requisite(s) AVIA 2111, AVIA2112, AVIA2113, AVIA2114,AVIA2115,AVIA2116 & AVIA2117.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Define and explain concepts used in planning flights in pressurised, multi-engine turbojet aeroplanes operating under Instrument Flight Rules.
CLO2 : Construct flight plans accounting for weight, payload and fuel limitations, route requirements, optimal altitude considerations, weather conditions and engine, pressurisation and other system failures.
CLO3 : Interpret and extract data from cruise, climb and descent planning tables and charts using the performance handbook.
CLO4 : Satisfy the theoretical knowledge requirements of the Civil Aviation Safety Regulations 1998 Part 61 Manual of Standards for the Air Transport Pilot Flight Planning - Common and Air Transport Pilot Flight Planning - Aeroplane units of competency.

Course Learning Outcomes	Assessment Item
CLO1 : Define and explain concepts used in planning flights in pressurised, multi-engine turbojet aeroplanes operating under Instrument Flight Rules.	• Comprehensive knowledge check • CASA Air transport pilot licence flight planning (aeroplane) exam (CASA AFPA)
CLO2 : Construct flight plans accounting for weight, payload and fuel limitations, route requirements, optimal altitude considerations, weather conditions and engine, pressurisation and other system failures.	• Comprehensive knowledge check • CASA Air transport pilot licence flight planning (aeroplane) exam (CASA AFPA)
CLO3 : Interpret and extract data from cruise, climb and descent planning tables and charts using the performance handbook.	• Comprehensive knowledge check • CASA Air transport pilot licence flight planning (aeroplane) exam (CASA AFPA)
CLO4 : Satisfy the theoretical knowledge requirements of the Civil Aviation Safety Regulations 1998 Part 61 Manual of Standards for the Air Transport Pilot Flight Planning - Common and Air Transport Pilot Flight Planning - Aeroplane units of competency.	• Comprehensive knowledge check • CASA Air transport pilot licence flight planning (aeroplane) exam (CASA AFPA)

Learning and Teaching Technologies

Moodle - Learning Management System

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Comprehensive knowledge check Assessment Format: Individual	50%	Start Date: 18/03/2024 09:00 AM Due Date: 18/03/2024 12:00 PM
CASA Air transport pilot licence flight planning (aeroplane) exam (CASA AFPA) Assessment Format: Individual	50%	Start Date: As booked for you at the external CASA examination centre. Due Date: As per individual booked exam .

Assessment Details

Comprehensive knowledge check

Assessment Overview

For the Comprehensive Knowledge Check assessment, you are required to undertake a test after

Day 10. The test will consist of short answer questions covering material from Days 1-10.

You will be provided with 180 minutes to complete the test.

General feedback on student performance with an emphasis on identified problem areas will also be provided verbally by the instructor in the class following the comprehensive knowledge check submission deadline.

Course Learning Outcomes

- CLO1 : Define and explain concepts used in planning flights in pressurised, multi-engine turbojet aeroplanes operating under Instrument Flight Rules.
- CLO2 : Construct flight plans accounting for weight, payload and fuel limitations, route requirements, optimal altitude considerations, weather conditions and engine, pressurisation and other system failures.
- CLO3 : Interpret and extract data from cruise, climb and descent planning tables and charts using the performance handbook.
- CLO4 : Satisfy the theoretical knowledge requirements of the Civil Aviation Safety Regulations 1998 Part 61 Manual of Standards for the Air Transport Pilot Flight Planning - Common and Air Transport Pilot Flight Planning - Aeroplane units of competency.

Assessment Length

180 minutes

Assignment submission Turnitin type

This is not a Turnitin assignment

CASA Air transport pilot licence flight planning (aeroplane) exam (CASA AFPA)

Assessment Overview

For this assessment, you are required to complete a federally mandated examination conducted by the aviation regulator (CASA) external to UNSW. The exam will test your knowledge of the syllabus in Part 61 Manual of Standards (MOS) schedule 3. The exam comprises of multiple-choice questions and numerical entry questions.

You will be provided with 180 minutes to complete the examination. Feedback will be provided immediately after the examination via the Knowledge Deficiency Report (KDR).

As the flying training is conducted under Civil Aviation Safety Regulation 1998 Part 142 approval, students must not arrange, transfer, or sit exams without Head of Operations approval. All first attempts at exams will be arranged by UNSW.

You must provide the original CASA result (KDR) notification to the Head of Operations as evidence that you have passed a CASA exam within the time allowed. Students who do not hand in the KDR and subsequently lose the original copy will be liable to purchase a replacement from CASA at their own expense.

The mark to pass this examination is a minimum of 70%. Failure to attempt or pass this assessment will result in the award of a UF grade, irrespective of the final mark.

Course Learning Outcomes

- CLO1 : Define and explain concepts used in planning flights in pressurised, multi-engine turbojet aeroplanes operating under Instrument Flight Rules.
- CLO2 : Construct flight plans accounting for weight, payload and fuel limitations, route requirements, optimal altitude considerations, weather conditions and engine, pressurisation and other system failures.
- CLO3 : Interpret and extract data from cruise, climb and descent planning tables and charts using the performance handbook.
- CLO4 : Satisfy the theoretical knowledge requirements of the Civil Aviation Safety Regulations 1998 Part 61 Manual of Standards for the Air Transport Pilot Flight Planning - Common and Air Transport Pilot Flight Planning - Aeroplane units of competency.

Assignment submission Turnitin type

This is not a Turnitin assignment

Hurdle rules

Assessment task 3 is an essential component of the course. **Failure to attempt or pass assessment task 3 will result in the award of a UF grade for AVIA 3111.**

Important: Where applicable, you must provide the original CASA result notification to the Head Of Operations as evidence that you have passed the CASA exam.

General Assessment Information

Your final mark for AVIA 3111 will be determined using the weightings shown for each assessment task. Your mark will be moderated so that a result of between 70% to 100% in each assessment task will equate to a moderated result of 50% to 100% for AVIA 3111.

If a student does not pass asssessment task 3 at the first attempt, then the result for AVIA 3111 will be capped at 50% regardless of the performance in the other assessment tasks, provided the student subsequently passes assessment task 3 within the time allowed.

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 4 : 4 March - 10 March	Lecture	Day 1 • ASL CASA Prerequisites • Boeing 727 Handbook • Course Key points • ISA and Wind Deviation • Aerodrome suitability • TAS Calculations Day 2 • Tas and ISA Deviations. • Total Air Temperature. • Corrected TAS/PH/OAT/CAS • Altitude (FL) Capability. • En-Route Climb Day 3 • Climb Planning • Standard Climb Planning • Descent Exercise Planning • Fuel Flow Rates • Zone Fuel Calculations • 1 Line Flight Plan Day 4 • 1 Line Flight Plan • Complete Flight Plan Day 5 • Fuel Calculation & Quick Trip • Determine BRW and LW • Buffett Boundaries B727 • Step and Cruise Climb • Payload Calculations
Week 5 : 11 March - 17 March	Lecture	Day 6 • DP Ops CP/ETP • 1 Inop CP/ETP • 3 Engine CP/ETP • PNR 3 Engines • PNR DP Ops • PNR 1-Inop Day 7 • Exercise 22 • Exercise 23 Day 8 • Exercise 24 • Exercise 25 Day 9 • Exercise 26 • Exercise 27 Day • Exercise 28 • Exercise 29 • Course Review

Attendance Requirements

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

Course Resources

Prescribed Resources

A comprehensive series of online notes and practice questions are available to students on Moodle. All handouts, quizzes and reviews are within the respective Molodle folders.

Access to UNSW Moodle is through the following link and student key

ATPL Flight Planning

FOUAK - ATPL - FLPL (unsw.edu.au)

FOUAK_ATPL_FP_STD_2020

Recommended Resources

The following textbook is provided for enrolled students

- A comprehensive series of printed notes and practice questions are issued to students during the course.

Additional Costs

A breakdown of posible additional direct flying costs can be found in the Profesional Pilots Procedures Manual v17.3 June 2023. A copy of this manual can be downloaded from the FOU intranet at Library | School of Aviation (unsw.edu.au)

Course Evaluation and Development

Assessment 1 feedback will be given verbally by the ATPL lecturer within 2 days of the assessment and before the CASA exam.

Assessment 3 (CASA exam) feedback is given immediately after the exam via Knowledge Deficiency Report.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Head lecturer	Jeremy Andrews		Bankstown	9791-1151	By appointment	Yes	Yes
Lecturer	Martin Jamieson		Bankstown	9791-1151	By appointment	No	No

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 Plagarism

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)