



UNSW Course Outline

AVIA5006 Airport Planning - 2024

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General Course Information

Course Code : AVIA5006

Year : 2024

Term : Term 2

Teaching Period : T2

Is a multi-term course? : No

Faculty : Faculty of Science

Academic Unit : School of Aviation

Delivery Mode : Online

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Postgraduate

Units of Credit : 6

Useful Links

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

An airport is an extensive system of inter-related and finely balanced subsystems. If any of the subsystems are out of balance, airport users, airlines, aircraft operators and their passengers experience delays and inconvenience. In addition, any disruptions to the system have directly negative financial implications. To ensure optimal performance, the airport system and its

subsystems need to be planned for an appropriate future time horizon.

This course will provide a broad understanding of the key elements of Airport Planning and foster skills in taking a realistic view when faced with an airport planning situation, of what the process can achieve and what constraints must be considered across the various parts of aviation industry.

This fully online course uses real life aviation examples and is taught by an industry expert. It explores concepts including town planning, access, obstacles, growth, and issues relating to environment, politics and ownership as airports become privatised. The course will cover topics including privatisation and investment evaluation, community benefits, airport master plans, forecasting aircraft movements and passenger and freight flows, terminal planning issues, runway and taxiway planning. Students will also have the opportunity to test their understanding through assessments that draw on the concepts explored in the case studies.

Course Aims

The aim of this course is to provide students with an overview of the key elements of Airport Planning so that regardless of the student's specific personal involvement in aviation, they can take a realistic view, when faced with an airport planning situation, of what the process can achieve and what constraints must be considered.

The course aims to introduce students to the complexities and wide-ranging nature of the issues that an airport planner regularly faces, including long lead times and costs involved in providing airport infrastructure. Students will also be supported in developing an appreciation of the need for effective and flexible planning if an airport is to be developed to its maximum potential, providing for future aviation needs while satisfying development imperatives that will ensure its long-term commercial viability.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Describe critical issues that must be considered in airport planning, including the regulatory framework and geographical constraints.
CLO2 : Conduct independent research and inquiry and apply analytical skills in finding solutions to complex and difficult issues related to airport planning.
CLO3 : Communicate and present solutions to complex and difficult airport planning issues in a clear and concise manner.
CLO4 : Apply a combination of airport planning knowledge and lived experience gained in the aviation industry to resolving airport planning issues and challenges.

Course Learning Outcomes	Assessment Item
CLO1 : Describe critical issues that must be considered in airport planning, including the regulatory framework and geographical constraints.	<ul style="list-style-type: none">• Research Assignment 1• Research Assignment 2• Assignment 3
CLO2 : Conduct independent research and inquiry and apply analytical skills in finding solutions to complex and difficult issues related to airport planning.	<ul style="list-style-type: none">• Research Assignment 1• Research Assignment 2
CLO3 : Communicate and present solutions to complex and difficult airport planning issues in a clear and concise manner.	<ul style="list-style-type: none">• Assignment 3• Research Assignment 1• Research Assignment 2
CLO4 : Apply a combination of airport planning knowledge and lived experience gained in the aviation industry to resolving airport planning issues and challenges.	<ul style="list-style-type: none">• Assignment 3• Research Assignment 1• Research Assignment 2

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

The course is delivered electronically via UNSW Moodle website, on a distance-learning basis. The core component of delivery is the course manual. The course manual approach allows students to study at their own pace, in accordance with their particular work schedules and locations, subject to having studied sufficient material to be able to address the assessments as they come due. The course manual provides a considerable range of articles, references and case studies the student can absorb. Academic review and feedback is delivered via e-mail or

Moodle.

Students should be familiar with the information contained in myUNSW and Moodle regarding expectations of students, assignment submission, equity and diversity and other policies that affect you. Students are expected to check their UNSW email and the course Moodle website on a frequent basis as updates and announcements will be communicated via these platforms. Students are expected to keep up with the class schedule through the term.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Research Assignment 1 Assessment Format: Individual	20%	Start Date: Week 1 Due Date: 12/07/2024 11:59PM
Research Assignment 2 Assessment Format: Individual	30%	Start Date: Week 1 Due Date: 02/08/2024 11:59PM
Assignment 3 Assessment Format: Individual	50%	Start Date: 09/08/2024 12:00 AM Due Date: 16/08/2024 11:59PM

Assessment Details

Research Assignment 1

Assessment Overview

This assignment requires you to adopt the role of an airport planning consultant who has been engaged by the airport owner to evaluate the planning considerations involved in relocating the existing airport to a new site. As part of the evaluation, you need to prepare and submit a 1500 word report, addressing the assessment criteria. The assignment will evaluate how well you can communicate these considerations and consider your type of audience in the content and presentation of your report.

Details of the assessment will be released in Week 1. You must submit the assignment by Week 7. Marks and written feedback will be provided via Moodle within 10 working days following submission.

Course Learning Outcomes

- CLO1 : Describe critical issues that must be considered in airport planning, including the regulatory framework and geographical constraints.
- CLO2 : Conduct independent research and inquiry and apply analytical skills in finding solutions to complex and difficult issues related to airport planning.

- CLO3 : Communicate and present solutions to complex and difficult airport planning issues in a clear and concise manner.
- CLO4 : Apply a combination of airport planning knowledge and lived experience gained in the aviation industry to resolving airport planning issues and challenges.

Submission notes

Please refer to Assessments Hub on Moodle

Assignment submission Turnitin type

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

Research Assignment 2

Assessment Overview

The assignment requires you to adopt the role of an airport planning consultant. You are to prepare a 2500-word briefing paper for the airport owner on the impacts of the airline's proposal. This includes detailing whether the proposal will provide adequately for future passenger growth, as well as the airside and terminal infrastructure the airport would have to plan to provide. The assignment will evaluate how well you can communicate the general issues involved and consider your type of audience in the content and presentation of your report.

Details of the assessment will be released in Week 1. You must submit the assignment by Week 10. Marks and written feedback will be provided via Moodle within 10 working days following submission.

Course Learning Outcomes

- CLO1 : Describe critical issues that must be considered in airport planning, including the regulatory framework and geographical constraints.
- CLO2 : Conduct independent research and inquiry and apply analytical skills in finding solutions to complex and difficult issues related to airport planning.
- CLO3 : Communicate and present solutions to complex and difficult airport planning issues in a clear and concise manner.
- CLO4 : Apply a combination of airport planning knowledge and lived experience gained in the aviation industry to resolving airport planning issues and challenges.

Submission notes

Please refer to Assessments Hub on Moodle

Assignment submission Turnitin type

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

Assignment 3

Assessment Overview

This assignment will be released on Moodle at the start of the official UNSW examination period. The assignment comprises of multiple choice questions. You will be given the correct, or most appropriate, answers to these questions. For each question, you will be required to explain why the correct answer is the most appropriate option of those provided and why each of the other four options are not, or are less, appropriate i.e., you will provide five comments in relation to each question. The task is due in the second week of the Examination Period

Feedback is available through inquiry with the course convenor.

Course Learning Outcomes

- CLO1 : Describe critical issues that must be considered in airport planning, including the regulatory framework and geographical constraints.
- CLO3 : Communicate and present solutions to complex and difficult airport planning issues in a clear and concise manner.
- CLO4 : Apply a combination of airport planning knowledge and lived experience gained in the aviation industry to resolving airport planning issues and challenges.

Submission notes

Please refer to Assessments Hub on Moodle

Assignment submission Turnitin type

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General Assessment Information

Please note that you are provided with an opportunity to complete an early self-assessment quiz, due by the end of Week 4. This is a formative assessment item and the marks will not be used as a summative contribution to the final mark. However, it is expected that you will attempt it with serious intent, as the aim of this assignment is to assess your understanding of the course material early in the course to help you understand your progress and identify areas for improvement.

Marks will be provided immediately after completion of the test.

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.

Assessment Criteria and Standards

Unless otherwise specified, all written work should be submitted electronically in Word or PDF format via Moodle. The criteria for assessment of all written work will be:

1. overall understanding of the assignment requirement, demonstrated in terms of material selected for inclusion in and development and structure of the student response;
2. appropriate weight and balance given to the components of the assignment;
3. evidence of understanding of the concepts and problems being studied or reviewed;
4. evidence of relevant independent research;
5. ability to analyse and synthesise material;
6. ability to apply solutions in the aviation field from the student's own areas of experience;
7. ability to write in a concise and simple manner while solving complex and difficult issues
8. appropriate style of response utilised eg – report, briefing paper, paper for presentation, a critique etc;
9. presentation of the response allows the reader easy and clear access to the material presented and an understanding of the structure of the response;
10. appropriate referencing of researched material.

In general terms the assignments will be marked on:

- coverage - criteria 1, 2, 3 and 4 (45%);
- analytical skills and problem solving - criteria 5 and 6 (45%); and
- presentation – criteria 7, 8, 9, 10 (10%).

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 27 May - 2 June	Topic	Unit 1: Introduction to Airport Planning Unit 2: Regulatory Requirements Other: Tutorial – Introduction to course facilitators and discussion on Western Sydney Airport (WSI) planning.
Week 2 : 3 June - 9 June	Topic	Unit 3: Airport Site Selection
Week 3 : 10 June - 16 June	Topic	Unit 4: Planning to Safeguard Future Airport Development
Week 4 : 17 June - 23 June	Topic	Unit 5: Forecasting Unit 6: Airport Capacity
Week 5 : 24 June - 30 June	Topic	Unit 7: Runways and Taxiways
Week 6 : 1 July - 7 July	Topic	Unit 8: Aprons/Ramps Other: Tutorial Discussion - Airport Planning and Simulation Modelling by Woody Andrew (AirBiz)
Week 7 : 8 July - 14 July	Topic	Unit 9: Terminal Area – Passenger Building
Week 8 : 15 July - 21 July	Topic	Unit 10: Terminal Area – Landside Facilities
Week 9 : 22 July - 28 July	Topic	Unit 11: Ancillary Airside Facilities
Week 10 : 29 July - 4 August	Topic	Unit 12: Landside Planning Other: Tutorial – Course Wrap-up with Q&A opportunity.
Week 11 : 5 August - 11 August	Topic	

Attendance Requirements

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

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

There is no prescribed textbook for this course.

Essential Readings

Each Unit is accompanied by readings. A list of these can be accessed via Leganto on Moodle.

Recommended Resources

Recommended Texts

While some of the texts are not of recent vintage they are still some of the most definitive available.

Ashford, N., et al, 2012, Airport Operations, 3rd Ed, McGraw Hill, New York.

Ashford, N. et al 2011, Airport Engineering, 4th edn, John Wiley & Sons, Hoboken, New Jersey.

Dempsey, P.S., 1999, Airport Planning & Development Handbook, McGraw Hill, New York.

De Neufville R.& Odoni A. et al, 2013, Airport Systems, Planning, Design and Management, McGraw, New York.

Kazda, A. & Caves, R.E. 2015, Airport Design and Operation, 3rd Ed, Emerald Group Publishing Limited, Bingley.

Young, S. & Wells, A., 2011, Airport Planning & Management, 6th Ed, McGraw Hill, New York

Horonjeff, R.M., McKelvey, F.X., Sproule, W.J., Young, S., 2010, Planning and Design of Airports, 5th Ed, McGraw Hill, New York.

International Air Transport Association, 2019, Airport Development Reference Manual, 11th Ed, Montreal.

International Civil Aviation Organisation, 1987, Airport Planning Manual – Part 1 Master Planning, Montreal.

Aviation Internet Sites

There are not many sites dedicated specifically to airport planning. The ones listed below may prove useful for certain units and will provide links to other sites that are worth exploring.

An all-purpose website that you are probably already familiar with which allows you to search on almost any topic is <http://www.google.com.au>. Google Earth will allow you to view the facilities

at numerous airports. Google searches on Airport Design and Airport Planning will provide sites of interest.

A number of airports in Australia and around the world now post their master plans on their websites. These provide useful examples of what the airport planning process is designed to achieve.

Airservices Australia <http://www.airservicesaustralia.com/>

Aviation Statistics <https://bitre.gov.au/statistics/aviation/index.aspx>

Bureau of Infrastructure, Transport & Regional Economics (BITRE) <https://bitre.gov.au/>

Department of Infrastructure and Regional Development <https://infrastructure.gov.au/>

Civil Aviation Safety Authority <https://www.casa.gov.au/>

Australian Aviation Acts and Regulations <https://www.legislation.gov.au/>

International Civil Aviation Organisation (ICAO) <https://www.icao.int/>

International Air Transport Association (IATA) <http://www.iata.org/>

Airport Council International (ACI) <https://aci.aero>

Federal Aviation Administration <https://www.faa.gov/>

Sydney Airport <https://www.sydneyairport.com.au/>

Brisbane Airport <http://www.bne.com.au/>

Western Sydney Airport

<https://www.westernsydneyairport.gov.au/about/airport-plan>

<https://westernsydney.com.au>

<https://www.westernsydneyairport.gov.au/sites/default/files/Key-Functional-Specifications.pdf>

Course Evaluation and Development

The myExperience Survey aims to boost 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.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Stevan Sipka				via email and/or Moodle forums	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

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