

**The University of New South Wales
School of Aviation**

AVIA5009 – Airline Corporate Management

Course Outline

Course Staff

The lecturer in charge is Dr Ian Douglas of the School of Aviation. Ian can be contacted via e-mail at ian.douglas@unsw.edu.au.

About the Editor/Facilitator

Dr Ian Douglas completed a Doctor of Business Administration researching the impact of national economic freedom and state-ownership on airline operating margins. He also holds an MBA and a Graduate Certificate in Educational Studies. Ian worked at Qantas from 1977 to 2003, with roles in airports, marketing, alliances, and strategic planning. In 2003 he joined the strategy group of the School of Management at UTS, before moving to the School of Aviation at UNSW in 2007. His aviation consultancy work includes an extensive pricing and revenue management project with Malaysia Airlines, graduate training at Saudia Airlines, a fleet study for Air Bagan, cargo strategy work with Thai Airways International, and executive training programs with HNA Airports, Hainan Airlines, and the Singapore Aviation Academy. Ian was appointed a Commissioner of Australia's International Air Services Commission in late 2012, and Chair of the Commission in May 2016.

About the Original Author

The original version of this subject was written by Rodger Robertson. Rodger has a Bachelor of Science Degree with First Class honours in Statistics and a Master of Commerce Degree in Econometrics, both from The University of New South Wales. He worked at Qantas from 1965 to 1994, ultimately leading the Company's Corporate Planning Division, before joining UNSW Aviation.

Course Information

Aims

The current structure of the global aviation industry dates back to the 1944 Chicago Convention. That convention, by allowing governments to control air traffic rights, established a market for route access. The airline industry has grown to generate over

\$US800 billion in annual revenues, but has failed to create a sustainably profitable business model. The industry, in aggregate, often falls far short of delivering an adequate return on the capital invested, and many carriers continue to operate below economic returns despite lower and stable fuel prices in recent years. Profitability is often poorer at state-owned airlines, but can suffer at any carrier during periods of rapid growth. The fall in profitability at Norwegian is an example of this problem.

An objective of this course is to introduce the student to the structure of the aviation industry and to explain how the industry's history shapes its structure today¹. This introduction provides a background to the formation of current airline strategies, and provides a context for the study of business model innovation. As with most industries, aviation has a unique set of performance measures and its own jargon and terminology.

The airline industry shares the features of other service industries with absolutely perishable products such as broadcast media. Once the aircraft door closes, an empty seat is valueless, beyond making the adjacent passenger feel more comfortable. Using revenue management and pricing tools, airlines work to minimise the wastage of seats. A brief outline of the key drivers facing airline corporate management is covered in this course. Particular focus is given to the main revenue drivers, the analysis of costs, and the challenge to management of simultaneously controlling both revenue and costs.

Each unit of the course is designed to foster closer analysis of individual and specific areas of corporate management, and aims to illustrate the underlying theory with practical and contemporary examples. Airline management teams face highly complex and wide-ranging problems. Airlines require the integration and interrelation of many diverse processes, from fleet management to customer service. Further, the industry is both capital intensive and labour intensive, and faces the dilemma of longer-term planning horizons mixed with short-term market shifts. While fleet plans and aircraft orders are looking out beyond 4-5 years, changing economic or competitive conditions can alter markets within weeks.

This course will look at the complexity of the airline business and the inter-relationship between departments of the business. The course then considers individual organisational units and how each solves its own problems in the broader firm context. This approach takes the course through a traditional Airline Business Planning Process where annual plans and longer-term plans are integrated.

Longer-term planning processes look out to future periods to take account of external factors such as environmental regulation, technical innovation and other structural constraints that may only be starting to emerge. Shorter-term planning addresses

¹ This impact of a firm's history on its current strategy and its options for future directions is often described as 'path-dependence'.

immediate economic conditions confronting the business and the internal changes required. As each area is studied, students are strongly encouraged to position the course material within contemporary industry issues. These may well evolve as the semester progresses. For those students already employed in the broader aviation business, the detail in this course should provide an opportunity to drill-down into the finer details of problems already encountered and offer the chance to consider potential solutions. For those outside the industry, the study will encourage cross-industry analysis and encourages the development of adaptive solutions.

This course interrelates with another AVIA course titled Airline Operational Management. The separation between the courses can be seen as a more 'Head office' focused approach in this course and more 'field' focused approach in the Operational course. In practice the interaction between both is pervasive, and the two aspects engage simultaneously to achieve an airline's objectives.

The way an airline schedules its network tells us a lot about the airline and its strategies and objectives. Hub-based networks rely on building connecting traffic feed and are a characteristic of full-service network carriers (FSNC). Conversely, point-to-point operations are usually adopted by small regional carriers and low-cost (LCC) airlines. This distinction between LCC and FSNC is becoming more and more blurred as airlines like Air Asia build connectivity at longhaul gateways and Ryanair increases its range of online connections in Europe – most recently increasing connections over Bergamo and Rome. Airline online schedules are displayed in a city pair format, so it is not always easy to establish an airline's full timetable online.

Airline websites offer more than schedule and price information. Investor pages often hold valuable analysis of the company. Qantas shareholder briefings are particularly comprehensive. It is useful to stay aware of airline business news during this course. Newspapers, magazines, and analyst briefings are useful sources of company information. For Australian students the best newspapers are the Financial Review and the Aviation section in The Australian newspaper. All students can access several aviation magazines through the University Library and this is strongly encouraged. Airline Business and Air Transport World are aviation management magazines with broad coverage of the issues, but there are others. Recommended "readings" for the course are often from these sources, so the Library electronic journal databases will be a regular tool used during your studies.

Much of your communication will be via email. Please use your university email address for all formal correspondence. The only way to submit assignments is through the Moodle site. Your marks will appear there and you will be able to access an online copy of your report with a marking rubric and comments. The due dates for assignments are shown on the Moodle site. From time to time I will post additional material through Moodle – usually as a web link.

When you submit assignments or attachments, please name the file with your name, the subject number, and the assignment number (e.g. Lee5009a3.doc). Please do **not** send a file labelled assignment1.doc. Also please ensure identification information (name, subject, student number etc) is on the title page of the document. A surprisingly large number of assignments come from Anonymous authors

Learning Outcomes

On completion of this course students should:

- Have a good understanding of the main airline corporate management tasks.
- Have an understanding of airline economics.
- Be able to plan a manual schedule for a small fleet of aircraft.
- Be familiar with fleet planning theory and practice.
- Be familiar with the key airline financial aspects.
- Understand the trade-offs between aircraft utilisation and customer convenience that are addressed when airline schedules are developed.

Location

This course runs for the duration of Semester 1.

The course is delivered electronically via UNSW Moodle, on a distance-learning basis. The core component of delivery is the course manual. The Post-Graduate course manuals are written by experts from various backgrounds within the aviation industry, and a cross section of disciplines at UNSW. Each manual has been designed to guide the learner in the most effective and efficient way. As new concepts are introduced, practical exercises are provided so you can develop skills, which can be applied immediately in your workplace. The manuals are not (and are not intended to be) the source of all information for this subject. Wider reading is essential, both in the trade press and academic articles. There are massive resources available to you through the UNSW Library, including online (e-book) versions of major textbooks.

Students are able to study at their own pace, in accordance with their particular work schedules and locations. Academic review and feedback is delivered via Moodle – and a marking rubric attached to each assignment. Additional generalised feedback is also provided to the entire cohort in this subject. The course notes for this subject are regularly updated and reviewed – but you will find some older material retained. This is usually because it is the best available example of a concept – even if it is not particularly recent.

Learning and Teaching Philosophy

This course aims to provide an integrated background and understanding of the main airline corporate management tasks, with a particular focus on analysis and corporate planning. This is achieved using contemporary examples and exercises.

Internet

Online content and study materials can be accessed via UNSW Moodle;
moodle.telt.unsw.edu.au

Assessment

The Aviation Masters Program's approach to assessment closely follows that of the Australian Open Learning Program of the Australian Graduate School of Management. At all times assessment is intended to form a component of the learning process and assignments are designed to encourage you to apply what you learn to your own organization and experience. Assignments will be assessed on the basis of how effectively you **apply** subject material, your development of new insights into your organization, and your increased understanding. Online marking rubrics and comments that accompany your returned assignments are designed to ensure that all students are graded objectively. These rubrics often include notes and specific feedback. The examination will provide you (and us) with feedback about your understanding of the subject content.

Criteria for Assessment

The criteria for assessment of all written work will be:

- A demonstrated **understanding** of the aviation concepts and problems studied in a contemporary industry environment.
- The ability to **apply and adapt generalised concepts** (both in aviation and broader management disciplines) from your studies, and to apply these concepts to problems in your own areas of experience.
- Critical thinking and concise writing that delivers **clear and credible analysis** of complex issues.
- Outcomes and **recommendations that are supported by your analysis**, and that reflect originality and openness to realistic alternative solutions.
- Assignments that answer the question
- Appropriate length and detail. Assignments are usually 2000 - 3000 words +/- . Your writing needs to be comprehensive enough to cover the material, but brief enough to hold the reader's interest. The use of tables and dot points to summarise data is strongly encouraged.

THE MOST COMMON REASON FOR FAILING AN ASSIGNMENT IS PLAGIARISM.

Final Course Results

All final course results are reviewed and scaled by the School and the Faculty. The final approved course results will be officially released via UNSW email and myUNSW in July (S1) and December (S2). Students should not assume their final official marks directly from each assessment task even after all the marks for each and every assessment are received.

Assignment 1

Submission: Week 5

Weighting: 20%

Length: 800-1000 words

Write a concise 800-1000 word report on the following topic. This requires critical thinking, research, and analysis. Conjecture and unsupported opinion will result in poor marks. You are expected to make use of the University's online library resources and to **use APA/Harvard style referencing** - e.g. (Douglas, 2016) – in your paper. You may choose to include tables or charts in your paper to clarify and present your analysis, but these do not replace good written argument.

The Australian Government publishes extensive aviation statistics. Access the BITRE database and download the necessary files from the Aviation section.
<https://bitre.gov.au/statistics/aviation/index.aspx>

Analyse the schedule and capacity data for the market between Australia (at a city pair level) and Indonesia for at least the past 5 years. What are the trends? Is there evidence of volatility in the market? What is likely to happen in this market in the coming 2 years?

Assignment 2

Submission: Week 9

Weighting: 40%

Length: 2000 words

Access and read the Adler and Swan paper posted on Moodle. Then, using the unit cost formulas in the paper, write a 1600-2000 word report on the following topic.

Unit costs are impacted by aircraft type, configuration, and sector length. Using the cost formula identified in the Adler and Swan paper undertake a study that considers the following variables, and analyses the relative cost structures. How much impact does configuration have? What is the ratio of space between cabin classes? Note that the KLM E175 and the BA A320 are short-haul services with standard economy seats fitted to the entire aircraft. How does this impact unit cost and customer comfort?

1. Passenger connection between Tokyo (NRT/HND) and Dublin (DUB).
2. Aircraft are
JL B777-300ER 8F/49C/40W/147Y
EK B777-300ER 42C 0W 385Y
KL B777-300ER 34C 40W 354Y premium economy is only extended legroom
KL E175 20C/8W/60Y C is also economy seats. W class overwing exit rows.
BA A320 24C 0W 132 Y (middle seat blocked in C – variable cabin)
3. Schedule options are
HND-LHR-DUB on Japan Airlines (JL) and British Airways (BA)
NRT-DXB-DUB on Emirates (EK)
NRT-AMS-DUB on KLM (KL)

The great circle distances for the schedules can be obtained from www.gcmap.com or a similar source. Please work in km not miles.

This assignment requires interpretation, analysis, and the integration of data from multiple sources. Simply reporting or summarising available data will NOT gain marks. This assignment requires analysis, synthesis, and the development of informed view.

Final Examination

Submission: End of Exam Week

Weight: 40%

This assessment task is a “Take Home” exam – you will be given a week to answer a set of questions and submit the work through the Moodle course site.

The examination will be in two parts. The first is made up of short answer questions touching on recent airline events. The second part will require completion of a route economics study using data provided.

Ian Douglas, February 2018.

Academic Honesty and Plagiarism

Plagiarism is the presentation of the thoughts or work of another as one's own². Examples include:

- direct duplication of the thoughts or work of another, including by copying work, or knowingly permitting it to be copied. This includes copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and,
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.³

Submitting an assessment item that has already been submitted for academic credit elsewhere may also be considered plagiarism.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does not amount to plagiarism.

Students are reminded of their Rights and Responsibilities in respect of plagiarism, as set out in the University Undergraduate and Postgraduate Handbooks, and are encouraged to seek advice from academic staff whenever necessary to ensure they avoid plagiarism in all its forms.

UNSW Academic Skills and Support website provides information on plagiarism and academic honesty. It can be located at:

<https://student.unsw.edu.au/plagiarism>

Also, the Learning Centre <http://lc.unsw.edu.au/> provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

1. correct referencing practices;
2. paraphrasing, summarising, essay writing, and time management;
3. appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

² Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle.

³ Adapted with kind permission from the University of Melbourne.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

Course Content

Units should be done in the corresponding course week, i.e. the course is a 12-week course with one Unit being achieved in each week.

Unit 1	Introduction to the Aviation Industry - Past and Present
Unit 2	Aviation Statistics
Unit 3	Airline Economics - Demand
Unit 4	Airline Economics - Costs
Unit 5	Airline Business Planning Process
Unit 6	Schedule Development
Unit 7	Fleet Planning
Unit 8	Forecasting
Unit 9	Finance
Unit 10	The Future Outlook
Unit 11	Commercial Agreements and External Relations
Unit 12	Marketing and Distribution

The 12 units follow the outline above. The unit headings give a reasonable indication of the content of the unit. Units vary slightly in length and in terms of effort. The objective is to cover a lot of ground and get some understanding of many subjects. Sometimes depth suffers a little in achieving the breadth of the subject. Some Unit topics could form subjects in their own right. Do not be too concerned if some Units seem to be too big. Get as much as you can out of it and move on. Reading material is generally labelled “essential” or “reference”. The former is self-explanatory and the latter can be studied in the course or simply kept as a reference for later reading.

The course introduces (in Units 1 and 2) the aviation industry and briefly studies its regulatory environment and economic drivers. These two Units have considerable content that forms the basis for the following Units. You may find that you return to these introductory Units throughout the course.

Units 3 and 4 deal with the economic decisions required in the business. Demand side issues are studied in Unit 3. Then the costs of operation and some simple work on profit planning are covered in Unit 4.

Unit 5 addresses the major planning processes for an airline. The approach considers the airline business environment and scenario planning to support a classical development of a strategic business plan and budget. This unit adapts generic strategic management processes to the airline environment.

Units 6 and 7 take in two further major processes in the airline. The development of the airlines schedules is fundamental to operations.

Delivering the schedule is the driver of both revenue and expenditure for an airline. In airline planning terms, the development of schedules is a core task, and drives the expenditures and strategies of operational managers. Scheduling is covered in Unit 6 and you should be able to do some simple aircraft scheduling at the end of the unit. For large carriers scheduling is automated, and the schedule is built around constraints including slot availability, airport curfews as well as customer demand.

Unit 7 covers the Fleet Planning process. This process will give you an understanding of the evaluation of aircraft in terms of their performance (both cost and physical) and their revenue generation potential. Trade-offs are often required between fleet complexity and the acquisition of ideal aircraft types for particular markets.

Unit 8 discusses forecasting in the airline, with a particular focus on traffic and revenue forecasting.

Unit 9 offers an overview of Airline Finance issues. It is not designed to be an in-depth study of financial management, but rather to identify the special issues which airlines face in a pragmatic way.

Unit 10 A look at the future directions for the industry – based on a recent paper by Prof Hans-Martin Niemeier.

Unit 11 deals with the Globalisation of the industry. The role of Strategic Alliances and Commercial Agreements (both short and long-term), cross-border ownership, and regional trading blocs such as the European Union are considered in this Unit. Engagement with Governments, as well as with important suppliers, alliance partners, and the media, shape an airline's results.

Unit 12 is an overview of Airline Marketing. This Unit does not attempt a full study of the marketing function, but addresses the impact of online selling (both web and mobile) on FSNC and LCC business models, and the impact of the move towards the mobile distribution channel.

Each unit includes readings. The readings are offered most often as links, or on occasion as a separate pdf file.

Online Resources

Most of the necessary background reading material can be sourced through the library's extensive journal databases online. Suggested reading material directs students to useful websites, but self-directed research well beyond the recommended reading is an important part of the learning process. Wider reading adds a variety of opinions, richer content to the subject, and the opportunity to contrast theoretical and practitioner views of the industry.

Instructions for using the databases are available on the UNSW library website <https://www.library.unsw.edu.au/study/services-for-students> This page includes a links to various library services. Industry journals Air Transport World and Airline Business can both be accessed using the UNSW Library electronic access.

Textbooks

There are no set textbooks for this subject but there are some books that are useful references in airline management that are available through the library as e-books. Links have been provided on Moodle.

These are

- Rigas Doganis, *Flying Off Course - The Economics of International Aviation*. Available as an e-book in the UNSW library
- Stephen Holloway, *Straight and Level- Practical Airline Economics*. 3rd edition 2008.
- Budd and Ison (ed), *Air Transport Management: An international perspective*. Taylor and Francis 2016
- Peter Morrell, *Airline Finance* 3rd edition 2008.
- Stephen Shaw, *Airline Marketing and Management* 7th edition Ashgate 2012
- Bijan Vasigh, Ken Fleming, Thomas Tacker. *Introduction to Air Transport Economics* 2nd edition 2013

Report Writing – IMPORTANT !!!!!

Report writing standards and requirements vary in the University environment and within industry and Government. It is expected that students will be familiar with referencing and basic academic writing. When writing results and producing recommendations, these must be based in your analysis and are most useful when they are action-orientated – that is they should be possible for an airline to implement.

The standard for referencing is Harvard/APA student.unsw.edu.au/harvard-referencing

Continual Course Improvement

Periodically, student evaluative feedback on the course is gathered, using among other means, UNSW's [myExperience](#) process. Student feedback is taken seriously, and continual improvements are made to the course based in part on such feedback. Significant changes to the course will be communicated to subsequent cohorts of students taking the course.

Few students completed the online survey after the 2017 cycle, limiting the opportunity for student led revisions to the course content. The assessment structure and unit topics reflect recent informal and formal feedback. You are encouraged to complete the survey at the end of the course.

Administrative Matters

The course will be administered through UNSW Moodle. This site can be accessed from moodle.telt.unsw.edu.au

Your assignments should be uploaded on to the website and all questions directed through the mail system. The Facilitator will use the course site to make announcements and to mark the assignments and answer questions.

For those of you in Sydney and able to get along to the University there is a somewhat parallel undergraduate course called AVIA3101 Airline Management. It is held on Tuesdays 1000-1200 and 1300-1500. If you wish to attend then either turn up or email me beforehand to check the location and to ascertain that there is a relevant lecture in that session. There are regular guests from industry who deliver guest lectures.

Students should be familiar with the information contained in <https://my.unsw.edu.au> regarding expectations of students, assignment submission, examination procedures, equity and diversity and other policies that affect you. A Postgraduate Aviation Student Guide can be obtained from the School of Aviation which is also available on UNSW Moodle. Please contact aviam@unsw.edu.au for any administrative enquiries.