Master of Engineering (Aerospace)

You’ll learn how to analyse complex engineering assets in the aerospace and aviation environment, and develop engineering, scientific and technological solutions to ensure problem-free operations.

As the aerospace industry is associated with cutting-edge technology, you’ll learn how to find innovative solutions for challenging problems and opportunities from an array of possibilities. These skills will be gained through systematic problem-solving and engineering/technological systems design methodologies operating in the industry.

Learning and teaching
A range of learning and teaching approaches are used within this program to develop your capabilities and to assist you in developing skills as an independent and lifelong learner.

Industry connections
Industry plays a vital role in the development, delivery and assessment of the program through membership of the Program Advisory Committee (PAC), which comprises industry representatives, academic staff and alumni.

You will undertake activities and interact with industry and communities in real-work contexts or situations. Any or all of these aspects of a work-integrated learning experience may be simulated.

Work-integrated learning (WIL) has been incorporated into the final year Master’s Research Project where you will work on a capstone project. These projects are either directly connected with industry or simulate the situation of a graduate in industry reporting to a supervisor with whom they meet regularly. In cases where the project is directly connected with industry, the industry partner is usually involved in the assessment.

Career outlook
Graduates will be equipped with advanced knowledge and skills to further their career in aerospace engineering, operations, or consultancy in aviation, mechanical engineering and automotive engineering as:
- a research and development leader introducing new technologies and research and development
- a team leader implementing operational strategies
- an operations manager responsible for the competitive performance of a unit
- a consultant providing specialist technical advice to industry.

Professional recognition
This program does not yet have accreditation from Engineers Australia. Accreditation will be sought for this program as soon as it is feasible to do so within the accreditation timelines set by Engineers Australia.

International opportunities
You have the opportunity to complete a dual masters’ degree program with FH Aachen – University of Applied Sciences in Aachen, Germany. You will spend two semesters at RMIT and two semesters at the partner university, earning a master’s degree from each university.

Five students per year have the opportunity to undertake the dual masters’ award and selection is based on academic merit (cumulative GPA).

Program structure
The Master consists of 192 credit points. The program aims to provide you with skills to step up as a project leader, consultant or manager with advanced knowledge to lead the introduction of new technologies and operating practices in aerospace and aviation organisations.

Core subject areas include structures and materials, aerodynamics and performance, propulsion, avionics and ATM systems, flight dynamics and control and aircraft design. The program is complemented by a range of elective courses relevant to the aviation industry to tailor your study plan according to your professional interests.

Work experience
As part of the program you must complete at least 12 weeks of work experience in a professional engineering environment. Work experience completed prior to joining this program and after commencing a relevant bachelor degree (see Entry requirements) may count towards the work experience component.
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Year 1
Complete the following core courses:
- Aircraft & Air Transportation
- Aerospace Materials
- Thermofluids and Propulsion Systems
- Aerodynamics and Flight Performance
- Advanced Aircraft Structural Analysis
- Flight Dynamics and Control.
And complete two courses of your choice from the options list.

Year 2
Complete the following core courses:
- Research Methods in Engineering
- Aerospace Design and Optimisation
- Avionics and ATM Systems.
And complete:
- Master’s Research Project
Or
- Master’s Research Project Part 1
- Master’s Research Project Part 2.
And complete one course from the options list of your choice (not previously completed).

Options List
Aviation option courses:
- Airworthiness Management Frameworks
- Engineering Risk Management in Aviation
- Human Factors in Aviation Safety
- Aviation Safety Systems
- Aircraft Structural Integrity
- Incident and Accident Investigation
- Airport Design and Operations
- Aircraft Maintenance
- Engineering Sustainability in Aviation
- Airline Operations Management
- Aircraft Certification
- Intelligent Transport Systems

Engineering management option courses:
- System Engineering Principles
- Project Management
- Building Quality Organisations
- Logistics Engineering and Systems
- Innovation and Technology Management
- Engineering Economic Strategy
- International Engineering Management
- Planning and Control

Modelling & simulation option courses:
- Advanced CAE
- Modelling and Simulation of Engineering Systems
- Product Lifecycle Design and Management
- Virtual Validation, Documentation and Maintenance
- Methods and Models of Operations Research
- Time Series Analysis
- System Dynamics
- System Simulation and Characterisation

Manufacturing & mechatronics option courses:
- Advanced Manufacturing Technologies
- Lean Manufacturing
- Design for Manufacture
- Computer Integrated Manufacturing
- Engineering Manufacturing
- Advanced Mechatronics System Design
- Advanced Robotic Systems
- International Engineering Management
- Planning and Control
- International Engineering Management
- Planning and Control

2017 indicative fees
- Commonwealth supported places (CSPs) range from A$6,349 to A$10,596
- Full-fee: A$29,760 per annum
How much you’ll pay will depend on whether you’re offered a Commonwealth supported place or a full-fee place. Entry for this program is primarily through CSPs. Government financial assistance is available to eligible students regardless of the type of place you enrol in.

Disclaimer: Every effort has been made to ensure the information contained in this publication is accurate and current at the date of printing. For the most up-to-date information, please refer to the RMIT University website before lodging your application. Visit www.rmit.edu.au

This information is designed for Australian and New Zealand citizens and permanent residents of Australia.