Overview

This course covers introductory and intermediate topics related to analysis and design of airframes:

Aerospace Materials and their Properties

- Lightweight Materials - Alloys and Composites
- Tensors - Stress, Strain, Invariants
- Failure Prediction
- Material Degradation - Fatigue, Corrosion, Wear
- Analysis of Composite Materials

Classical Airframe Analysis

- Airframe Loads
- Stressed Skin Design Philosophy
- Role of Airframe Components
- Thin-walled Approximation
- Structural Idealisation
- Analysis of Indeterminate Trusses
- Bending, Shear and Torsion of Complex Beams
- Detailed Stressing - Joints and Cut-outs

Structural Instability and Aeroelasticity

- Buckling of Columns and Plates
- Stiffened Panel Analysis and Design
- Aeroelasticity - Divergence, Control Reversal and Flutter
Faculty
Faculty of Engineering

School
School of Mechanical and Manufacturing Engineering

Study Level
Undergraduate

Offering Terms
Term 1

Campus
Kensington

Delivery Mode
Fully on-site

Indicative contact hours
5

Timetable
Visit timetable website for details
Conditions for Enrolment

Prerequisite: ENGG2400 OR MMAN2400 OR CVEN2301
Course Outline

To access course outline, please visit:

AERO3410 Course Outline
Fees

Commonwealth Supported Students $1191
Domestic Students $5970
International Students $5970

DISCLAIMER
Please note that the University reserves the right to vary student fees in line with relevant legislation. This fee information is provided as a guide and more specific information about fees, including fee policy, can be found on the fee website.

For advice about fees for courses with a fee displayed as "Not Applicable", including some Work Experience and UNSW Canberra at ADFA courses, please contact the relevant Faculty. Fees for courses delivered through UNSW Global are published and charged by UNSW Global and thus appear as "Not Applicable" on this site.

Where a Commonwealth Supported Students fee is displayed, it does not guarantee such places are available.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179