



CONTINUING EDUCATION AND
TRAINING SERIES

Introduction to Aircraft Composite Structures

This 4-day course provides participants with an understanding of the use of composite materials in aircraft structures applications. The course is intended for Engineers who are seeking to develop their technical knowledge and skills as well as practitioners and managers who are engaged in design, repair and maintenance of aircraft structures. It includes practical examples / discussion sessions / worked examples / class exercises and quizzes.

Monday 17th — Thursday 20th February 2025
9:00am—5:00pm

Venue:
MEMKO - L28, 303 Collins Street, Melbourne
VIC 3000, Australia



Course managed by MEMKO Aviation, Aerospace and Defence,
ABN 73 619 452 470

COURSE REGISTRATION

Introduction to Aircraft Composite Structures

Name: _____

Company: _____

Address: _____

Telephone: _____

E-mail: _____

Registrations close Friday 7th February 2025

Email this form with your payment details to:

MEMKO A.A.D.
Email: training@memko.com.au

Payment Method:

- Bank transfer (\$3,575) to MEMKO AAD P/L BSB 033-060 Ac 437512
 Charge my credit card:

Visa MasterCard Amount: \$ 3,575

Number: _____ CVC: _____

Card expiry: __ / __ Cardholder Name: _____

Cardholder's Signature: _____

For further info, please contact MEMKO on 03-8605 7777 or training@memko.com.au
Tax invoices/receipts will be emailed to above email address.

COURSE OUTLINE

The course will cover the following topics:

- introduction to composites
- advantages and disadvantages
- aerospace applications
- fibres
- resins
- prepregs
- core materials
- manufacturing processes
- structural mechanics
- failure modes
- analysis methods
- design considerations
- fracture, fatigue and environmental durability
- non-destructive evaluation & structural health monitoring
- repair
- design airworthiness

COURSE LECTURERS

Ian Cuckson

Materials & Process Principal – MEMKO

Ian is a professional Materials and Process Engineer with 45 years experience in the aviation industry with a specialisation in Composite materials. He started his career in 1978 in the Materials and Manufacturing development department at British Aerospace Warton UK at a time when composite materials were being used for the first time on prototype demonstrator aircraft components. He joined GAF in Melbourne to support the manufacture of composite trailing edge flaps for the then newly acquired F/A-18 A/B. He was involved in the start-up and provided ongoing M&P support to wide variety of composite part manufacturing programs at the Fishermens Bend site which was sold to Boeing in 1996. These programs include 757 & 777 rudders, 747 Kreuger panels, A330/340 Main Landing Gear doors, Rohr Transition rings, Sikorsky Black Hawk and Sea Hawk blades and F/A-18 E/F trailing Edge Flaps. Ian led the Boeing M&P team that developed and certified a unique resin infusion composite manufacturing process for the 787 Moveable Trailing Edge parts. He holds a degree in Engineering Materials from the University of Newcastle-upon-Tyne, UK.

David Rees

Principal Design Engineer - MEMKO

David is an aerospace professional engineer with over 30 years industry experience in aircraft design, certification and sustainment of civil and military platforms across multiple technical domains including aircraft structures, mechanical systems and cabin systems. He started his career as a Research Engineer with DSTO and CRS-AS before joining Aerostructures Australia providing design services and aircraft structural integrity support across multiple RAAF platforms. David subsequently held senior design roles on major projects with Airbus UK on the A380 and with GKN on the Lockheed Martin F-35. David then spent 12 years as a Senior Certification Engineer with CASA where his responsibilities included entry control and oversight of CASR 21M Authorised Persons and 21J Approved Design Organisations. David is a CASR 21.M Authorised Person, a member of RAeS and a Fellow and CPEng (Aerospace) of the Institution of Engineers Australia. He holds a Bachelor of Aeronautical Engineering from the University of Sydney, Australia.

COURSE ACCREDITATION

All participants will receive a certificate of completion after full attendance of the course. Academic credit will be given to participants who successfully complete the components of assessment.

COURSE FEES

Fee for this 4-day course is \$3,250 plus GST. This includes course notes, morning and afternoon tea/coffee and lunches. Course fees will be returned less a \$50 administration fee, upon receipt of a written cancellation notice before Friday 7th February 2025.

MEMKO reserves the right to cancel the course, in which case participants will be notified and the course fee will be returned in full, this includes COVID-19 related circumstances. Because of this, please hold off booking flights and accommodation until the course is confirmed.

Places are limited.

Please note the course notes will be delivered in an eBook format. iPads will be provided to access the material. Participants are welcome to bring their own laptops.