memko
Aviation, Aerospace and Defence

CONTINUING EDUCATION AND TRAINING SERIES

Introduction to Fatigue & Damage Tolerance Analysis

This 4 day course *is designed to develop participants an understanding of the concepts related to aircraft structural fatigue and damage tolerance (F&DT) analysis. The course is intended for Engineers who are seeking to develop their skills and understanding of the concepts as well as practitioners and managers who require familiarity with contemporary rules, standards and tools in the area of F&DT and engaged in work requiring design, certification and maintenance of aircraft structures. It includes questions & answers sessions / quizzes / discussion sessions / worked examples and aims to provide hands-on experience to solve structural F&DT problems.*

Monday 18th to Thursday 21st of May 2026
9:00am – 5:00pm

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

COURSE REGISTRATION

Introduction to Fatigue & Damage Tolerance Analysis

Name: _

Company: _

Address: _

_ _

Telephone: _

E-mail: _

Registrations close Friday 8th May 2026

Email this form with your payment details to:

MEMKO Aviation, Aerospace and Defence Pty Ltd
Email: training@memko.com.au

Payment Method:

☐ Bank transfer ($3,575) to MEMKO 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 purpose of this course is to allow the participants to develop a sound understanding of the concepts related to fatigue and damage tolerance, and understand the impact on structural safety due to associated damage. The intent of the course is to;

1. Walk through some key historical events that have helped the aviation community gain better understanding of structural behaviour.
2. Identify the applicable regulations requiring consideration (for compliance) for the design and certification of structures.
3. Provide theoretical coverage of the concepts (and terminology) through examples (and problem solving) to reinforce the associated knowledge.
4. Use appropriate tools and techniques to establish threshold and repeat inspection periods for particular structural features.
5. Ensure full participant involvement through interactive problem solving.

COURSE OUTCOMES

By the end of this course the participants will have an;

1. Overview understanding of the design philosophies and good design practice for structural fatigue and damage tolerance of aircraft structures.
2. Awareness of problem areas and regulatory requirements for fatigue and damage tolerant design in aircraft structures.
3. Understanding of the principles and techniques of fatigue and fracture mechanics analysis, strength and service durability predictions.
4. Understanding of fatigue concepts and applying these to solve problems related to aircraft structures through analysis.
5. Understanding of damage tolerance (DT) concepts and applying these to solve problems related to aircraft structures through analysis.
6. Ability to use AFGROW and solve practical problems through making appropriate assumptions.
7. Understanding of the concepts associated with wide spread fatigue damage.

The course includes questions & answers session / quizzes / discussion sessions / worked examples and aims to provide hands-on experience to solve structural fatigue, and damage tolerance problems.

COURSE LECTURER

Eric Whitney

Eric Whitney is a consulting aeronautical engineer involved in the design of aircraft and UAVs including the design and certification of repairs and modifications to existing types ranging from LSA/General Aviation through to transport category and military types.

Engineering disciplines covered include stability and control, performance and crashworthiness, and CASR 21.M Authorised Person for Structures and Mechanical Systems. Regular activities include fatigue and damage-tolerance analyses using AFGROW and related industry tools in support of real-world engineering decisions on primary structures. He holds a Ph.D. and B.E. in Aeronautical Engineering, and delivers fatigue and damage-tolerance training grounded firmly in practical engineering application.

COURSE ACCREDITATION

All participants will receive a certificate of completion after full attendance of the course.

COURSE FEES

Fee for this 4-day course is $3,575 (includes 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 8th of May 2026.

MEMKO Aviation, Aerospace and Defence Pty Ltd reserves the right to cancel the course, in which case participants will be notified and the course fee will be returned in full.

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.