

AFGROW Advance Training Syllabus

1. Creating crack growth rate models using the fracture mechanics database (table lookup and another model)

- *Using AFMAT (Air Force fracture mechanics Material database)*
- *How to find the data for similar materials*
- *Acquiring/Organizing data*
- *Fitting, validating, and formatting data*
- *Importing and using data with AFGROW*

2. Using load interaction models to predict crack growth rate data available in the fracture mechanics database and/or DTDH

- *AFGROW load interaction models in depth*
- *Using AFMAT (Air Force fracture mechanics Material database) and DTDH (Damage Tolerance Design Handbook) to find example crack growth test data*
- *Fitting AFGROW load interaction model parameters to match test results*
- *Retardation model tips and tricks*

3. Practical life prediction examples

- *Wing Attachment Fitting*
- *Multiple Load Path Structure*
- *Fail Safe/Multiple Load Path Structure*
- *One example proposed by users*

4. Advanced AFGROW COM API programming

- *AFGROW Application Interface, Methods, Properties and Events*
- *Use COM to control AFGROW and perform repetitive tasks*
- *AFGROW Com interfaces, modifying AFGROW model, materials, prediction parameters, beta correction using COM API*
- *How to create a different stress intensity factor solution/continued damage model using COM API*
- *Hands-on examples (finding initial equivalent flaw size, residual strength plot generation, creating GUI to AFGROW in Excel and more)*