

COURSE DESCRIPTION

What is the Introduction to Aircraft Certification Testing course?

This short course is designed to introduce Engineers and Technologists to the testing phase of aircraft certification. It will cover Transport Canada, FAA and EASA testing requirements for the approval of new components for aircraft or for STC approval of modifications. The course will cover detailed test procedures in a number of areas including flight test, structures and flammability. It will feature a walk-thru evaluation on the interior of an actual 737 aircraft and a visit to a testing lab. Finally, you will learn the reporting requirements for flight certification.

You will learn:

- The Transport Canada, FAA and EASA requirements and procedures for aircraft certification testing
- Component level testing RTCA DO-160
- Electromagnetic interference and radio
- Frequency interference testing
- Flammability testing
- Structures testing – including composites
- Engineering reviews for aircraft interiors – FAA AC 25-17
- Flight test procedures and guidelines

1301 16TH AVENUE NW
CALGARY, ALBERTA, CANADA T2M 0L4
403.284.SAIT (7248)
OR IF OUTSIDE CALGARY CALL 1.877.284.SAIT



SCHOOL OF TRANSPORTATION
**INTRODUCTION
TO AIRCRAFT
CERTIFICATION
TESTING**
JUNE 6 - 9, 2016

COURSE DETAILS

Course Code: AERO-115

Course Registration Number: 39719

Course Cost: \$1,420 (including GST)

1. Online at sait.ca

Go to Continuing Education, select Search for Courses, do a Quick Search by SAIT Course Code: AERO-115.

2. Fax

Complete the registration form found on our website and fax to: 403.284.7112

3. Mail

Complete the registration form found on our website and mail to: SAIT Polytechnic
Attn: Registrar
1301 - 16th Avenue NW
Calgary, Alberta, Canada T2M 0L4

4. Phone

SAIT Registrar Office
403.284.7248 or toll free 1.877.284.7248

A confirmation letter will be sent to you prior to the course. If you do not receive this letter, please contact SAIT.

TRAVEL INFORMATION

For travel information contact:

Art Smith Aero Centre
aerocentre@sait.ca
403.284.7018

SPEAKER BIOGRAPHIES

DENNIS HOEPFNER, P.ENG TRANSPORT CANADA (RETIRED)

Private Pilot License (1969)

B.Sc. Mech. Eng. – University of Manitoba (1974)

Saunders Aircraft – Gimli, MB – FAA FAR 25

Design and Certification (1974 – 1975)

Transport Canada – Aircraft Certification Engineer

Winnipeg (1976 – 1998); Calgary (1998 – 2014)

- Approve modifications and repairs – (STCs, LSTCs, PAs) on: small/large fixed wing aircraft including all DHC-1 to -8 series, B707-767 series, A319-330 series, L1011, Douglas DC-3/4/8/9, F28, CL215, CRJ small and large rotorcraft including Aerospatiale, Bell, MBB, McDonnell Douglas/Hughes, Sikorsky (specialty – avionics/electrical/system/interiors/simple structures)
- Develop delegation for many DARs/DAQs/AEOs in the prairie and northern regions
- Audit of AEOs (Canada's major airlines) and other DARs/DAQs
- Working group participation:
 - Transport Canada Aircraft Certification Specialty Course
 - early drafting – Airworthiness Manual 513 and advisory material ACSI 22 and ACSI 23
 - early CAR Std 571.03 – Major/Minor

31 – Medevac Policy

- Aircraft Certification Testing Course development
- Transport Canada – FAA Part 26 – Electrical Wiring

Interconnection System (EWIS) Course

- Instructing/Presentations
- SAIT Aero Engineering Technology Course – Mods and repairs (2000 – 2001)
- SAIT Mech Engineering Technology – Thermodynamics (2000)
- AME Symposiums

KEN MANSFIELD

Performance/Handling Qualities/Certification Process

BEng Chemical (Royal Military College 1968),

Sea King Helicopter Squadrons (1970 – 1974)

United States Navy Test Pilot School (1975)

Canadian Forces Aerospace Engineering Test

Establishment Flight Test (1976 – 1981)

Transport Canada Flight Test, Chief of Flight Test,

Director of Air Certification (1981 – 2001)

Canadian Air Transport Security Authority (2002 – 2006)

Aviation Safety and Security Consultant (2007 – Present)

ALF WONG

Structures

- Since 1979 Alf Wong, our DAR, has been working with manufacturers, operators and repair facilities to create timely answers to a wide variety of engineering problems. To date, our aerospace consultants have amassed more than 30 years of engineering experience on a host of different fixed wing aircraft and helicopters; from single engine Cessnas to massive Boeing 747s. In 2003, he attended the rotary wing flight test course at the National Test Pilot School in Mojave, California.

STEVE HARKE

Avionics

Genesys Certification Services Inc.

- Steve Harke has over 30 years' experience in the aviation industry, over 25 years of which have involved the design and certification of avionics systems in aircraft. He earned diplomas in Aircraft Maintenance Technology (1982) and Avionics Technology (1989) from SAIT. He holds both Transport Canada AME Category M&E and FAA A&P licenses, as well as Transport Canada ministerial delegations, both as a Design Approval Representative (DAR) and as a delegate member of FLYHT Aerospace's Design Approval Organization (DAO).
- Mr. Harke worked at Amtech Aeronautical (2 years) and Western Avionics (16 years), where as the Engineering Manager and head of their DAO he was responsible for all of Western Avionics/Avmax's certification approvals. In 2006, Mr. Harke joined FLYHT Aerospace as their Director of Product Development, where he was responsible for the design and development of the latest Automated Flight Information Reporting System (AFIRS). Mr. Harke has been involved in the certification of the AFIRS 228 system for factory line-fit at Airbus Industries and Bombardier Aerospace, including DO-178B Software and DO-254 Airborne Electronic Hardware certifications.
- While he still works part-time for FLYHT, Mr. Harke also works independently as a Transport Canada DAR in the Systems & Equipment – Avionics & Electrical specialty. His delegation includes avionics and electrical systems installations, TSO MOPS compliance testing, DO-160 environmental testing, and lightning compliance certification.
- Mr. Harke has been a member of the ICAO Iridium SARPs Working Group, as well as a member of RTCA SC-215 and SC-222 to revise the DO-262 MOPS for safety-services certification of the Iridium satellite system. He is also currently a member of the FAA Performance-Based Aviation Rulemaking Committee (PARC) Communications Working Group (GWG), supporting the development of regulatory material for the NextGen datalink and satellite voice services.

AL BAKER

Performance/ Aerodynamics

Baker Aviation Services Ltd.

- Mr. Baker started test flying as a Certification Test Pilot with Transport Canada in the late 1960's. After leaving Transport Canada, he spent some time as Director of Flight Operations for a Canadian regional airliner and General Manager of a Fixed Base and Charter operation. He joined Canadair Ltd (now Bombardier) as a Senior Test Pilot. He was responsible for a significant amount of the development and certification test flying on the original Canadair CL-600 Challenger business jet. After a few years as Aviation Manager for an oil company with world-wide operations, he then formed his own engineering flight test organization which carried out test planning, envelope expansion, development, and certification flight testing, data analysis and reporting on modified aircraft. In 47 years of flying, Mr. Baker has flown over 9000 hours in over 100 aircraft types. Although no longer active as a DAR Test Pilot, he still holds a Transport Canada DAR Covering Flight Analysis – Performance, and Flight Analyst – Flight Characteristics. He was a member of the now-disband Transport Canada Airworthiness Advisory Board. He has been a member of the Canadian Aeronautics and Space Institute since 1956 and has been awarded the Trans-Canada(McKee) Trophy for outstanding achievement in the field of air operations.

