

Education, Training, Certification of FTE's

- What qualifies someone to be an FTE?
 - Educational background
 - Prior Experience / OJT
- What are appropriate qualification requirements for the FTE?
 - Foundational Academic Education
 - Initial and Recurrent Training
 - Short Courses
 - Certificate Program
 - Advanced Degree

EASA Lead FTE License

- EASA Advance Notice of Proposed Amendment 2013-16 dated 8/13/13
- Flight Test Engineer – defined as any engineer involved in flight test operations either on the ground or in flight
- Lead Flight Test Engineer – defined as FTE assigned duties in an aircraft for the purpose of conducting flight tests or assisting the pilot in the operation of the aircraft and its systems during flight test activities.
 - LFTEs have duties to operate some test aircraft systems, possibly through FT instrumentation that could affect aircraft control. Act as test director onboard, actively participating in conduct of flight or making in-flight decisions.
 - Trying to develop training and medical fitness standards for LFTEs. EASA NPA 2008-20 defines FTE requirements as “completed a specific training course accepted by the Agency.”

- EASA NPA 2008-20 dated 8/13/13
 - Combination of education and practical experience “short course”

AMC to Appendix XII to Part-21

Competence and experience of flight test engineers and of pilots engaged in categories 3 and 4 of flight testing

1. Competences and experience:

(a) The flight test engineer must have satisfactorily completed a specific training course approved by the competent authority.

Such training courses usually cover Performance; Handling Qualities; Systems and Test management, and should follow approximately the same outline as pilots undertaking the same category of test flights. Bachelor of Science or equivalent university standards are usually requested from applicants.

(b) The flight test engineer must have gained a significant amount of flight experience relevant for the task, and must have been trained for flight testing activities.

An example of such short courses lasts 15 weeks and the flying training amounts to 38 hours on 12 types of airplanes.

When such training is provided in-house in the case of large aeroplanes, ground training is provided by members of the company as part of their job and flight training is provided during real test flights. The trainee is added to the normal flight test crew.

FAA FTE Training Requirements

- FAA Flight Test Training Requirements:
 - Order 8110.41A, dated 11 July 2005
 - “The keys to ensuring flight test safety are: hiring and retaining the most qualified people, training them continuously, keeping them current and proficient in the practice of flight testing, and maintaining an effective safety program.”
 - Engineering Indoctrination Course, Initial FTE Course, CRM Course,
 - Prior to participating in flight testing FAA requires:
 - FAA Class III medical certificate, substance abuse screening
 - Physiological training, including altitude chamber (for testing above 25K ft)
 - Smoke evacuation training (by Accident Investigation School, OK City OK)
 - Survival training.
 - Recurrent FTE training course + CRM every 4 years, Physiological ground school every 4 years, altitude chamber every 8 years.
 - **FAA order 4040 9D Change 20 requires quarterly safety meetings.**
 - Equipment provided includes 2 Nomex flight suits, 1 nomex flight jacket, steel toe boots, nomex gloves, flight helmet and bag nomex underwear and socks, headset, flight bag, kneeboard, sunglasses

OEM / Institutional Options

- In-House Tailored Programs
- Training Providers
- Degree Granting Colleges
- Certification

Do We Mandate a Standard?