

Becoming a pilot



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Athletic and sun-tanned - at home in the metropolises of the world - work, which many would consider leisure-time - high wages and fast cars. This is still a popular image of the pilot-profession held by the public. This brochure aims at doing away with some of these myths, while also providing guidance along the way to a challenging, but also one of the most fascinating jobs in the world.



REQUIREMENTS

In addition to appropriate academic graduation-certificates, successful completion of aptitude-tests and the passing of an official trustworthiness-investigation, the applicant should bring certain skills and aptitudes.

Basic requirements

- School-graduation: No legal minimum-requirements; however, most airlines require a general (sometimes subject-specific) university entrance-level qualification
- Foreign-language competencies are always helpful; indispensable are fluent German and English competencies, written and oral
- Minimum age: 18 years (at the time of license-issue) for a CPL(IR) and/or MPL
- Medical Certificate Class I
- Also not legally required, but generally a basic requirement: an unrestricted and valid passport
- Trustworthiness-Investigation - records of traffic-violations (e.g. German “point-register” in Flensburg), possible criminal record, in particular alcohol- and drug-related offenses, and the general (including family-) background will be looked at

You need to bring...(basic skills and abilities)

Applicants should have an interest in physics, mathematics and technical-subjects (high-school level). The ability to quickly absorb and digest a large amount of information, across a wide array of subject areas, is indispensable.

Common sense, helpful in an outcome-oriented decision-making process, should be well-developed. During the performance of flight-duties the abilities to manage complex systems, to solve intricate problems and to work involved checklists are often put to the test - which is why one should be able to structure work well. In this context one should be able to conduct good monitoring of oneself and of the team-partner to be able to evaluate the performance and performance-capabilities.

For the future work in a team both, leadership-qualities, as well as the ability to perform the legwork of subordinate positions well, are required.

Last, but not least, manual flying requires, among other, good “hand-eye coordination”.

Medical

Due to the demanding job, pilots need to be in good physical condition and health; however, there are no impossible limits - for example, even wearers of corrective eye-glasses may become an airline pilot under certain conditions. We recommend those interested, as well as new-entrants, to conduct an initial exam at an AeroMedical Center (AeMC), to have their medical fitness evaluated. A list of AeMCs can be found on the home-

page of the national aviation authority (Luftfahrt-Bundesamt - www.lba.de/).

Personal challenges

Pilots are viewed by the public as the representatives of their airlines. In this respect, most airlines attach a lot of importance on a well-groomed appearance and charisma. Visible piercings and tattoos are generally not accepted.

Due to the working structure there is contact with many different people. Depending on the airline, you may meet people from different culture-groups and/or may have to adjust to new colleagues with every new duty-rotation.

The continuous examinations that will accompany pilots throughout their piloting career require certain resilience towards the accompanying stress. Learning never stops - nor does the evaluation of performance. Being open to criticism is a must!

Flexibility is required when confronted with roster-changes,

delays (e.g. due to weather) or a possible transfer. Keeping a regular family-life requires a lot of organizational effort.

Personal pressures due to financial debt, workload-compression and increasing shift of economic responsibility towards the pilots may lead to personal stress.

ALTERNATIVE OR ADDITIONAL QUALIFICATIONS

It is always advisable to have an alternative-plan in addition to pilot-training, as the aviation industry is always susceptible to large fluctuations. If the pilot-market should be saturated at the time that pilot-training is completed, it is very helpful to be able to fall back on an alternative means of income. Also, if the medical fitness is lost (which can happen due to comparatively minor injury or sickness), or whenever the employer goes out of business (this too has happened increasingly lately), an alternative means of income secures ones livelihood.

There are several integrated degree-programs, which allow for completion of an academic degree in conjunction with pilot-training. The additional qualification by means of a col-



lege-degree may provide for a separate “leg to stand on” in economically challenging times – a preferential selection for management-positions (e.g. technical-pilot, safety-pilot, etc.) of pilots with academic-degrees has not been observed so far. Aviation offers a myriad of possibilities for additional involvement for personnel without academic degree – even at later stages of one’s professional career.

THE PATH TO THE GOAL

Training content:

- 750 hours theoretical instruction. Content: Air Law, Aircraft-Systems, Instruments, Mass and Balance, Aircraft Performance, Flight Planning, Human Factors, Meteorology, Navigation, Procedures, Aerodynamics, Radio-Telephony
- Approx. 240 flight-hours with emphasis on: visual flight, instrument flight, training in a two-man cockpit, type-rating

Different training models

1. Modular

- Separate packages, earning commensurate certificates (PPL(A), CPL, IR...ATPL(A))
- Takes a lot of time, requires high degree of self-discipline
- Can be planned by oneself, flexible, can be done part-time, requires high degree of planning-discipline, correspon-



dence- (tele-, online-) courses available

- Self-financed

2. Ab-Initio (Integrated)

- Complete package, straight to CPL (IR), ATPL theory credited (“frozen ATPL”, basic requirement for ATPL are 1.500 hours of flight-time experience)
- Financing-schemes should be well-evaluated and thought-out at the front-end of the training
- Fastest way
- Is organized by flight-school
- Only possible as full-time student

3. MPL

- Only in conjunction with an airline, which is responsible for the training content
- Partially pre-financed by airline (in this case back-payment is deducted from salary)
- Low number of flight-hours in the actual aircraft; mainly training on simulator(s)
- Limited to operations with two-man (multi-crew) cockpit

Duration of Training, Cost of Training

- 70.000 - 100.000 Euro, pure training-cost, depending on model
- Personal contribution depends on market-situation and may be significantly lower
- Depending on employer, in certain circumstances additionally up to 35.000 Euro to acquire a type-rating
- Cost for medical examination

Training abroad

Pilot training outside of Europe, especially in the USA, may appear cheaper and faster as in Europe. However, one acquires a license not recognized in the EU. A transfer, if at all possible, is associated with high costs and additional examinations.

OUTLOOK, CHANCES, CAREER

For years the International Air Transport Association (IATA) assumes mid-term growth in aviation. Emerging markets have, however, moved far away to Africa (long-term) and East-Asia (mid-term). However, these markets are looking for experienced pilots (minimum 1000 flight-hours). Acceptance/transfer of the European license may potentially involve additional qualification-hurdles and costs. Often, well-paid, but temporary (three- to five-years) contracts, with very short termination-notice periods, are offered. Regulations concerning residency and working-permits of the respective countries should be minutely checked.



Currently there is a need for qualified pilots in Europe; however, the working conditions, such as wages, work-hours, basing, etc. vary widely. The best prospects are offered by flight-schools that are affiliated with an airline; however, there are no job-guarantees. Despite this recovery of the pilot-market, external applicants have only slight chances of employment with large airlines, as these are still working off their long waiting-lists of aspiring pilots

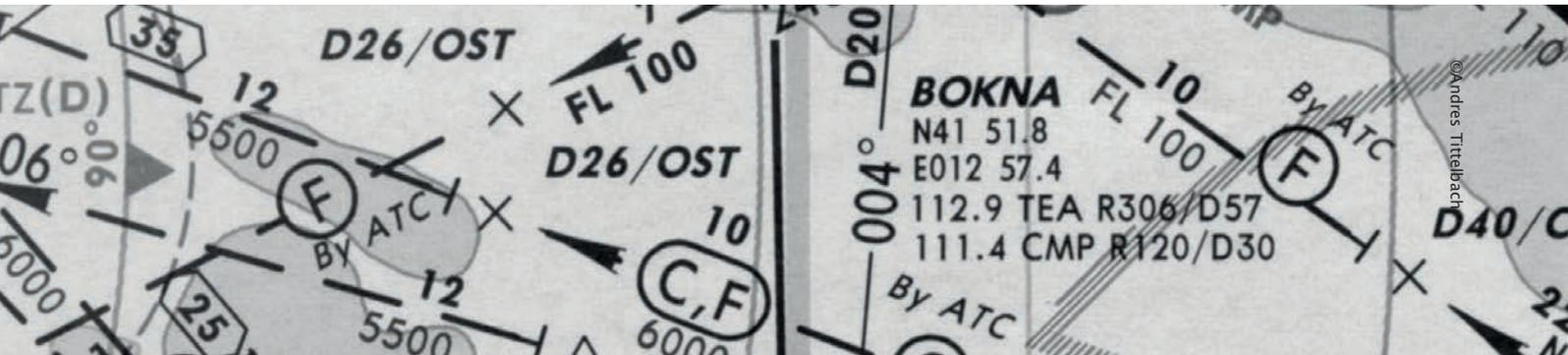
Paying yourself for a type-rating or Pay2Fly may provide a short-term opportunity to log flight-hours; in the long-term, however, they do not improve the prospects for employment. They mainly put a strain on your bank-account.

Freelancing is common in business aviation. Airline and pilot enter into a loose agreement. If there are requests, a flight is offered. The pilot is self-employed and is paid solely by flight-hours performed. The “contractor pilot” model aims much in the same direction; however, it could prove difficult with regards to potential bogus self-employment.

Responsibility vs. Pay

As Captain you are responsible for the entire flight. This includes the condition of the aircraft, the correctness and completeness of the flight documents and of the documentation to be carried aboard, the safe conduct of the flight, correct performance of duties of the flight- and cabin-crew, as well as the well-being of passengers and crew. The responsibilities for the crew extend across the entire rotation, during the duration of which, the commander assumes the position of the employer. Some duties surrounding control, monitoring and execution are generally delegated to the First Officer and Purser/Senior Flight Attendant. However, if in doubt, the Commander is always legally responsible. Precise knowledge of laws, regulations, company-specific rules, as well as specifics of aircraft, air-route and airports are indispensable.

Airlines, additionally, expect consideration of economic goals during the conduct of the flight - at the same time, workload increases due to assumption of additional tasks during ground-handling, flight-planning and maintenance. New flight



duty-time regulations translate into more work-compression, tighter schedules, with less time for recovery between rotations. Every year three to five training- and check-flights must be completed in the aircraft and simulator. In addition to flying skills, management-competencies and knowledge of the changing regulations and working-rules are checked. In return pilots receive a salary which is based to a large extent on the segment in which they are employed. Common components of salary are:

- Basic Pay
- Flight-time based components, overtime-pay
- Per-diem
- Profit-related components and bonuses
- Shift-pay

The salary-schemes of the airlines differ significantly from one another. There are schemes, under which salaries are based upon flight- or duty-time. Most of the time, however, salaries are based upon pure flight-time – meaning: Time for pre- and post-flight duties (including at home), studying of regulations, training-events, stand-by time etc. are often not paid. The base-pay fluctuates significantly. The flight-hours paid also. This means that whenever the number of “included hours” is low, top salaries can be earned during work-intensive summer-months – while in less intensive months (winter, leave) or during sickness, only minimum salaries can be earned. This can become especially critical if, with an already low starting-salary, loans of up to 100.000 Euro must be paid off. Costs for a loss-of-license insurance (approx. 300 Euro per month) and an adequate retirement-/pension-plan also need to be considered. Notwithstanding how long pilots may be allowed to fly (currently up to age 65), the risk of losing the medical qualifications rises with age.

In general, a First Officer can expect to earn between 1.500- and 5.000-Euro gross-pay per month. A Captain receives between 3.000 and 10.000 Euro, in which the time to upgrade to Captain takes between three and twenty years, depending on the size of the airline and developments on the market. Typically, selection for upgrade to Captain is done by time with company (seniority-principle). The general aptitude for Captaincy should have been tested prior to employment. Fluctuations are very limited due to strong bond with the employer (MPL, financing of training, seniority-principle, company-specific



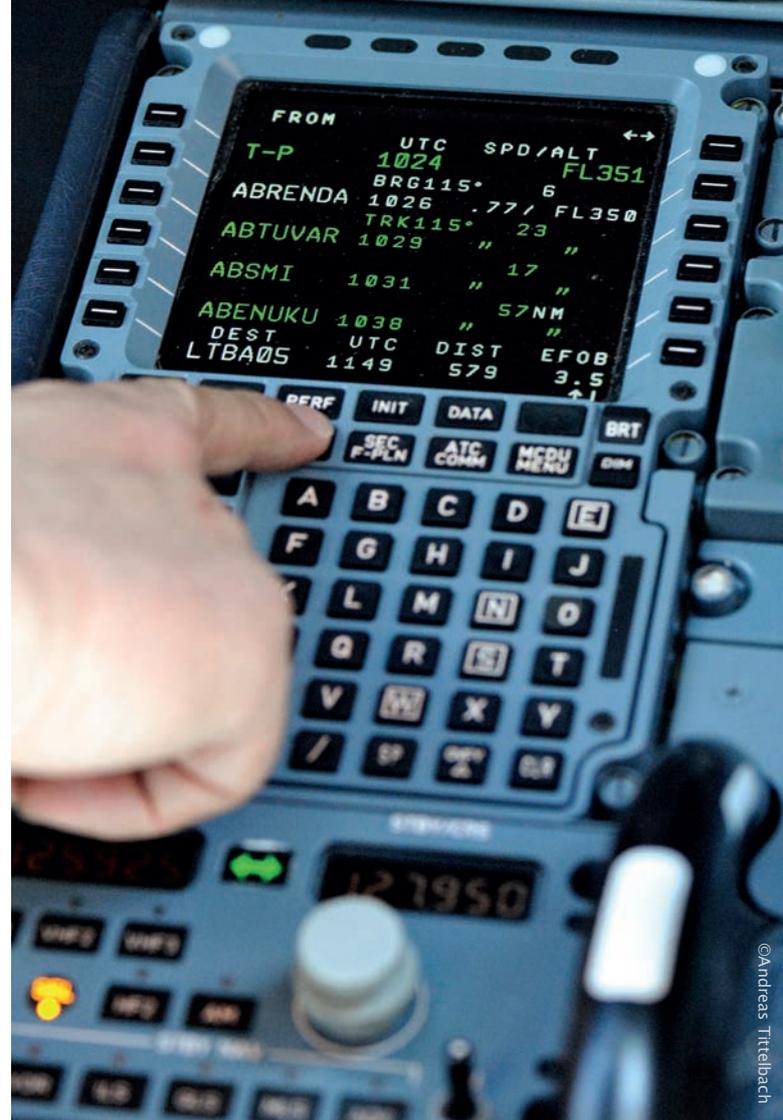
procedures, and licenses not recognized internationally). Variable salary-components in Germany are not several monthly salaries (as is common for management salaries), but rather fractions of a monthly salary.

Jetset vs. Shift-Work

The truth is: The golden age is over! Different areas of employment result in different life-styles.

Short or long

Work on the short-hauls is characterized by several day-tours with up to six flights per day. High time-pressure, short ground-times and crammed duty-rosters result in maximum work-load; however, also in gaining a lot of experience in varying environments. Generally, one is at home in the evenings or spends a short night in a hotel. Aircraft and crew may change several times throughout the day. Within a seven-day period up to 60 hours of flight-duty time are allowed. More and more airlines are considering this to be a planning-goal. Daily flight-duty may, with certain restrictions, be planned for up to 14 hours - in exceptional cases extended for up to 15 hours. The daily routine on the long-hauls is generally one flight per day - sometimes, if the maximum duty time allows, with up to two additional short cycles. With an enlarged crew (three pilots), the duty-time may be extended up to 18 hours regular duty-time - in exceptional cases, extended for up to 21 hours. The minimum rest-times depend upon the time-zone differences





between departure- and destination-airport. In general, the return-flight is after 24 hours. The days of the one-week layovers are largely over (including the charter-business). Either the outward- or the return-flight is conducted at night. Long-haul pilots typically conduct only one to five landings per month; at times minimum-landings have to be made up in the simulator to maintain currency (three landings within the last 90 days).

Charter or Scheduled Airline

Charter-Airlines mainly provide service to holiday destinations. This does not mean simply flying to picturesque islands or other exotic destinations. One must often deal with challenging, poorly equipped airports with rudimentary air traffic control services. High workload-season is when others are on vacation. This means that vacation options during school-breaks are often limited. This may potentially pose difficulties for family-life. During winter there is a lot of time off, which, depending on the salary-scheme, may result in financial cons-

traints. Spontaneous adjustments to flight-schedules result in relatively frequent roster-changes.

Scheduled-Airline service focuses on financial capitals and major cities. This means busy, but generally well-equipped, airports (exception: Africa); congested airspace; long waiting times; good infrastructure at the place of accommodation. Workload fluctuates less across seasons. Keeping flight-schedules on time is of very high value, which means stable duty-rosters.

And Air Cargo?

The common cliché "cargo pilots only fly at night" is not true. Mostly cargo flies anti-cyclical, meaning opposite to the usual traffic-flow. The spectrum of different operations is wide. There are one-way and two-way connections, as well as round-robin trips with several stops at different destinations. The length of tours varies between one and, in extreme cases, up to 21 days. Duty-rosters are known to be not very stable.

Commonalities

- **Duty roster**

Influence on the personal duty roster is limited. There are various types of taking influence, by which individual flights, multiple-day rotations or longer patterns, off-days (single or multiple), may be requested. Requests are granted based upon seniority and/or a fairness-system. There are monthly- or rolling-period (next two- to four weeks) rosters.

- **Stand by**

Beside flight-duty and training there is also stand-by duty, which serves as a means to deal with irregularities in the flight-operations. After notice by telephone, one has to report ready for flight-duty within a pre-determined period of time. There is a distinction between short-notice stand-by (one- to three-hour reporting-time) and longer reserve-duty, which, depending on activation, may have six- or twelve-hour reporting-times. Some operators have no stand-by duty per se, but expect constant availability and the willingness to react to short-notice roster-changes.

- **Weekend**

The European flight-duty time regulations call for a 36-hour rest-time beginning within seven consecutive days. This period may commence anytime, thus most of the time, this period will not fall on a weekend. Vacations, holidays, Easter, Christmas are regular duty-days. Some airlines compensate for this by – compared to “regular” employees – more leave-days (e.g. 28-42/year, to have 4-6 weeks of leave).

Flight-Time vs. Duty-Time

In addition to the pure flight-time, duty-time includes all preparation-work, as well as any flight-related activities, such as checking of official mail, review and handling of flight-documentation, briefings with cockpit- and cabin-crew, pre-flight checks of aircraft, termination of flight upon disembarkation of passengers, completion of documentation, immigration and de-briefing. All this is often not doable in the allocated pre- and post-flight times. Often only the time between engine-start and -shutdown is used as the basis for calculating paid flight-time. Idle-times due to strikes, bad weather, missing passengers, etc. are not remunerated. There are no typical break-time arrange-



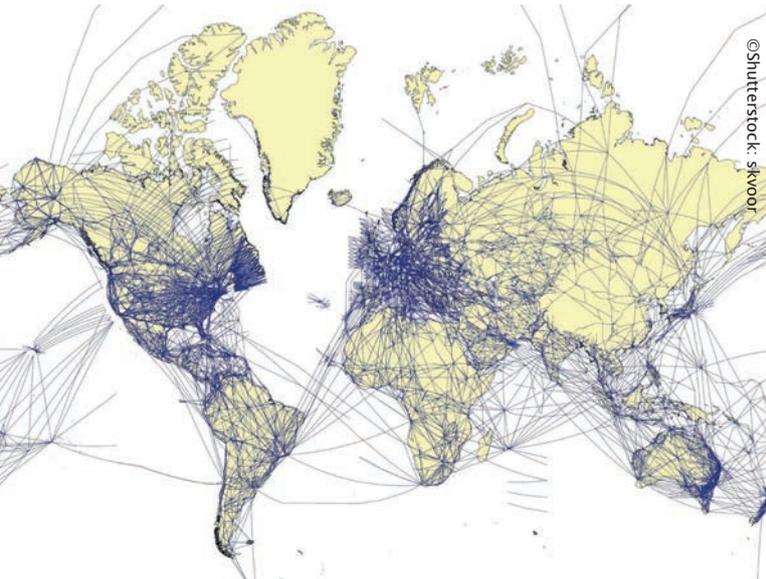
ments, as can be found in other jobs.

Review of regulations and flight-preparation for flights, as well as training- and checking-events is done during leisure time.

Risk!

Money ...

The greatest economical risks to pilots are losing the medical qualification, which inevitably leads to the loss of the job; as



well as the bankruptcy of the operator, as then a large number of similarly-qualified applicants will be enter the market in one fell swoop.

...or life

Work-related body-stressors such as dry air, noise, unfavorable lighting-conditions, sitting activity, night-shift, jetlag, work-compression and short regeneration-periods pose both high physical, as well as psychological, strains. The strain, resulting from often-changing colleagues, time away from family and friends, poor compatibility of duty-roster and social-life, difficulties in planning one's private life, high responsibility with increasing economic pressure and constant time-pressure, varies from one individual to another.

Due to cosmic radiation, pilots are among the most highly affected occupation-groups concerning radiation-exposure. The health-effects of this exposure have not been conclusively clarified via epidemiological studies yet; therefore, the individual radiation-dose should be monitored. Airlines have been legally obligated to record radiation-doses for a little over ten years. The mathematical models currently used to determine radiation-doses reflect the actual exposure only in a limited fashion; which is why the Vereinigung Cockpit, among other, advocates the use of measuring devices to record exposure.

Despite all challenges and changes, new entrants can still expect a unique workplace in terms of sophistication and versatility - whether to accept these challenges or not should be well-thought-through.





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