

### **General Learning Objective**

The general learning objective of the practical training is to develop awareness of the operational environment, knowledge of operating procedures, responsibility, recognition of potential threats to airline operation, recognition of critical conditions and corrective action.

The FOO-student will be instructed in the standard flight planning process using the given OM-data, procedures and tools under supervision of the FOO-Instructor. The student shall be able to use all standard information and performance calculation tables and tools and shall demonstrate the use of the Dispatch related standard procedure for communication, information and reporting. The FOO-student will also be instructed in non-standard procedures according legally valid basic regulations, situational awareness during normal and abnormal conditions and adequate decision making. This requirements should include pre-active flight following and inflight support functions.

### **Practical Examination**

The examination will take place in the normal environment of the respective Flight Operations Department, which is normally the Operations Control Center of the AOC-holder. The student should calculate a normal flight plan from the network of the respective AOC-holder. Based on this flight plan, the student shall provide a structured briefing about the result and an explanation of the factors of influence leading to decisions made during the flight planning process.

The student shall also demonstrate all required procedures and methods of decision making and should find answers to the specific questions related to the data, results, procedures, the OFP-format and all other flight plan related questions. Additional questions about general aspects on basis of rules and data from the OM-A, -B and -C will be addressed. The respective learning objectives in the actual version should be used by the instructor and the student during the practical training as a reference. All examination questions must base on of Learning Objectives from this document.

### **The Learning Objective used in this catalogue**

Apply	Apply given data or formulas
Check results	Check results of given computations
Compare	Compare given data, procedures or conditions
Compute	Compute results out of given data
Decode	Decode abbreviation
Define	Provide the definition of data, procedures or regulations
Distinguish	Distinguish between more than one result, procedure or condition
Extract	Extract data or procedures from tables or graphs
Find out reason	Find the reason of specified conditions
Make decisions	Decide between more than one option and justify
Name	Provide the name of data, procedures or conditions
Name effect on practice	Name expected or possible consequences
State	State the properties of data, procedures or conditions

Learning Objective Groups

Group	Title	Page
01	Responsibility	3
02	Fuel Policy	5
03	Altimetry	7
04	WX-Format	8
05	LDG-Minima	9
06	NOTAM	11
07	T/O-Minima	12
08	ALTN Selection	14
09	CWO, Cold Weather Operation	17
10	Landing Performance	18
11	T/O Performance	19
12	Usability of aerodromes	21
13	MEL CDL	22
14	ETOPS	23
15	Area of Operation	24
16	DGR, Dangerous Goods Regulations	25
17	OFP	26
18	Operational Aspects	28

<b>01 Responsibility</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
State	Responsibility for the issue and the update of the OM-A, -B, -C, -D		
State	Responsibility of the individual postholder Flight operation, ground operation, training, maintenance		
	The postholder responsible for the given OOC		
	Responsibility and function of the accountable manager		
	Responsibility and function of the quality manager		
	Responsibility of the FOO		
	Responsibility of the PIC		
	Authority to cancel, reroute, delay, initiate flights for operational, technical or commercial reasons		
Extract	Actual relevant AOC approvals All weather operation (AWO), IFR/VFR, RVSM, RNP/RNAV, MNPS, ETOPS, DGR		
Name effect on practice	Actual approvals and legal documents Certificate of airworthiness, certificate of insurance and third party liability, certificate of registration, noise certificate	Relevance of the documents	
	ERAP/ERP/emergency manual, OM-A		
	A/C sealing	Admission to A/C	
State	Qualification requirements for FOO according OM-D	Basic and recurrent	
	Reporting of incidents, accidents Ref. OM-A		
Distinguish	Incidents – accidents Ref. OM-A		
Extract, Name	All data-sources according to all LOs in the operator documentation		

<b>02 Fuel Policy</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Define	Contingency fuel, options according OM-A and basic regulation		
	Alternate fuel		
	Final reserve fuel		
	Additional fuel		
	Extra fuel		
	Company fuel	Tankering, company procedures	
	Minimum T/O fuel	Standard calculation	
	No alternate procedure according OM-A and basic regulation	Additional requirements	
	Pre-determined point procedure	incl. isolated aerodrome	
	Reduced contingency fuel procedure		
	Fixed speed operation		
	Variable speed operation	LRC, ECO, CI	

<b>03 Altimetry</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Define	QNH	SL, hPa	
	QFE	Elev. hPa	
	Standard	ISA - 1013 hPa, 29.92 inHG	
	MSA, Minimum Sector Altitude	as per OM-A	
	MORA, Minimum Off-Route Altitude	as per OM-A	
	MEA, Minimum Enroute Altitude	as per OM-A	
	MRA, Minimum Reception Altitude		
Extract	MSA	from OM-C	
	MORA	from OM-C	
	MEA	from OM-C	
Compute	Pressure altitude in relation airport elevation, 30ft/hPa		
	Estimated OAT based on given OAT in relation to given FL/altitude by using temperature coefficient +/- 2 K per 1000 ft		

<b>04 WX-Format</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Extract, Decode, Define	METAR/TAF period of validity		
	METAR/TAF condition BECMG, TEMPO, PROB, TEMPO PROB		
	METAR/TAF surface wind		
	METAR/TAF prevailing visibility and RVR		
	METAR/TAF significant weather	RA, SN, TS, TSRA, HZ, DU and other examples from OM	
	METAR/TAF showery conditions	SHRA, SHSN	
	METAR OAT / dew point / spread		
	METAR QNH / QFE		
	METAR/TAF supplementary information		
	Weather chart period of validity		
	Weather chart frontal systems		
	Weather chart temperature and wind situation		
Name effect on practice	CAT-areas		
	CBs & icing		
	Jetstreams		
	Volcanic ash		
	Tropopause heights		
	ITCZ		
	Tropical cyclones		
Extract, Decode	From TAF the lowest expected ceiling and visibility on given ETA	In relation to period of validity	
Define		Icing conditions:< +10°C TAT + visible moisture	

<b>05 LDG-Minima</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Compare, Name effect on practice	Outage of GP/GS according OM-A	Failed or Downgraded Equipment	
	Outage of ILS standby power according OM-A	Failed or Downgraded Equipment	
	Outage of RCL according OM-A	Failed or Downgraded Equipment	
	Outage of RL or RWY edge lights according OM-A	Failed or Downgraded Equipment	
Extract	Weather reports/forecasts		
Apply	Period of validity		
Make Decisions	BECMG, FM, TL		
	TEMPO, TEMPO FM, TEMPO TL		
	Transient/showery conditions, SHRA, SHSN		
	Persistent conditions		
	PROB30 TEMPO		
	Mean wind and gusts		
Compute	Resulting CWC and TWC	for expected RWY in use	
Extract	Limited CWC and TWC from OM-B		
Name effect on practice	Automatic versus manual landing	In view of max. CWC	
Make Decisions	Expected RWY in use		
Extract	Landing minima of the destination airport	LDG-normal	
		LDG-minima after glide path outage	
		LDG-minima after approach light system outage	
		LDG-minima after RWY-light outage	
Extract, Define	Best approach, best LDG-minima		
Distinguish	DA versus DH and MDA versus MDH	RWY elevation versus aircraft altitude at touchdown	
	Aircraft speed category	In view of landing minima	
	TORA versus TODA versus ASDA		

<b>05 LDG-Minima</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
	VIS versus RVR	In relation of forecasted VIS to landing minimum in RVR	
	Cloud base versus cloud ceiling		
Extract, Define	Crew qualification, allowed PIC-minima	Based on new type rating, cycles/hours minimum	
Make Decisions	best LDG-minima - best approach	for the type of operation	



<b>06 NOTAM</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Define and Decode	SNOWTAM	According OM-C decoding table	
	ASHTAM		
	NOTAM		
Name effect on practice	Volcanic ash advisory		
	NOTAM		
	Typhoon/hurricane advisory		

<b>07 T/O Minima</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Extract	T/O-minima from OM-C		
Apply	Minima data	in respect of NOTAM	
Extract	OM-procedures and data in view of T/O-minima requirements		
Make decision	Identify the RWY to be used for Take Off, if T/O is legal		
Apply	Procedures if T/O minima are not fulfilled	describe the consequences	
	Procedures if LDG-minima at departure are not fulfilled	describe the consequences	
Name effect on practice	Landing minimum at departure airport not fulfilled	T/O alternate required, within 60' if two eng., 120' if more than two eng. or ETOPS-approval.	

<b>08 ALTN Selection</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Compare	Suitable airport - adequate airport	Ref. OM-A,	
	Landing minima - planning minima	Planning min. is more restrictive, apply planning minima table, add. Values utilized in flightplanning. No planning minima after T/O	
State	Utilization of suitable airport	Ref. OM-A, Basic regulation destination, T/O alternate ETOPS alternate	
	Utilization of adequate airport	Ref. OM-A, basic regulation enroute alternate, overwater operations	
	Possibility to change planned alternate	Criteria, poss. change by ATC final decision by PIC	
	Operational aspects for ALTN-selection	Authorized airport, distance/fuel, political situation, immigrations for passengers, fuel, company policy, handling facilities and contracts, economical aspects	
Name effect on practice	Unsuitable destination	Two alternates required Two alternates in ATC-plan	
	Unsuitable destination alternates		
Define	Reasons for unsuitable airport	Check conditions of adequate airports: AIP and NOTAM check. WX-planning minima, curfew, NOTAM, weather, downgraded equipment, company regulation	
	No alternate planning OM-A, basic regulation		

<b>09 CWO, Cold Weather Operation</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Extract	CWO procedures and data from the OM		
Define	HOT	Hold over time	
	LOUT	Lowest operational used temperature	
	One-step and two-step procedure		
	Fluid Type 1,2 and 4	In view of HOT, mixture and costs	
	De-Icing		
	Anti-Icing		
	RWY contamination	show tables from OM-B	
Name, Name effect on practice	Anti-ice information after anti-icing was done	Info to crew, reason, contents	
	Braking action, method of measurement	and data-reliability	
	Cold soak effect	General safety risk, anti icing procedures to be observed	
Decode	RWY Report	I.e. from METAR	
Distinguish	Braking action versus measured coefficient versus normative coefficient according OM		
Name effect on practice	Effects of RWY contamination on take -off and/or landing performance	aspects of winter season	
Decode	SNOWTAM		

<b>10 Landing Performance</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Compare	LDA versus LDR	Actual or demonstrated LD (LDA) without safety margins, LDR=167% of LDA	
Name effect on practice	influence of approach speed on landing distance	Speed categories: A - E	
State	use of thrust reverser	Influence to LD during RWY-contamination, MEL	
	use of anti skid	Considered in calculation	
Name effect on practice	factors of influence on landing distance	RWY cond., appr. speed corr., GW, HWC-TWC, flap setting, PA, OAT, MEL/CDL-Items. No stopway.	
Extract	Approach climb performance (one engine out, gear up)		
State	Manual landing		
Distinguish	Auto brake/manual brake		
Compute	Landing distance required	OM-B, observe +15% for wet RWY	

<b>11 T/O Performance</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Define	TORA ref OM-C	Distance for ground run of A/C	
	TODA ref OM-C	TORA + CWY	
	ASDA ref OM-C	TORA + SWY	
	Clearway ref OM-C	Clear of obstacle, for initial climb, no ground run	
	Stopway Ref OM-C	to support a/c after aborted take-off	
Name effect on practice	Antiskid outage		
	Reverser outage		
Define	Balanced field length	Ratio ASDA/TODA, optimization of maximum weight (by sketch)	
Define, Name effect on practice	Factors of influence to T/O performance limitations	OAT, PA, RWY cond.HWC/TWC, V1/V2 ratio, bleed air, MEL/CDL, GW, config., RWY slope, CG	
Compute	v1, v2, vr	Based on given flight and conditions with available means	
Name, Name effect on practice	Measurement of braking action	Reliability/relevance of information	
Define	Climb limitations	Second Segment, climb gradient	
Define, Name effect on practice	Factors of influence to climb performance limitations	OAT, PA, V1/V2 ratio, bleed air, MEL/CDL-Items, GW, flap setting	
Define	Obstacle limitations	35ft, net flight path, departure sector with VMC/IMC	
Define, Name effect on practice	Factors of influence to obstacle performance limitations	OAT, wind, PA, V1/V2 ratio, bleed air, MEL/CDL, GW config., position/height of obstacle, IMC-VMC	

<b>12 Usability of Aerodromes</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Details</b>	<b>Remarks</b>
Define and Extract	Adequate airport, operators airport Authorization requirements (incl. exemptions)	Ref to OM-A, example from approved airport list	
State	PCN-ACN		
	Factors of influence	Flexible/rigid, CBR	
Compute/extract	Planned GW in relation to ACN	Calculate for certain a/c-type, use of formula	
State, Name effect on practice	Exemption-rules		
State	LCN, SIWL, tire pressure		
State, Name effect on practice	Factors of influence	% of GW on MGL, CG, tire press.	
Compute	GW in relation to LCN	Use of graph, use of formula	
Decode, Name effect on practice	RFFS	Show min. RFFS cat. for certain A/C	
Extract	Hours of operation	OM-C, factor of influence: NOTAM, daylight (SR/SS)	
Distinguish	Airport qualification category A, B, C	OM	
Extract, Name effect on practice	Airport of entry		

<b>13 MEL CDL</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject detail</b>	<b>Remarks</b>
Define	Flight day ref to OM-B	24hrs midnight to midnight	
	Rectification interval ref to OM-B	Example: A-D	
Distinguish, compare	MEL - CDL	Aircraft systems versus Aerodynamic configuration	
Extract, state	Operator technical information System/source (handicap item list)		
Extract, Name effect on practice	Example MEL	Examples: APU , HF, anti skid, pack, horizon, NAV light, beacon, auto flight, TCAS	
Extract, Name effect on practice	Example CDL	Examples: flap track fairing, landing light, horizontal stabilizer leading edge, winglets	



<b>14 ETOPS</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Define	Conditions of ETOPS approval	Procedures, data, qualification, ref. to OM-A	
		Authorization by CAA ACC.basic operation	
Define	Adequate airport	as per OM-A	
	ETOPS-threshold, 60 minutes	Still air distance, one ENG out	
Name effect on practice	MEL/CDL	ETOPS-criteria, System redundancy, example: electric, fuel, hydraulic, APU. emerg. equip, fire protection, NAV-equipment, communication-equipment	
Name	ETOPS maintenance preflight check prerequisite for ETOPS-Leg		
Distinguish	Adequate versus suitable airport	Criteria OM-A	

<b>15 Area of Operation</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Name effect on practice	maximum distance over water	Ref. OM-A/B	
Name	required aircraft equipment for over water ops	Survival, raft, life vests	
Name effect on practice	fire extinguisher in hold	None available => adequate airport in reach of xx NM or mins	
Define	extended overwater ops	MEL-chapter	
Evaluate	distance from adequate airport	Display on chart	
	Oxygen requirements	OM-A/B Diversion time above FL100 after decompression	
State	Area of operation	Ref. AOC/OM-A, restricted to Europe, Atlantic or unrestricted	
Name effect on practice	HF-inop, LRNS inop	MEL criteria, rerouting, blue spruce routes, VHF-coverage, special MNPS permission	
	RVSM incapability	MEL criteria, Below FL280, Item 10 ATS-flightplan, letter W	
Define	MNPS airspace	MEL criteria, North Atlantic crossing, special navigational equipment, HF and SELCAL, MEL-items, item 10 in ATS-flightplan, Letter X, min. nav. performance specification	
Name	OTS	Oceanic tracks east and westbound, time limits, validity, publication / source	
Name, Name effect on practice	scope of network management	Eurocontrol, network management, coordinates slots, regulations, helpdesk	
	scope of IFPS	MAN, ACK or REJ flight plans in Europe, check conformity with RAD and AIP, AFTN/SITA message distribution	
	region of control of network management	ECAC	

Name	CHMI (Central Human Machine Interface) and NOP (Network Operating Portal)	Slot handling, sector counts and availability, SLOT allocation and definition	
Name effect on practice	CPDLC (Controller Pilot Datalink Communication) as regional requirement	MEL	
Name, Name effect on practice	ADS-B (Automatic Dependence Surveillance) Type B as regional and equipment based procedures	MEL	

<b>16 DGR, Dangerous Goods Regulations</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Extract	DGR-procedures and data from OM-A		
Define	Drill codes		
	UN-number		
	inherent and additional risks of DG		
	CAO		
	Transport index		
	Incompatibilities for the loading of DG		
Name	Contents of the NOTOC		
Find out reason	of NOTOC		
Name effect on practice	Factors of influence of DG to flightplanning	Ground times, overflight of specific states or regions, Max. flight time due to RRY transport Index	

<b>17 OFP Operational Flight Plan</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
State	related data/procedure	OM-A-C	
Compare and nep	elevation DEST / ALTN		
Make decisions	ETA (to keep schedule)	Routing / speed	
Apply	Specific payload		
Name effect on practice	- NOTOC		
Make decisions	- Routing		
Define	ZFW	DOW + payload, MZFW	
Name effect on practice	ADDFUEL	Weather, routing, comm	
Define	LW	Limitations (Performance, Structural). Increase tripfuel by % of contg. fuel	
Define	TOW	Limitations (Performance, Structural, LW)	
Define, Name effect on practice	Speeds	Econ, const. Mach, LRC, MRC	
Name effect on practice	NAT-procedures	Track, MTT, MDT, MFT, INS-failure, NARs, non common, MNPS User manual	
Apply, Compute	Tripfuel for crosscheck by using distance, speed, fuel flow from OFP	FF (t/h), NAM/NM, wind component, TAS/GS	
Define	T/O ALTN	criteria for two / or more than two eng.	
Apply	TRK	True, Mag, Grid	
Apply, Compute	Distance	SID, STAR, APPROACH distance from OM-C	
Name effect on practice	LVL	OM-C data, OM-B chart opt. altitude, specific country regulations even/odd, OTS	
Compute	TEMP	ISA, ISA DEV, climb	
Define, Name effect on practice	Wind	AVGE, prognostic, upper air data	

<b>17 OFP Operational Flight Plan</b>			
<b>Requirements</b>	<b>Subjects</b>	<b>Subject details</b>	<b>Remarks</b>
Extract	TAS	OM-B	
Compute	GS	TAS-WC	
Define, Compute	Minimum diversion fuel	Remaining Trip, ALTN, final reserve, contingency, ADDFU, ETOPS	
Define, Evaluate	Remaining fuel on board by different flight status	Inflight or after landing at DEST or at ALTN	
Define, Compute	Max possible EXTRA fuel in relation to max TOM, max LAM, max. tank capacity.		
Define, Compute	Max possible additional load in relation to max TOM, max LAM, max. ZFM.		
Define, Compute	Fuel savings/tankering	by using given data \$/t	
Check Results	ATC-Plan		
Define, Apply, Name effect on practice	Briefing package ref. OM-A	OFP, NOTAMS, WX-Forecast, WX-charts, company information	
Name	Back-up procedures	alternative system/procedure to obtain briefing package	

<b>18 Operational Aspects</b>			
<b>Requirements</b>	<b>Subject</b>	<b>Subject details</b>	<b>Remarks</b>
Extract	Duty time-limitations, based on: standard-crew, single leg and departure-time allowing the longest duty period, according to OM-A.		
Name	Factors of Influence to maximum duty time	Window of circadian low (WOCL), number of legs, crew composition	
	Factors of influence to minimum rest time	Preceding duty period, time zones, extensions	
	Factors of influence to maximum number of passenger	Reduced cabin crew operation	
Define	check-in period		
Compute	Actual duty time	based on actual operation	
	Maximum duty time	based on actual operation and OM-A limits	
Name effect on practice	Exceedance of duty time limitations, possible solutions, consequences to the subsiding operation	Crew enlargement, crew-change, duty-extension by PIC, subsiding rest period	
Name	Factors of influence to aircraft allocation and tail assignment limitations	Flight hours and cycles limitation of letter checks, AD-notes, service bulletins.	
Define	Direct operating costs (DOC)	Variable and fixed costs in direct relation to a flight	
	Variable versus fixed costs	Variable costs will vary if a flight is conducted or not Fixed costs will not vary if a flight is conducted or not	
	Direct versus Indirect costs	Direct costs are variable or fixed and in direct relation to a flight. Indirect costs are not in direct relation to a flight.	
	ACMI (Aircraft, Crew, Maintenance, Insurance)	Fixed costs of the DOC	
State	Factor of influence to the passenger compensation fee according EC 261/2014	Ticket affecting EC, delay of more than 2, 3, 4 hours, sector length	
State	Factors of influence to DOC, under direct Influence of the FOO	Variable costs of: fuel, ATC, time, fees, delay. ACMI (by resource productivity)	

