

Hello Tomorrow



Developing and Implementing UPRT at Emirates Airline

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Senior Standards Training Captain

ICAO MID Region Safety Summit

Doha, Qatar, May 2016

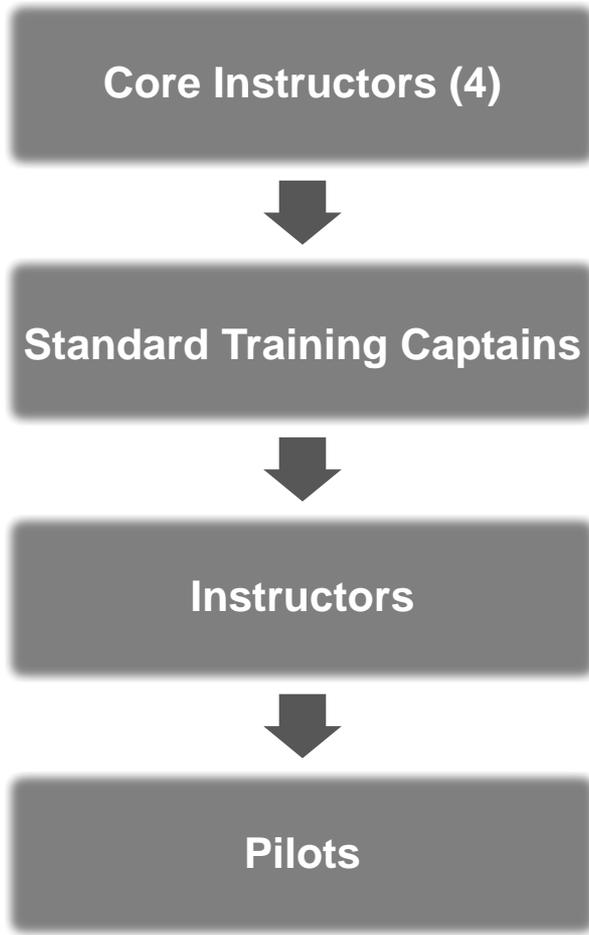
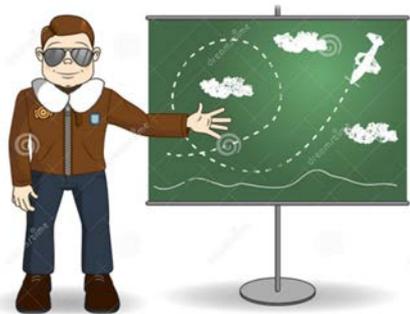


Loss of Control In-Flight Symposium

ICAO Headquarters, Montreal, May 2014



UPRT FSTD Instructor Qualification



Instructor Qualification

- eLearning + Exam
- Classroom
- FFS
 - 4 hours
 - 2 Instructors U/T



UPRT Instructor Qualification Training					
Time	Events			ALT	F/CTL LAW
Trainee 1 – Effects of Controls – Low Altitude (Trainees in seats)					
0:15	1	• Raw Data TO/SID/Climb 5000'		L	N
	2	• Primary Flight Control Evaluation – Normal Law		L	N
	3	• Primary Flight Control Evaluation – Degraded Law		L	D
0:25	4	• Secondary Control Characteristics (Trim)		L	D
Trainee 1 – Effects of Controls – High Altitude (Trainees in seats)					
	5	• Secondary Control Characteristics (Thrust)		H	N
0:35	6	• AoA Management		H	A
Trainee 1 – Stall Recoveries – High/Low Altitude (Trainees in seats)					
	7	• Stall Recovery/Clean Config/Level Turn		H	A
0:45	8	• Stall Recovery/Approach Config/3° GP		L	A
Trainee 1 – Upset Recovery – Nose High – Low Altitude (Instructor in seat – instructor demo then trainee practice)					
	9	• Nose High Characteristics Demo/Pitch Technique		L	A
	10	• Nose High Characteristics Demo/Bank Technique		L	A
	11	• Nose High Recovery – Nose High/Wings Level		L	A
1:05	12	• Nose High Recovery – Nose High/45° AoB		L	A
Trainee 1 – Upset Recovery – Nose Low – Med Altitude (Instructor in seat – instructor demo then trainee practice)					
	13	• Nose Low Recovery – Nose Low/45° AoB		M	A
1:20	14	• Nose Low Recovery – Nose Low/High AoB		M	A
Repeat 1 – 14 for Trainee 2					
Break					
Trainee 1 – Demos (Trainees in seats)					
	15	• Each Demo One Nose High Upset Recovery		L	A
3:00	16	• Each Demo One Nose Low Upset Recovery		M	A
Repeat 15 – 16 for Trainee 2					
Trainee 1 and 2 – CRM Exercise (Trainees in seats. Recovery from LH and RH seat. As PF and PM. Day and Night/IMC)					
3:30	17	• Upset Recovery Setup/Startle/Recovery		L/M	A

Upset Prevention

Recurrent

Conversion

- EASA AMC2 ORO.FC.220&230 – Table 1
- Gap analysis
- Risk analysis
- Distribution of UPRT elements across EBT

Recurrent Phases

- Distribution of UPRT elements across EBT

Conversion Courses

Upset Recovery

Recurrent

Conversion

- EASA AMC2

ORO.FC.220&230 – Table 2

Upset Prevention and Recovery Training (UPRT)			
Time	Exercise	ALT	F/CTL Law*
Advanced Handling Characteristics (Instructor in seat)			
	1) Ailerons	L	N/D
	2) Rudder	L	N/D
	3) Energy management	H	N
	4) G-load awareness and management	H	A
Stall Event Recovery (Instructor in seat)			
	Approach-to-stall recovery in various configurations	H/L	A
Upset Recovery (Instructor in seat)			
Normal Law			
	1) Nose-high / 45° bank angle	L	N
	2) Nose-high / 45° bank angle	H	N
Degraded Law – Nose-high			
	3) Nose-high characteristics – using elevator / thrust	L	A
	4) Nose-high characteristics – using bank angle	L	A
	5) Nose-high / wings level	L	A
	6) Nose-high / 45° bank angle	L	D
Degraded Law – Nose-low			
	7) Nose-low / 45° bank angle	M	A
	8) Nose-low / high bank angle (Night / IMC)	M	D
Consolidation of Upset Recovery Techniques (Trainees in seats)			
Recovery from each seat. As PF and PM. Day and Night / IMC.			
	9) 2 recovery exercises / trainee	L/M	A

Recurrent UPRT + EBT



EBT Recurrent Phases							
6	1	2	3	4	5	6	1
AUG 2016	FEB 2017	AUG 2017	FEB 2018	AUG 2018	FEB 2019	AUG 2019	FEB 2020
	UPRT <ul style="list-style-type: none"> eLearning + Exam Classroom FFS Recovery Prevention 			UPRT <ul style="list-style-type: none"> eLearning + Exam Classroom FFS Recovery Prevention 			UPRT <ul style="list-style-type: none"> eLearning + Exam Classroom FFS Recovery Prevention

Challenges

- Information processing
- Fitting it in
- Doing the right thing –
AURTA or what?
- Standardization and
Quality Assurance

