

KLS

KLM Flight Academy



KSA 100 in TM

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CTKI

June 28th, 2018



Instructional Systems design ADDIE

The five phases are:

- analysis,
- design,
- development,
- implementation and
- evaluation



Analysis



You're never
too cool to learn
something new.

Word of the Day
daily newsletter!

Actual content in Training Manual

Total lessons	<u>615 of 50 minutes</u> = 512.5 clock hours (excl. breaks)
Total assignments	287 of 60 minutes = <u>287 clock hours</u>
Total instruction	799.5 clock hours

4.4 ATPL (A) LESSON PLAN

Compliance to Part-FCL

In each textbook of Nordin a compliance list can be found to assure that the teaching material is according Subpart D, AMC1 FCL.515 (b). In the breakdown of the lectures the complete content of the books is involved. The class room hours and assignments cover all LO's as published by EASA.

Structure: Three separate blocks of theory.

Block 1	lessons	Assign-ments	Block 2	lessons	Assign-ments	Block 3	lessons	Assign-ments
Meteorology	59	29	General navigation	78	38	Human perf & limitations	34	10
						Social skills	10	
						Stress management	6	
Principles of flight	46	20	Radio Navigation	40	30	Flight planning	28	13
			Sim	4				
			Communications IFR, incl practical test and Morse code exam	25	4	AGK Instrumentation	80	43
AGK/Airframe, systems and powerplants	56	25	Airlaw	44	16	USA Airlaw and Communications	19	13
AGK/Electrics	19	8				Operational procedures	12	12
Communications VFR, incl practical test	21		Mass & balance	7	12	Performance	27	14
Total block 1	201	82	Total block 2	198	100	Total block 3	216	105

Total lessons 615 of 50 minutes = 512.5 clock hours (excl. breaks)
Total assignments 287 of 60 minutes = 287 clock hours
Total instruction 799.5 clock hours

Actual text in Training Manual

Tests

Two tests.

Test 1 will be held after charts have been taught to check the knowledge Flight Planning of SEP aircraft..

Test 2 will be held at the end of the complete course.

Cross links with other Subjects

There are links with General Navigation (Navigation log, charts), Radio navigation (nav aids) Air Law (airspace classifications, cruising levels etc.), Meteorology (weather info) and Performance (fuel flow and Airspeed tables, climb and descend graphics etc.).

Compliance list syllabi numbers versus lessonplan

Syllabus reference	Syllabus text	Lecture in ATPL lesson plan
033 01 00 00	FLIGHT PLANNING FOR VFR FLIGHTS	1 – 6, 15
033 02 00 00	FLIGHT PLANNING FOR IFR FLIGHTS	7 – 10
033 03 00 00	FUEL PLANNING	22 – 23, 7 – 8, 16 – 18, 19 – 21
033 04 00 00	PRE-FLIGHT PREPARATION	7 – 10, 16 – 18, 19 – 21
033 05 00 00	ATS FLIGHT PLAN	4
033 06 00 00	FLIGHT MONITORING AND IN-FLIGHT RE-PLANNING	7 – 10, 22 – 23
071 02 00 00	ETOPS	24 - 25

Breakdown

SUBJECT 030 Flight performance and planning	HEADING: 033 Flight Planning and monitoring	LECTURE NO 1 - 2
	SUBHEADING: Introduction and ED-6 chart	TRAINING PHASE: BLOCK 2
CONTENT: Introduction Fuel types ED-6 chart explanation Introduction assignment VFR		TRAINING AIDS Text book Slide presentation Route manual CAP 697

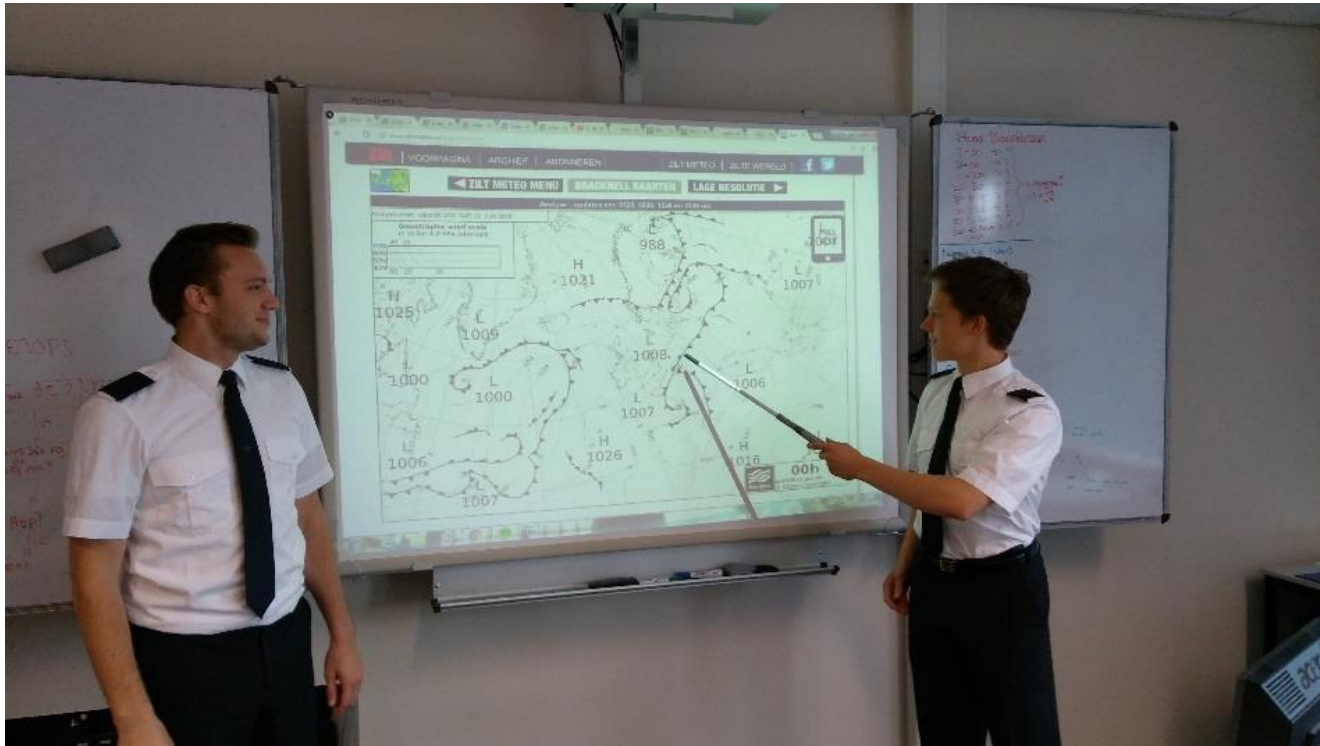
During the theory phase

- 4 Simulator details on SE simulator



At KLS in the theory phase

- Meteo briefings with the actual weather information



At KLS in the theory phase

- Oral boards with students and two instructors



Now at KLS in the theory phase

- Assignments with group work (all subjects)



At KLS in the theory phase

- 4 Simulator details on SE simulator
- Meteo briefings with the actual weather information
- Oral boards with students and two instructors
- Assignments with group work (all subjects)
- 12 hours training of social skills
- Exercises in mental calculation in Gen Nav and Flight Planning lessons

Design



Where in the training programme the FA's and SA's?

Formative Assessment(s)

- FA: 4 simulator sessions on FNPT1 simulator



Summative Assessment nr 1

Assignment in group of 3 students

- Flight planning assignment for SEP1 aircraft
 - Choice of route in VFR schart
 - Calculation top of climb
 - Navigation aids
 - Communication frequencies
 - Weather information
 - Fuel consumption
 - Block fuel calculation
 - Nav log and ICAO flight plan



Summative Assessment nr 2 Oral Board

- 100 02 01 Communication
- 100 02 02 Leadership and teamwork
- 100 02 03 Problem-solving and decision-making
- 100 02 04 00 Situation awareness
- 100 03 01 00 Application of knowledge
- 100 03 02 00 Upset prevention and recovery training (UPRT) and resilience



Mental mathematics 'written' test on PC

- On each LO 2 questions, in total 22 questions.





TRAINING MANUAL 1

ATP INTEGRATED COURSE

Text in Training Manual

100 KNOWLEDGE, SKILLS AND ATTITUDE

Teaching Materials

- Formative Assessment in the form of Simulator training, see 062
- Summative Assessment 1 Flight Planning assignment, see 033
- Summative Assessment 2 Oral board for completion KSA 100

Tests

- Two Summative Assessments:
 - flight planning assignment
 - oral board
- Mental mathematics test on PC/ laptop/ tablet .

Text in Training Manual

Score

The scores for the summative assessments and the mental mathematics test

- will be stored in the student records and is
- only available for the student and the assessor.

The summative assessments to be marked with:

Nacc = not acceptable (less than 35%)

Acc = acceptable (35% - 60%)

S = standard level (61% - 75%)

S+ = standard plus level (76% - 100%)

The score for the Mental Mathematics test $\geq 75\%$

Text in Training Manual

Where KSA 100 uses other subjects

The assessments consist of scenario planning exercises combining multiple subjects; practical exercises using training devices oral communication exercises; written assignments and project work; discussions; the preparation and delivery of group or individual presentations and discussions.

Mental mathematics is trained in 061 and 033.
(see table below)

Text in Training Manual

Compliance list syllabi numbers versus lessonplan

Syllabus reference	Syllabus text	Lecture in ATPL lesson plan
100 02 01 00	Communication	040 lecture 43 - 52
100 02 02 00	Leadership and teamwork	040 lecture 27 - 31, 38,39, 53-58
100 02 03 00	Problem solving and decision making	040 lecture 27 - 31,
100 02 04 00	Situation awareness	040 lecture 9 - 12
100 02 05 00	Workload management	040 lecture 38, 39
100 03 01 00	Application of knowledge	010, 032, 033, 062, 070
100 03 02 00	Upset prevention and recovery training (UPRT) and resilience	081 lecture 20- 23
100 04 00 00	Mental mathematics	061 lecture 65 - 70 033 lecture 15 - 23

Text in Training Manual FA en SA1

SUBJECT KSA 100	HEADING: Formative assessment	Duration: 4 hours
	SUBHEADING: Simulator sessions	TRAINING PHASE: BLOCK 2
CONTENT: 4 flights on FNPT1 simulator, 062 lecture 31 - 34		TRAINING AIDS FNPT1

SUBJECT KSA 100	HEADING: Summative assessment 1	Duration 4 hours
	SUBHEADING: Flight planning assignment	TRAINING PHASE: BLOCK 3
CONTENT: 033 Assignment planning of VFR flight in group of 3 students		TRAINING AIDS Nordian book ELO, CAP 697

SA2 and Mental Mathematics

SUBJECT KSA 100	HEADING: Summative assessment 2	Duration 30 minutes
	SUBHEADING: Oral board	TRAINING PHASE: BLOCK 3
CONTENT: Oral assessment about all LO's 100 02 and 100 03		TRAINING AIDS

SUBJECT KSA 100	HEADING: Mental mathematics	Duration 1 hour
	SUBHEADING: Test on PC	TRAINING PHASE: BLOCK 3
CONTENT: Test consisting of 22 questions, for each LO 100 04 two questions. This has to be done without the help of a calculator.		TRAINING AIDS PC, laptop or tablet

Records for registration

Name student:	Test:	Score:	Remarks:
Joost Weethetwel	SA 1	S+	Nervous
	SA 2	S+	Self esteem
	Mental Math	98%	Excellent
Peter Jeweetniks	SA 1	Nacc	Not cooperative
	SA 2	Acc	Very slow
	Mental Math	70%	Bad shape

Instructors training

- Relevant competencies and performance indicators
- Area 100 KSA LO's
- Formative and summative assessments
- Area 100 KSA grading system
- Student debrief methods and procedures



Example for instructor training

- 6 hours classroom training:
 - 00:30 explanation of definitions competencies
 - 01:00 explanation of KSA Area 100 LO's
 - 01:00 explanation of formative assessments
 - Example simulator:
How to train a 2 person crew on communication, leadership and teamwork, situational awareness in the simulator
 - 01:00 grading and assessing performance:
 - Observe related to the word pictures
 - Compare to the prescribed standard
 - Consider circumstances
 - Assess according to the word pictures
 - 01:00 Debriefing:
 - 'Feedback burger'
 - Two way communication
 - 01:30 practical exercises



Refresher training

- To keep the instructor proficient, he/she shall at least perform XXX formative assessments and XXX summative assessments per year.
- In addition 03:30 refresher training:
 - 01:00 Grading and assessing performance:
 - observe (related to the word pictures)
 - compare to the prescribed standard
 - consider circumstances → assess according to the word pictures.
 - 01:00 Debriefing:
 - 'feedback burger'
 - 01:30 practical exercises



Thank you for your attention