

# Appendix 1 to TRM ATPL (INT)

## Training Syllabus ATPL INT

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# 1 Theory Training Syllabus ATPL(A) INT

## 1.1 Theory Training – Basic

Kategorie	Kürzel	Beschreibung	Minuten	Stunden
010 LAW	LAW-1-1-B	010 05 00 RULES OF THE AIR ACCORDING TO ICAO ANNEX 2 AND SERA	90	1,5
010 LAW	LAW-1-2-B	010 07 00-07 02 11 AIR TRAFFIC SERVICES (ATS) AND AIR TRAFFIC MANAGEMENT (ATM)	90	1,5
010 LAW	LAW-1-3-B	010 07 02 15-07 02 20 AIR TRAFFIC SERVICES (ATS) AND AIR TRAFFIC MANAGEMENT (ATM)	90	1,5
010 LAW	LAW-1-4-B	010 09 00-09 06 AERODROMES Design and Operations and Regulation	90	1,5
021 AGK	AGK-1-1-B	021 01 00 SYSTEM DESIGN, LOADS, STRESSES, MAINTENANCE	90	1,5
021 AGK	AGK-1-2-B	021 02 00 AIRFRAME	90	1,5
021 AGK	AGK-1-3-B	021 05 00 FLIGHT CONTROLS	90	1,5
021 AGK	AGK-1-4-B	021 10 00 -10 09 04 PISTON ENGINES	90	1,5
022 INS	INS-1-1-B	022 01 00 SENSORS AND INSTRUMENTS	120	2
022 INS	INS-1-2-B	022 02 00-02 06 MEASUREMENT OF AIR DATA PARAMETERS	60	1
022 INS	INS-1-3-B	022 03 03-04 MAGNETISM: DIRECT READING COMPASS AND FLUX VALVE	90	1,5
022 INS	INS-1-4-B	022 04 00-04 GYROSCOPIC INSTRUMENTS	90	1,5
032 PER	PER-1-1-B	032 01 00 PERFORMANCE - GENERAL	180	3
032 PER	PER-1-2-B	032 02 00 CS-23/APPLICABLE OPERATIONAL REQUIREMENTS PERF. CLASS B	180	3
033 FPM	FPM-1-1-B	033 01 00 FLIGHT PLANNING FOR VFR FLIGHTS	180	3
033 FPM	FPM-1-2-B	033 04 00 PRE-FLIGHT PREPARATION	120	2
033 FPM	FPM-1-3-B	033 05 00 ICAO FLIGHT PLAN (ATS flight plan (FPL)) BASIC	60	1
050 MET	MET-1-1-B	050 01 00 THE ATMOSPHERE	90	1,5
050 MET	MET-1-2-B	050 02 00-02 02 WIND	90	1,5
050 MET	MET-1-3-B	050 04 00 CLOUDS AND FOG	120	2
050 MET	MET-1-4-B	050 05 00 PRECIPITATION	60	1

Kategorie	Kürzel	Beschreibung	Minuten	Stunden
050 MET	MET-2-1-B	050 09 00-04 FLIGHT HAZARDS BASIC	180	3
050 MET	MET-2-2-B	050 10 02- 04 METEOROLOGICAL INFORMATION	180	3
061 GEN	GEN-1-1-B	061 01 00 BASICS OF NAVIGATION 1	180	3
061 GEN	GEN-1-2-B	061 01 00 BASICS OF NAVIGATION 2	180	3
061 GEN	GEN-2-1-B	061 02 00 VISUAL FLIGHT RULE (VFR) NAVIGATION 1	180	3
061 GEN	GEN-2-2-B	061 04 00 CHARTS 1	180	3
062 RAN	RAN-1-1-B	062 01 00 BASIC RADIO PROPAGATION THEORY 1	180	3
062 RAN	RAN-1-2-B	062 01 00 BASIC RADIO PROPAGATION THEORY 2	120	2
062 RAN	RAN-1-3-B	062 02 00 RADIO AIDS BASIC	60	1
071 OPS	OPS-1-1-B	071 01 00-01 02 GENERAL REQUIREMENTS BASIC	60	1
081 POF	POF-1-1-B	081 01 00-09 SUBSONIC AERODYNAMICS BASIC	180	3
081 POF	POF-1-2-B	081 02 05 HIGH SPEED AERODYNAMICS BASIC	90	1,5
081 POF	POF-1-3-B	081 03 00 Stall, shock stall, and upset prevention and recovery (Basic UPRT)	90	1,5
081 POF	POF-2-2-B	081 05 00 CONTROL BASIC	90	1,5
081 POF	POF-2-1-B	081 07 00 PROPELLERS	180	3
081 POF	POF-2-3-B	081 08 00 FLIGHT MECHANICS	90	1,5
090 COM	COM-1-1-B	090 01 00 CONCEPT	120	2
090 COM	VFC-1-2-B	090 02 00 GENERAL OPERATING PROCEDURES	180	2
090 COM	VFC-1-3-B	090 03 00 RELEVANT WEATHER INFORMATION	150	2,5
090 COM	VFC-1-4-B	090 04 00 VOICE COMMUNICATION FAILURE	240	4
090 COM	VFC-1-5-B	090 05 00 DISTRESS AND URGENCY PROCEDURES	150	2,5
090 COM	VFC-1-6-B	090 06 00 VHF PROPAGATION AND ALLOCATION OF FREQUENCIES	150	2,5
090 COM	IFC-1-7-B	090 07 00 OTHER COMMUNICATION	90	1,5

## 1.2 Theory Training – Advanced

Kategorie	Kürzel	Beschreibung	Minuten	Stunden
010 LAW	LAW-2-1-A	010 01 00 INTERNATIONAL LAW: CONVENTIONS, AGREEMENTS AND ORGANISATIONS	30	0,5
010 LAW	LAW-2-2-A	010 02 00 AIRWORTHINESS OF AIRCRAFT, AIRCRAFT NATIONALITY AND REGISTRATION MARKS	30	0,5
010 LAW	LAW-2-3-A	010 03 00 Intentionally left blank	30	0,5
010 LAW	LAW-2-4-A	010 04 00 PERSONNEL LICENSING	30	0,5
010 LAW	LAW-2-5-A	010 06 00 AIRCRAFT OPERATIONS	30	0,5
010 LAW	LAW-2-6-A	010 07 02 12-07 02 14 AIR TRAFFIC SERVICES (ATS) AND AIR TRAFFIC MANAGEMENT (ATM)	30	0,5
010 LAW	LAW-2-7-A	010 08 00 AERONAUTICAL INFORMATION SERVICE (AIS)	30	0,5
010 LAW	LAW-2-8-A	010 09 07-09 ENDE AERODROMES Design and Operations and Regulation	30	0,5
010 LAW	LAW-2-9-A	010 10 00 FACILITATION (ICAO Annex 9)	30	0,5
010 LAW	LAW-2-10-A	010 11 00 SEARCH AND RESCUE (SAR)	30	0,5
010 LAW	LAW-2-11-A	010 12 00 SECURITY — Safeguarding International Civil Aviation against Acts of Unlawful Interference (ICAO Annex 17)	30	0,5
010 LAW	LAW-2-12-A	010 13 00 AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION	30	0,5
021 AGK	AGK-2-1-A	021 03 00 HYDRAULICS	120	2
021 AGK	AGK-2-2-A	021 04 00 LANDING GEAR, WHEELS, TYRES AND BRAKES	60	1
021 AGK	AGK-2-3-A	021 06 00 PNEUMATICS - PRESSURISATION AND AIR CONDITIONING SYSTEMS	120	2
021 AGK	AGK-4-1-A	021 07 00 ANTI-ICING AND DE-ICING SYSTEMS	60	1
021 AGK	AGK-4-2-A	021 08 00 FUEL SYSTEM	60	1
021 AGK	AGK-3-1-A	021 09 00 ELECTRICS 1	180	3
021 AGK	AGK-3-2-A	021 09 00 ELECTRICS 2	180	3
021 AGK	AGK-2-4-A	021 10 10 PISTON ENGINES	60	1
021 AGK	AGK-4-4-A	021 11 00 TURBINE ENGINES	120	2
021 AGK	AGK-4-3-A	021 12 00 PROTECTION AND DETECTION SYSTEMS	60	1
021 AGK	AGK-4-5-A	021 13 00 OXYGEN SYSTEMS	60	1

Kategorie	Kürzel	Beschreibung	Minuten	Stunden
022 INS	INS-2-1-A	022 02 07-08 MEASUREMENT OF AIR DATA PARAMETERS 2	30	0,5
022 INS	INS-2-2-A	022 03 00-02 MAGNETISM: DIRECT READING COMPASS AND FLUX VALVE	30	0,5
022 INS	INS-2-3-A	022 04 05-06 GYROSCOPIC INSTRUMENTS	30	0,5
022 INS	INS-2-4-A	022 05 00 INERTIAL NAVIGATION	90	1,5
022 INS	INS-2-5-A	022 06 00 AEROPLANE: AUTOMATIC FLIGHT CONTROL SYSTEMS	60	1
022 INS	INS-2-6-A	022 08 00 TRIMS, YAW DAMPER AND FLIGHT ENVELOPE PROTECTION	60	1
022 INS	INS-2-7-A	022 09 00 AUTOTHURST — AUTOMATIC THRUST CONTROL SYSTEM	60	1
022 INS	INS-3-1-A	022 10 00 COMMUNICATION SYSTEMS	30	0,5
022 INS	INS-3-2-A	022 11 00 FLIGHT MANAGEMENT SYSTEM (FMS)/FLIGHT MANAGEMENT AND GUIDANCE SYSTEM (FMGS)	90	1,5
022 INS	INS-3-3-A	022 12 00 ALERTING SYSTEMS, PROXIMITY SYSTEMS	60	1
022 INS	INS-3-4-A	022 13 00 INTEGRATED INSTRUMENTS: ELECTRONIC DISPLAYS	60	1
022 INS	INS-3-5-A	022 14 00 MAINTENANCE, MONITORING AND RECORDING SYSTEMS	60	1
022 INS	INS-3-6-A	022 15 00 DIGITAL CIRCUITS AND COMPUTERS	60	1
031 MAB	MAB-1-1-A	031 01 00 PURPOSE OF MASS AND BALANCE CONSIDERATIONS	60	1
031 MAB	MAB-1-2-A	031 02 00 LOADING	60	1
031 MAB	MAB-1-3-A	031 03 00 INTENTIONALLY LEFT BLANK	60	1
031 MAB	MAB-1-4-A	031 04 00 MASS AND BALANCE DETAILS OF AIRCRAFT	60	1
031 MAB	MAB-1-5-A	031 05 00 DETERMINATION OF CG POSITION	60	1
031 MAB	MAB-1-6-A	031 06 00 CARGO HANDLING	60	1
032 PER	PER-2-1-A	032 02 05 CS-23/APPLICABLE OPERATIONAL REQUIREMENTS PERF. CLASS B — THEORY	120	2
032 PER	PER-2-2-A	032 03 00-02 CS-23/APPLICABLE OPERATIONAL REQUIREMENTS PERF. CLASS B — USE OF AEROPLANE PERF. DATA SEP OR MEP	60	1
032 PER	PER-2-3-A	032 03 03-04 CS-23/APPLICABLE OPERATIONAL REQUIREMENTS PERF. CLASS B — USE OF AEROPLANE PERF. DATA SEP OR MEP	180	3



Kategorie	Kürzel	Beschreibung	Minuten	Stunden
032 PER	PER-3-1-A	032 04 00 CS-25/APPLICABLE OPERATIONAL REQUIREMENTS PERFORMANCE CLASS A – THEORY	180	3
032 PER	PER-3-2-A	032 05 00 CS-25/APPLICABLE OPERATIONAL REQUIREMENTS PERF. CLASS A – USE OF AEROPLANE PERF. DATA	180	3
033 FPM	FPM-3-1-A	033 02 00 FLIGHT PLANNING FOR IFR FLIGHTS	360	6
033 FPM	FPM-2-1-A	033 03 00 FUEL PLANNING – CAT.OP.MPA.106 and CAT.OP.MPA.150 plus AMC1, 2 and 3	60	1
033 FPM	FPM-2-2-A	033 05 00 ICAO FLIGHT PLAN (ATS flight plan (FPL)) ADV	60	1
033 FPM	FPM-2-3-A	033 06 00 FLIGHT MONITORING AND IN-FLIGHT REPLANNING	60	1
033 FPM	FPM-2-4-A	EAA 00 00 Rocket Route	180	3
040 HUP	HUP-1-1-A	040 01 00 HUMAN FACTORS: BASIC CONCEPTS 1	180	3
040 HUP	HUP-1-2-A	040 01 00 HUMAN FACTORS: BASIC CONCEPTS 2	180	3
040 HUP	HUP-2-1-A	040 02 00 Basics of aviation physiology and health maintenance	180	3
040 HUP	HUP-2-2-A	040 03 00 BASIC AVIATION PSYCHOLOGY	180	3
050 MET	MET-3-1-A	050 02 03-02 07 WIND	180	3
050 MET	MET-3-2-A	050 03 00 THERMODYNAMICS	180	3
050 MET	MET-4-1-A	050 06 00 AIR MASSES AND FRONTS	180	3
050 MET	MET-4-2-A	050 07 00 PRESSURE SYSTEMS	120	2
050 MET	MET-4-3-A	050 08 00 CLIMATOLOGY	60	1
050 MET	MET-5-1-A	050 09 05-09 FLIGHT HAZARDS ADV	180	3
050 MET	MET-5-2-A	050 10 00-01 05 METEOROLOGICAL INFORMATION ADV	180	3
061 GEN	GEN-3-1-A	061 03 00 GREAT CIRCLES AND RHUMB LINES	120	2
061 GEN	GEN-3-3-A	061 04 00 CHARTS 2 Day 1	180	3
061 GEN	GEN-4-1-A	061 04 00 CHARTS 2 Day 2	360	6
061 GEN	GEN-3-2-A	061 05 00 Time	60	1
062 RAN	RAN-2-2-A	062 02 00 RADIO AIDS ADV	180	3

Kategorie	Kürzel	Beschreibung	Minuten	Stunden
062 RAN	RAN-2-1-A	062 03 00 RADAR	180	3
062 RAN	RAN-3-1-A	062 06 00 GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSSs)	180	3
062 RAN	RAN-3-2-A	062 07 00 PERFORMANCE-BASED NAVIGATION (PBN)	180	3
071 OPS	OPS-1-2-A	071 01 03-04 GENERAL REQUIREMENTS ADV	120	2
071 OPS	OPS-1-3-A	071 02 00 SPECIAL OPERATIONAL PROCEDURES AND HAZARDS (GENERAL ASPECTS)	150	2,5
071 OPS	OPS-1-4-A	071 04 00 SPECIALISED OPERATIONS	30	0,5
081 POF	POF-3-1-A	081 01 10-12 SUBSONIC AERODYNAMICS ADV	120	2
081 POF	POF-3-3-A	081 02 00-04 HIGH SPEED AERODYNAMICS	180	3
081 POF	POF-3-2-A	081 03 00 Stall, shock stall, and upset prevention and recovery ADV	60	1
081 POF	POF-4-1-A	081 04 00 STABILITY	120	2
081 POF	POF-4-2-A	081 05 00 CONTROL ADV	60	1
081 POF	POF-4-3-A	081 06 00 LIMITATIONS	180	3
100 KSA	KSA-1-1-A	100 01 00 ICAO CORE COMPETENCIES	60	1
100 KSA	KSA-1-2-A	100 02 00 CORE COMPETENCIES LEARNING OBJECTIVES	120	2
100 KSA	KSA-2-1-A	100 03 00 ADDITIONAL THREAT AND ERROR MANAGEMENT (TEM) RELATED LEARNING OBJECTIVES	120	2
100 KSA	KSA-2-1-B	100 03 02 00 Upset prevention and recovery training (UPRT) and resilience	360	6
100 KSA	KSA-2-2-A	100 04 00 MENTAL MATHS	60	1
100 KSA	KSA-3-1-A	XXX ATTC 1	180	3
100 KSA	KSA-3-2-A	XXX ATTC 2	180	3
XX1 PAN	PAN-1-1-A	Definitions and Abbreviations	60	1
XX1 PAN	PAN-1-2-A	Chart Legend incl. Doc. 8168	120	2
XX1 PAN	PAN-1-3-A	International Civil Aviation Organisation - Definitions	30	0,5
XX1 PAN	PAN-1-4-A	Document 8168 - ATC Control and gen. Principles	150	2,5
XX1 PAN	PAN-2-1-A	Departure-, Arrival and Approach Procedure	90	1,5
XX1 PAN	PAN-2-2-A	Enroute and Holding Procedures	60	1
XX1 PAN	PAN-2-3-A	Noise Abatement	30	0,5
XX1 PAN	PAN-2-4-A	RNAV-Procedures	120	2
XX1 PAN	PAN-2-5-A	Altimeter Setting Procedure, SSR, Simultaneous Operation on parallel runways	30	0,5
XX1 PAN	PAN-2-4-A	SOPs an Checklists	30	0,5

## 1.3 Theory Training – Multi Crew Coordination

Kategorie	Kürzel	Beschreibung	Minuten	Stunden
XX2 MCC	MCC-1-1-M	Introduction	90	1,5
XX2 MCC	MCC-1-2-M	Communication	90	1,5
XX2 MCC	MCC-1-3-M	Leadership and team working	90	1,5
XX2 MCC	MCC-1-4-M	Situational awareness	90	1,5
XX2 MCC	MCC-2-1-M	Workload management	60	1
XX2 MCC	MCC-2-2-M	Problem-solving and decision-making	60	1
XX2 MCC	MCC-2-3-M	Monitoring and cross-checking	60	1
XX2 MCC	MCC-2-4-M	Task sharing	60	1
XX2 MCC	MCC-2-5-M	Use of checklists	60	1
XX2 MCC	MCC-2-6-M	Briefings	60	1
XX2 MCC	MCC-3-1-M	Flight management	60	1
XX2 MCC	MCC-3-2-M	FMS use	60	1
XX2 MCC	MCC-3-3-M	Systems normal operations	60	1
XX2 MCC	MCC-3-4-M	Systems abnormal and emergency operations	120	2
XX2 MCC	MCC-3-5-M	Environment, weather and ATC	60	1
XX2 MCC	MCC-4-1-M	Briefing 1 - pre practical training	90	1,5
XX2 MCC	MCC-4-2-M	Debriefing 1 - post practical training	60	1
XX2 MCC	MCC-4-1-M	Briefing 2 - pre practical training	90	1,5
XX2 MCC	MCC-4-2-M	Debriefing 2 - post practical training	60	1
XX2 MCC	MCC-4-1-M	Briefing 3 - pre practical training	90	1,5
XX2 MCC	MCC-4-2-M	Debriefing 3 - post practical training	60	1

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## 2 Practical Training Syllabus ATPL(A) INT

### 2.1 Phase 1 – Basic Training

Phase	Sequence	Content	Type	Control	Rule	Blocktime
1	1	Introduction	FNPT II	DUAL	IFR	05:00

<b>SUMMARY</b>	
This phase introduces the Student Pilot to the control and performance concept to the toolbox concept in instrument – training conditions basic IFR manoeuvres, to safety procedures, checklist procedure, pre-flight procedures, training aerodrome and local area, unusual attitude recovery and steep turns.	
<b>TRAINING ITEMS</b>	
Control Instruments - Performance Instruments	Change over to instruments during rotation
Attitude Instrument Flying	Instrument Scan and instrument crosscheck
Effect of Changing Power, configuration and trim	Attitude Flying, Control Instruments-Performance Instruments
Effect of Changing Power and configuration	Cross Checking the Instrument Indications
Instrument Interpretation	Direct and Indirect Indications
<b>BRIEFING ITEMS</b>	
The toolbox concept - the 5 phases of flight	Use Pitch-Power values of the A/C used for Training
Standard rate vs 25° and 30° bank turns	Application of Control and Performance Concept during steep turns with 45° as a cross reference to VFR manoeuvres (Pitch=ATL and V/S, Power=Speed)
Unusual Attitudes – Recoveries	Spatial disorientation avoidance
<b>AIR EXERCISES</b>	
Practice Take Offs, Climb, Cruise, Descent, Final	Standard Rate turns, 25° bank turns
180° escape turn after unintended flight into IMC	Fly the DA 20 VFR Pattern in IMC with 25° bank turns (see TM Air Exercises)
Turns, standard rate, 25°/30° bank turn, 45° turns (for training only in order to support VFR manoeuvres)	180° escape turn after unintended flight into IMC
Recovery from high pitch and low pitch attitudes	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
1	2	Basic VFR	SEP	DUAL	VFR	07:00

**SUMMARY**

This unit contains previously introduced contents and is designed, to meet the tolerances for the skill testing. It introduces the Student Pilot to the training aircraft, local training areas, emphasis on visual approach and landings, to local procedures consolidation, take off consolidation, visual approach and landing in different configurations. Explanation of the toolbox concept, checklist procedures, local procedures, positional awareness, safety procedures, take off, visual approach and landing, visual circuit, abnormal procedures philosophy, air work manoeuvres, local area and other training airports, positional awareness, local procedures, pre-flight procedures, take off, visual approach and landing and training aerodrome.

**TRAINING ITEMS**

Air work preparation	Manoeuvring during slow flight
Aircraft systems knowledge	ATC light signals
Attitude flying	Correction technique for slipstream, torque, precession, and P-factor effects in the various regimes of flight
Determining aircraft performance / Weight and balance	Engine failure in flight
Ground operations	Ground reference manoeuvres
Pitch / Power Table	Post flight procedures
Pre-flight operations	Radio communications
Safety aspects operating in and around an aircraft	Simulated engine failure
Starting engine, Run-up / Pre-take off procedures	Steep turns, Power-on and Power off stalls
Taxi procedure	Use of abnormal list
Use of checklists, Certificates and documents	Visual approach procedures
Visual Circuit procedures	Weather and NOTAMS

**BRIEFING ITEMS**

Air work Preparation	Air work
Ground reference manoeuvres	Aircraft systems – selective subjects
Attitude flying	Common errors during landing
Correction technique for slipstream, torque, precession, and P-factor effects in the various regimes of flight.	Determining aircraft performance / Mass and balance
Cockpit procedures	Engine failure in flight
Forms and documents	Ground reference manoeuvres: Rectangular pattern
Go-around	Handling of emergencies
Handling of Abnormal Checklists	Pitch / power affects in different configurations and speeds
Manoeuvring during slow flight	Safety aspects operating in and around an aircraft
Pitch / Power Table	Use of abnormal list
Simulated engine failure in flight	

AIR EXERCISES	
Air work	Air work preparation
Aircraft systems – selective subjects	Aircraft systems knowledge
Area and training airport familiarization	Area orientation
Attitude flying	Cockpit preparation
Collision avoidance precautions	Common errors during landing
Demonstration of Control and Performance Concept	Demonstration of position of natural horizon
Departure and climb	Engine failure in flight
Engine start	Ground operations
Go-around	Landing
Ground reference manoeuvres: Rectangular pattern	Manoeuvring during slow flight
Level off	Normal Landing
Normal Flaps landing	Operations at an airport with control tower (if available)
Operating limitations	Post flight procedure
Pilot awareness	Run-up
Power off stalls all configurations assisted	Simulated engine failure in flight
R/T with Training Aerodrome	Simulated Engine in flight
Safety aspects operating in and around an aircraft	Soft field T/O
Simulated engine failure in Visual Circuit	Steep turns assisted
Simulated Engine in flight assisted	T/O and Landings at various flap settings
Steep turns	Take off and departure to training area
Straight-and-level flight, Climbs, turns (medium), and descents	Taxi to apron, Shut down and parking
Take off	Touch and go
Take off briefing	Use of abnormal list
Taxi to run-up position	Use of natural horizon
Use of checklists	Visual Circuit procedures
Visual approach / Visual Circuit	
Visual inspection	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
1	3	Basic UPRT	SEP	DUAL	VFR	02.00

SUMMARY				
This phase introduces the Student Pilot to basic UPRT to develop the competencies to prevent and recover from aeroplane upsets.				
Basic UPRT elements and components			Pre-flight briefing	Flying training
Aerodynamics				
1	General aerodynamic characteristics		•	•
2	Aeroplane certification and limitations		•	•
3	Aerodynamics (high and low altitude)		•	
4	Aeroplane performance (high and low altitude)		•	
5	AoA and stall awareness		•	•
6	Aeroplane stability		•	•
7	Control surface fundamentals		•	•
8	Use of trim		•	•
9	Icing and contamination effects		•	•
10	Propeller slipstream (as applicable)		•	•
Causes of and contributing factors to upsets				
1	Environmental		•	
2	Pilot-induced		•	
3	Mechanical (Aeroplane Systems)		•	
Safety review of accidents and incidents relating to aeroplane upsets				
1	Safety review of accidents and incidents relating to airplane upsets		•	
G-load awareness and management				
1	Positive/negative/increasing/decreasing G-loads		•	•
2	Lateral G awareness (sideslip)		•	•
3	G-load management		•	•
Energy management				
1	Kinetic energy vs potential energy vs chemical energy (power)		•	•
Flight path management				
1	Relationship between pitch, power and performance		•	•
2	Performance and effects of differing power plants		•	•
3	Manual and automation inputs for guidance and control (if applicable)		•	•
4	Class-specific characteristics of flight path management		•	•
5	Management of go-arounds from various stages during the approach		•	•
6	Automation management (if applicable)		•	•
7	Proper use of rudder		•	•



Basic UPRT elements and components		Pre-flight briefing	Flying training
<b>Recognition</b>			
1	Class-specific examples of physiological, visual and instrument clues during developing and developed upset	•	•
2	Pitch/power/roll/yaw	•	•
3	Effective scanning (effective monitoring)	•	•
4	Stall protection systems and cues	•	•
5	Criteria for identifying stalls and upsets	•	•
<b>System malfunction</b> (including immediate handling and subsequent operational considerations, as applicable)			
1	Flight control defects	•	•
2	Engine failure (partial or full)	•	•
3	Instrument failures	•	•
4	Loss of reliable airspeed	•	•
5	Automation failures	•	•
6	Stall protection system failures, including icing alerting systems	•	•
Manoeuvre-based basic UPRT exercises		Pre-flight briefing	Flying training
<b>Timely and appropriate intervention</b>			
1	Arresting divergence of the airplane from intended flight path	•	•
2	Preventing flight at airspeeds inappropriate for the (intended flight) condition	•	•
3	Avoiding spins	•	•
<b>Flight path management</b>			
1	Steep turns	•	•
2	Slow flight (including flight at critically low airspeed)	•	•
3	High airspeed (including flight at relatively high airspeed)	•	•
<b>Application of OEM recommendations (if applicable) during developing upsets</b>			
1	Nose-high attitudes at various bank angles	•	•
2	Nose-low attitudes at various bank angles (including spiral dive)	•	•
<b>Stall events in the following configurations</b>			
1	Take-off configuration	•	•
2	Clean configuration	•	•
3	Landing configuration	•	•

Phase	Sequence	Content	Type	Control	Rule	Blocktime
1	4	Progress Test A	SEP	DUAL	VFR	1:30

**SUMMARY**

The Student Pilot will prepare and control this lesson in accordance with ATO standards. This lesson will determine the Student Pilot's ability to perform Solo Visual Circuits and will release him for first Solo. The lesson is designed to meet the Tolerances for the Skill Test.

**Endorsement by Instructor "Progress Check passed" and "Ready for Solo" is required.**

The unit contains safety procedures, checklist procedures, positional awareness, consolidation of abnormal procedures, consolidation of local procedures, consolidation of take-off, visual circuits, touch and go and full stop / taxi back.

**TRAINING ITEMS**

Review by student pilot prior flight lesson	Ground operations
Safety aspects operating in and around an aircraft	Use of checklists
Visual Circuit procedures	Common errors during landing
Go – around	Use of abnormal list
Engine failure in flight	Approach and landing with different configurations
Simulated Engine failure in Visual Circuit	ATC light signals
Radio communications failure, Radio communications	Touch/Go and Full stop/taxi back (min 3 landings)

**BRIEFING ITEMS**

Give special attention to preparation of the following lesson, where the student pilot performs the first solo. Focus on stress avoidance and professionalism. Discuss in detail how to avoid common errors and how to handle abnormal situations during solo flight. Point out steady watch and possible assistance by the instructor via radio.

**AIR EXERCISES**

Ground operations	Take off and departure to training area
Collision avoidance precautions	Steep turns
Power-off stalls	Simulated engine failure in flight
Visual approach / Visual Circuit	Simulated engine failure in Visual Circuit
Touch and go with different configurations	Full stop / taxi back
Go around	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
1	5	Consolidation	SEP	DUAL	VFR	0:30

SUMMARY	
<p>The Student Pilot will prepare and control this unit in accordance with ATO standards. He/she will fly Visual Circuits, landing different flap settings, special focus on touch and go landings. The lesson is designed to meet the Tolerances for the Skill Test.</p> <p>This unit is completed, when the student pilot has demonstrated confidence to the instructor and professionally performed touch and go landings in accordance with procedures and regulations without assistance of his instructor.</p>	
Introduction of safety procedures	Introduction of checklist procedures
Introduction of positional awareness	Consolidate abnormal procedures
Consolidate local procedures	Consolidate take off, Visual Circuits, full stop / taxi back landings
TRAINING ITEMS	
Ground operations	Attitude flying
Safety aspects operating in and around an aircraft	Use of checklists
Visual Circuit procedures	Common errors during landing
Go – around	Use of abnormal list
Engine failure in flight	Approach and landing with different configurations
ATC light signals	Radio communications failure
Radio communications	Touch and go, full stop / taxi back
BRIEFING ITEMS	
<p>Review experiences made during first Solo and discuss occurrences. Discuss possibilities to improve safety and strengthen confidence. Highlight avoidance of common errors during touch and go landings and professional handling of appropriate actions, such as go around in any phase of landing.</p>	
AIR EXERCISES	
Collision avoidance precautions	Visual Circuit
Take off	Aeroplane inspection and servicing
Touch and Go landings	Collision avoidance and precautions
Mass and balance determination	Normal take-offs and landings
Aerodrome and traffic pattern operations	Recognition of recovery from incipient and full stalls
Control of the aeroplane by external visual references	Unusual attitudes and simulated engine failure
Flight at critically low air speeds	Spin avoidance

Phase	Sequence	Content	Type	Control	Rule	Blocktime
1	6	First Solo	SEP	SOLO	VFR	0:30

**SUMMARY**

**PLB endorsements „Ready for Progress Test“, „Progress Test A passed“ and „Ready for Solo“ have been collected by the student pilot.**

This lesson must be flown as the first supervised Solo.

This lesson is completed; when the student pilot has successfully performed 3 take offs and landings in accordance to procedures and regulations without assistance of his/her instructor.

The Student Pilot will prepare and control this lesson in accordance with ATO standards. He/she will perform Solo Visual Circuits. The lesson is designed to meet the Tolerances for the Skill Test.

Introduction of safety procedures

Introduction of checklist procedures

Introduction of positional awareness

Consolidate abnormal procedures

Consolidate local procedures

Consolidate take off, Visual Circuits,

full stop / taxi back landings

**TRAINING ITEMS**

Collect endorsement „Ready for Solo“

Ground operations

Attitude flying - Safety aspects operating in and around an aircraft

Use of checklists

Visual Circuit procedures

Common errors during landing

Go – around

Use of abnormal list

Engine failure in flight

Approach and landing with different configurations

ATC light signals

Radio communications failure

Radio communications

Full stop / taxi back

**BRIEFING ITEMS**

Completed in preparation

**AIR EXERCISES**

Collision avoidance precautions

Ground operations

Pre-flight operations

Mass and balance determination

Aeroplane inspection and servicing

Aerodrome and traffic pattern operations

Collision avoidance and precautions

Control of the aeroplane by external visual references

Normal take-offs and landings

Flight at critically low air speeds

Recognition of recovery from incipient and full stalls

Spin avoidance

Unusual attitudes and simulated engine failure

## 2.2 Phase 2 – Basic Training

Phase	Sequence	Content	Type	Control	Rule	Blocktime
2	7	Cross Country	SEP	DUAL	VFR	8:00

SUMMARY	
The Instructor Pilot will prepare and control this lesson in accordance with ATO standards. The flights within this unit introduce the Student Pilot to cross country planning, flying, and preparation of the first cross-country solo.	
Consolidate local procedures	Introduce dead reckoning
Introduce flight log preparation for cross country	Introduce map preparation for cross country
Introduce pilotage	Introduce preparation of VFR plan
Introduction to checklist procedures	Introduction to positional awareness
Introduction to safety procedures	
TRAINING ITEMS	
Attitude flying	Safety aspects operating in and around an aircraft
Short field/obstacle approach and landing	Short field/obstacle take off
Short grass field/obstacle approach and landing	Short grass field/obstacle take off
VFR flight planning	Weather/NOTAMS
BRIEFING ITEMS	
Calculation of minimum safe altitude	Calculation of point of descent
Calculation of top of climb	Change of enroute altitude prior to or at turn points
Conduct of flight	Dead reckoning
Directional gyro, emphasizing precession error	Filing flight plan
Flight log entries	Information and flight documents
Level off	Opening / closing flight plan
Pilotage	Pitch, bank and altitude control
Planning of route	Positional awareness
Preparation of chart	Principles of planning
Short field/obstacle approach and landing	Short field/obstacle take off
Short grass field/obstacle approach and landing	Short grass field/obstacle take off
Time and fuel calculation	Use of aeronautical charts for VFR navigation
Use of flight instruments	Use of timer
VFR flight plan	VFR flight planning
AIR EXERCISES	
Airport entries at airports with or without control tower	Collision avoidance precautions
Dead reckoning	Pilotage
Ground operations	Maintain flight log
Opening and closing flight plan	Positional awareness
Short field/obstacle approach and landing	Short field/obstacle take off and departure
Short grass field/obstacle approach and landing	Short grass field/obstacle take off and departure
Touch and go / full stop	Visual approach / visual circuit

Phase	Sequence	Content	Type	Control	Rule	Blocktime
2	8	Cross Country	SEP	SOLO	VFR	9:00

**SUMMARY**

These lessons allow the student to gain confidence during Solo flights in the pattern and the close vicinity of the airport. The Instructor Pilot will prepare and control this lesson in accordance with flight training standards. These lessons introduces the Student Pilot to cross country planning and flying and prepare his cross-country solo flights.

Consolidate air work manoeuvres

Consolidate local procedures

Consolidate take off, visual approach and landing

Introduce dead reckoning

Introduce flight log preparation for cross country

Introduce map preparation for cross country

Introduce pilotage

Introduce preparation of VFR plan

Introduction to checklist procedures

Introduction to positional awareness

Introduction to safety procedures

**TRAINING ITEMS**

Aircraft systems knowledge

Air work

Air work preparation

Approach and landing with different configurations

Area orientation

Attitude flying

Common errors during landing

Engine failure in flight

Engine failure in visual circuit

Go – around

Ground operations

Radio communications

Safety aspects operating in and around an aircraft

Short grass field/obstacle approach and landing

Short grass field/obstacle take off

Use of abnormal list

Use of checklists

VFR flight planning

Visual circuit procedures

Weather/NOTAMS

**BRIEFING ITEMS**

Aircraft systems knowledge

Air work

Air work manoeuvres to be performed

Air work preparation

Approach and landing with different configurations

Area orientation

Attitude flying

Calculation of minimum safe altitude

Calculation of point of descent

Calculation of top of climb

Change of enroute altitude prior to or at turn points

Common errors during landing

Conduct of flight

Dead reckoning

Directional gyro, emphasizing precession error

Engine failure in flight

Engine failure in visual circuit

Filing flight plan

Flight log entries

Go-around

Ground operations

Information and flight documents

Level off

Opening / closing flight plan

Pilotage

Pitch, bank and altitude control

Planning of route

Positional awareness

Preparation of chart

Principles of planning

Radio communications	Short grass field/obstacle approach and landing
Short grass field/obstacle take off	Time and fuel calculation
Use of abnormal list	Use of aeronautical charts for VFR navigation
Use of checklists	Use of flight instruments
Use of timer	VFR flight planning
Visual circuit procedures	Visual circuits and approaches to be performed
<b>AIR EXERCISES</b>	
Airport entries at airports with or without control tower	Collision avoidance precautions
Dead reckoning	Flaps up touch and go
Full stop / taxi back landings as authorized by Instructor Pilot	Ground operations
Maintain flight log	Opening and closing flight plan
Pilotage	Positional awareness
Short grass field/obstacle approach and landing	Short grass field/obstacle take off and departure
Take off and departure to pattern and local training area	Touch and go / full stop
Visual approach / visual circuit	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
2	9	Progress Test B	SEP	DUAL	VFR	2:00

**SUMMARY**

This lesson should be flown with an instructor who was not previously involved in the training.

Determine proficiency in the following areas of training	Aircraft handling
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Visual circuit	Air work
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Abnormal situations	cross country preparation
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conduct of cross country flight,	conduct of a diversion
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**TRAINING ITEMS**

Safety aspects operating in and around an aircraft	Aircraft systems knowledge
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Determining aircraft performance / Weight and balance	Certificates and documents Agenda
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Attitude flying	Use of checklists
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ATC light signals	Radio communications
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Visual circuit procedures	Go-around
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Abnormal procedures	Air work preparation
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Air work	VFR flight planning
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Diversion / lost procedure	Flight instrument errors
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Radio navigation for VFR orientation	Use of flight instruments
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**BRIEFING ITEMS**

Student Pilot presents relevant paperwork	Student Pilot will brief the conduct of the lesson to include Air work
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Routing	Airports to be visited
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Arrival and Departure	Enroute Emergency Landing Fields
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Action in case of Weather Avoidance	Check pilot may ask specific questions and add to the Student Pilot's briefing
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**AIR EXERCISES**

Ground operations	Take off and departure
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Collision avoidance precautions	Positional awareness
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Pilotage	Opening and closing flight plan (if required)
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Maintaining flight log	Airport entries at airports with or without control tower
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Enroute procedure	Touch and go / full stop
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Visual approach / visual circuit	Simulated engine failure
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Maximum performance take-offs and short-field landings	Flight by reference solely to instruments including the completion of a 180° turn
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Dual cross-country flying using external visual references	Dead reckoning and radio navigation aids
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Diversion procedures	Aerodrome and traffic pattern operations at different aerodromes
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Crosswind take-off and landings	Abnormal and emergency procedures and manoeuvres
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Simulated aeroplane equipment malfunctions	Operations to, from and transiting controlled aerodromes
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Compliance with ATS procedures, R/T procedures and phraseology	Knowledge of meteorological briefing arrangements, evaluation of weather conditions for flight and use of AIS
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Phase	Sequence	Content	Type	Control	Rule	Blocktime
2	10	First Solo Cross Country	SEP	SOLO	VFR	2:00

**SUMMARY**

These lessons allow the student to gain confidence during Solo flights in the pattern and the vicinity of the airport.

Introduction to safety procedures	Introduction to checklist procedures
Introduction to positional awareness	Consolidate local procedures
Consolidate take off, visual approach and landing	Consolidate air work manoeuvres

**TRAINING ITEMS**

Ground operations	Aircraft systems knowledge
Attitude flying	Use of checklists
Visual circuit procedures	Common errors during landing
Go – around	Air work preparation
Air work	Area orientation
Use of abnormal list	Engine failure in flight
Engine failure in visual circuit	Approach and landing with different configurations
Radio communications	

**BRIEFING ITEMS**

NA

**AIR EXERCISES**

Ground operations	Take off and departure to pattern and local training area
Collision avoidance precautions	Visual approach / visual circuit
Flaps up touch and go	Full stop / taxi back landings as authorized by Instructor Pilot
Maximum performance take-offs and short-field landings	Flight by reference solely to instruments including the completion of a 180° turn
Cross-country flying using external visual references	Dead reckoning and radio navigation aids
Diversion procedures	Aerodrome and traffic pattern operations at different aerodromes
Operations to, from and transiting controlled aerodromes	Abnormal and emergency procedures and manoeuvres
Compliance with ATS procedures, R/T procedures and phraseology	Knowledge of meteorological briefing arrangements, evaluation of weather conditions for flight and use of AIS

## 2.3 Phase 3 – Basic Training

Phase	Sequence	Content	Type	Control	Rule	Blocktime
3	11	Cross Country	SEP	SOLO	VFR	35:00

<b>SUMMARY</b>	
The Student Pilot will prepare and control this lesson in accordance with flight training standards.	
<b>OBJECTIVES</b>	
Consolidate local procedures	Consolidate flight log preparation for cross country flights
Consolidate map preparation for cross country flights	Consolidate pilotage and dead reckoning
<b>TRAINING ITEMS</b>	
Safety aspects operating in and around an aircraft	Details of the Pilot's Operating Handbook
Attitude flying	VFR flight planning
Weather/NOTAMS	Cross Country Flying
<b>BRIEFING ITEMS</b>	
Safety aspects operating in and around an aircraft	VFR flight planning
Weather/NOTAMS	
<b>AIR EXERCISES</b>	
Pattern	Pilotage
Ground operations	Positional awareness
Normal departure	Maintain flight log
Collision avoidance precautions	Visual approach
Dead reckoning	Normal landing

Phase	Sequence	Content	Type	Control	Rule	Blocktime
3	12	300 NM Cross Country	SEP	SOLO	VFR	4:00

## SUMMARY

The Student Pilot will prepare and control this lesson in accordance with flight training standards. The lesson consolidates cross-country planning procedures and execution.

The lesson is designed to meet the Tolerances for the Skill Test.

**Minimum distance is 300NM in one round trip with 2 full stop landings.**

## OBJECTIVES

Consolidate local procedures	Consolidate pilotage and dead reckoning
Consolidate map and flight log preparation for cross country flights	Consolidate use of radio navigation aids

## TRAINING ITEMS

Safety aspects operating in and around an aircraft	Details of the Pilot's Operating Handbook
Attitude flying	VFR flight planning
Weather/NOTAMS	Cross Country Flying

## BRIEFING ITEMS

Safety aspects operating in and around an aircraft	Weather/NOTAMS
Attitude flying	VFR flight planning and procedures for loss of orientation

## AIR EXERCISES

Pattern	Pilotage
Ground operations	Positional awareness
Normal departure	Maintain flight log
Collision avoidance precautions	Visual approach
Dead reckoning	Normal landing

Phase	Sequence	Content	Type	Control	Rule	Blocktime
3	13	NIT	SEP	DUAL	VFR/NIT	3:00

**SUMMARY**

The Student Pilot will perform Night Traffic Pattern operations.

**OBJECTIVES**

1. During this and the subsequent lesson, a minimum of 10 take-offs and landings at night must be performed. An endorsement regarding the Student Pilot's competency in night flying is required
2. Prior to the Solo Traffic Pattern at Night, a logbook endorsement regarding the Student Pilot's competency in night flying is required.

**TRAINING ITEMS**

Aircraft lights	Normal or crosswind approach and landing
Airport and runway lighting	Normal or crosswind take off and climb
Full stop / taxi back	Simulated engine failure in traffic pattern
Go-around	Traffic pattern operations
Landing without landing light	

**BRIEFING ITEMS**

Aircraft lights Airport and runway lights	Normal or crosswind take off and climb
Go-around	Traffic pattern
Normal or crosswind approach and landing	

**AIR EXERCISES**

Traffic pattern	Normal or crosswind take-off and landing
Go-around	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
3	14	NIT – Cross Country	SEP	DUAL	VFR/NIT	1:00

<b>SUMMARY</b>	
Night flying with SEP aeroplane.	
<b>OBJECTIVES</b>	
Common errors	Inflight Performance
IFR Procedures	Night Operations
Importance of safety speeds	Pre-flight Planning
<b>TRAINING ITEMS</b>	
Use of alternate aerodromes	XC Preparation
XC Flight Planning	
<b>BRIEFING ITEMS</b>	
CRM / HPL aspects	Operational Consequences
Engine and system checks	System Malfunctions
Night Operation	Use of Abnormal lists
<b>AIR EXERCISES</b>	
All kinds of IFR approaches	Crosswind effects and procedure
Circling Approaches	Location and use of emergency equipment and exits
Crosswind effects and procedure	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
3	15	NIT – T/G	SEP	SOLO	VFR/NIT	1:00

**SUMMARY**

The Student Pilot will perform Night Traffic Pattern operations.

**OBJECTIVES**

1. During this lesson, a minimum of 5 solo take-offs and landings to a complete stop at night must be performed.
2. Prior to the Solo Traffic Pattern at Night, a logbook endorsement regarding the Student Pilot's competency in night flying is required

**TRAINING ITEMS**

Traffic pattern operations	Simulated engine failure in traffic pattern
Airport and runway lighting	Landing without landing light
Aircraft lights	Full stop / taxi back
Normal or crosswind take off and climb	Go-around
Normal or crosswind approach and landing	

**BRIEFING ITEMS**

Long Briefing:	Normal or crosswind take off and climb
Traffic pattern	Normal or crosswind approach and landing
Aircraft lights Airport and runway lights	Go-around

**AIR EXERCISES**

Traffic pattern	Normal approach and landing
Normal take off and climb	COMPLETION STANDARD
This lesson will be complete when the Student Pilot demonstrates that he/she is able to safely perform solo night traffic pattern operations.	

## 2.4 Phase 4 – Advanced Training

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	16	BASIC IFR	FNPT II	DUAL	IFR	7:30

<b>SUMMARY</b>	
Review the Control and Performance Concept while flying solely by reference to instruments. Radio Navigation Procedures, including inbound/outbound tracking.	
<b>OBJECTIVES</b>	
Consolidate checklist procedures,	Inbound/outbound interceptions of VOR radials and NDB bearings (QDR/QDM), crossing Nav Fixes.
Consolidate safety procedures, positional awareness	Radio Navigation Procedures, including tracking,
Consolidate toolbox manoeuvres	Review the Control and Performance Concept while flying solely by reference to instruments full- and partial panel.
Consolidate VOR and ADF tracking.	Time and distance checks 45° / 80°.
<b>TRAINING ITEMS</b>	
Control and Performance Concept	Radio Navigation
Go around	Toolbox concept
<b>BRIEFING ITEMS</b>	
Air work manoeuvres	Instrument flight manoeuvres
BI-manoevres: Constant airspeed climb/descent, timed turns, Climb/descending turns	Partial Panel, Recovery from unusual flight attitudes
Compass turns	Radio Navigation Procedures VOR, NDB, DME Arc, tracking
Constant airspeed climb and descent	RT phraseology
Holding Patterns and entries	Station passage procedures
<b>AIR EXERCISES</b>	
Air work manoeuvres	Recovery from Unusual Attitude
BI-manoevres: Constant airspeed climb/descent, timed turns, Climb/descending turns	RT phraseology
Compass turns	Station passage procedures
Interceptions inbound/outbound	T/O, Turns, climbs, and descents, Steep turns
Partial Panel, Recovery from unusual flight attitudes	Tracking VOR radials and NDB bearings inbound/outbound
Radio Navigation Procedures VOR, NDB, DME Arc, tracking	VFR Pattern in IMC

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	17	Progress Test C	FNPT II	DUAL	IFR	2:30

**SUMMARY**

The Student Pilot will prepare and control this lesson in accordance with ATO standards. This lesson will determine the Student Pilot's ability to perform Basic IFR contents and is designed to meet the tolerances for the Skill Test.

**OBJECTIVES**

Consolidate checklist procedures,	Inbound/outbound interceptions of VOR radials and NDB bearings (QDR/QDM), crossing Nav Fixes.
Consolidate safety procedures, positional awareness	Radio Navigation Procedures, including tracking,
Consolidate toolbox manoeuvres	Review the Control and Performance Concept while flying solely by reference to instruments full- and partial panel.
Consolidate VOR and ADF tracking.	Time and distance checks 45° / 80°.

**TRAINING ITEMS**

Control and Performance Concept	Radio Navigation
Go around	Toolbox concept

**BRIEFING ITEMS**

Air work manoeuvres	Instrument flight manoeuvres
BI-maneuvres: Constant airspeed climb/descent, timed turns, Climb/descending turns	Partial Panel, Recovery from unusual flight attitudes
Compass turns	Radio Navigation Procedures VOR, NDB, DME Arc, tracking
Constant airspeed climb and descent	RT phraseology
Holding Patterns and entries	Station passage procedures

**AIR EXERCISES**

Air work manoeuvres	Recovery from Unusual Attitude
BI-maneuvres: Constant airspeed climb/descent, timed turns, Climb/descending turns	RT phraseology
Compass turns	Station passage procedures
Interceptions inbound/outbound	T/O, Turns, climbs, and descents, Steep turns
Partial Panel, Recovery from unusual flight attitudes	Tracking VOR radials and NDB bearings inbound/outbound
Radio Navigation Procedures VOR, NDB, DME Arc, tracking	VFR Pattern in IMC



Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	18	Advanced IFR	FNPT II	DUAL	IFR	12:30

**SUMMARY**

The Student Pilot will review the Control and Performance Concept while flying solely by reference to instruments. He will demonstrate sound knowledge of Instrument departure and approach procedures including Non-precision and precision approaches and holdings

The Student Pilot will review the essential knowledge and skills of the previous phase

**OBJECTIVES**

Design criteria of instrument approaches	IFR Navigation Planning
DME based approaches	ILS
DME-Arc approaches	Precision and non-precision approaches
Holding entries, Holding procedures	SID, STAR, Holdings
IFR approaches at different aerodromes	SIDs

**TRAINING ITEMS**

Air work	IFR Flight Planning
Clarification of open questions and training items	Situational awareness
Commencement and continuation of approach criteria	VOR/NDB stations on test/ground checked on
Departure, Air work, Approaches	Weather minima, use of alternate aerodromes
Engine malfunctions in IMC	WX analysis, NOTAM analysis

**BRIEFING ITEMS**

Approach lighting systems	IFR Flight Planning
Changeover to visual cues after instrument approach	ILS, VOR/NDB/DME approach
Clarification of open questions	PAPI/VASI/TVASI/other visual aids
Commencement and continuation of approach criteria	Terrain Awareness
Discussion of engine malfunctions in IMC	VOR/NDB stations on test/ground checked only
G/A and missed approach	WX analysis, NOTAM analysis
Holdings	

**AIR EXERCISES**

Air work	Holdings
Circling approaches	ILS, VOR, NDB Approaches, Holdings
Engine failure (simulated discussion)	Partial Panel, System malfunctions (simulated)
G/A and Missed approach	SID, STAR

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	19	Progress Test D	FNPT II	DUAL	IFR	2:30

**SUMMARY**

The Student Pilot will prepare and control this lesson in accordance with ATO standards. This lesson will determine the Student Pilot's ability to perform Advanced IFR contents and is designed to meet the tolerances for the Skill Test.

**OBJECTIVES**

Design criteria of instrument approaches	IFR Navigation Planning
DME based approaches	ILS
DME-Arc approaches	Precision and non-precision approaches
Holding entries, Holding procedures	SID, STAR, Holdings
IFR approaches at different aerodromes	SIDs

**TRAINING ITEMS**

Air work	IFR Flight Planning
Clarification of open questions and training items	Situational awareness
Commencement and continuation of approach criteria	VOR/NDB stations on test/ground checked on
Departure, Air work, Approaches	Weather minima, use of alternate aerodromes
Engine malfunctions in IMC	WX analysis, NOTAM analysis

**BRIEFING ITEMS**

Approach lighting systems	IFR Flight Planning
Changeover to visual cues after instrument approach	ILS, VOR/NDB/DME approach
Clarification of open questions	PAPI/VASI/TVASI/other visual aids
Commencement and continuation of approach criteria	Terrain Awareness
Discussion of engine malfunctions in IMC	VOR/NDB stations on test/ground checked only
G/A and missed approach	WX analysis, NOTAM analysis
Holdings	

**AIR EXERCISES**

Air work	Holdings
Circling approaches	ILS, VOR, NDB Approaches, Holdings
Engine failure (simulated discussion)	Partial Panel, System malfunctions (simulated)
G/A and Missed approach	SID, STAR

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	20	Basic IFR	SEP	DUAL	IFR	20:00

**SUMMARY**

The Student Pilot will review the Control and Performance Concept while flying solely by reference to instruments. He/she will demonstrate sound knowledge of Instrument departure and approach procedures and holdings. He/she will be familiar with different aerodromes, the documentation and the terrain situation.

**OBJECTIVES**

Analysis of aerodrome facilities and procedures	Partial Panel flying
Continuous descent approach.	STARs, SIDs and Instrument approaches at different aerodromes.
Familiarisation with IFR navigation flight.	

**TRAINING ITEMS**

Aerodrome operating minima	IFR Flight Planning
Circling approach	Mass and balance
Enroute WX analysis	

**BRIEFING ITEMS**

Circling approaches	Continuous descent approach
Analysis of aerodrome documentation (Jeppesen)	Partial Panel flying
Mass and balance calculations	

**AIR EXERCISES**

SID, STAR	G/A and Missed approach
CDA	ILS, VOR, NDB Approaches
Circling Approach	Partial Panel ops

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	21	Progress Test E	SEP	DUAL	IFR	2:00

**SUMMARY**

The Student Pilot will prepare and control this lesson in accordance with ATO standards. This lesson will determine the Student Pilot's ability to perform Basic IFR contents and is designed to meet the tolerances for the Skill Test.

**OBJECTIVES**

Analysis of aerodrome facilities and procedures	Partial Panel flying
Continuous descent approach.	STARs, SIDs and Instrument approaches at different aerodromes.
Familiarisation with IFR navigation flight.	

**TRAINING ITEMS**

Aerodrome operating minima	IFR Flight Planning
Circling approach	Mass and balance
Enroute WX analysis	

**BRIEFING ITEMS**

Circling approaches	Continuous descent approach
Analysis of aerodrome documentation (Jeppesen)	Partial Panel flying
Mass and balance calculations	

**AIR EXERCISES**

SID, STAR	G/A and Missed approach
CDA	ILS, VOR, NDB Approaches
Circling Approach	Partial Panel ops

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	22	Advanced IFR	SEP	DUAL	IFR	12:00

**SUMMARY**

Review the Control and Performance Concept while flying IFR.

Basic knowledge of Radio Navigation Procedures

The Student Pilot will review the Control and Performance Concept while flying solely by reference to instruments. He/she will demonstrate sound knowledge of Instrument departure and approach procedures and holdings. He/she will be familiar with different aerodromes, the documentation and the terrain situation.

**OBJECTIVES**

Air work manoeuvres	IFR approaches at different aerodromes
Circling approach	IFR Navigation Planning (WX, NOTAMS, Destinations, Alternates, Performance)
Consolidate checklist procedures, local procedures	Partial Panel flying
Consolidate safety procedures, positional awareness	Precision and non-precision approaches
Continuous descent approach	Radio Navigation Procedures, including tracking, inbound/outbound interceptions of
DME based approaches	Review the Control and Performance Concept while flying solely by reference to instruments full- and partial panel.
DME-Arc approaches	SIDs
GPS approach	Time and distance checks 45° / 80°.
Handling of system malfunctions and abnormal situations.	VOR radials and NDB bearings (QDR/QDM), crossing Nav Fixes.
Holding entries, Holding procedures	

**TRAINING ITEMS**

Air work	SID, STAR, Holdings
Commencement and continuation of approach criteria	Use of checklists
Design criteria of instrument approaches	VOR/NDB tracking
IFR Flight Planning	Weather minima, use of alternate aerodromes
ILS	WX analysis, NOTAM analysis

**BRIEFING ITEMS**

Landing from an instrument approach	IFR Flight Planning
Air work Manoeuvres	ILS, VOR/NDB/DME approach
Function of trim at constant airspeed climb and descent	Landings from IFR Approach
Approach lighting systems	PAPI/VASI/TVASI/other visual aids
BI-maneuvres: Constant airspeed climb/descent, timed turns, Climb/descending turns	Partial Panel, Recovery from unusual flight attitudes
Changeover to visual cues after instrument approach	Radio Navigation Procedures VOR, NDB, DME Arc, tracking
Cold Weather temperature correction of DA/MDA	Recovery from unusual flight attitudes
Commencement and continuation of approach criteria	RT phraseology
Compass turns	Station passage procedures
Constant rate climbs and descents	Terrain Awareness
Control and Performance Concept, Toolbox Concept	Terrain Clearance
G/A and missed approach	Toolbox concept

GPS programming + GPS approach	Turns to headings
Handling of system malfunctions and abnormal	VOR/NDB stations on test/ground checked only
Holdings	WX analysis, NOTAM analysis
IFR approaches at different aerodromes	
<b>AIR EXERCISES</b>	
5 toolbox manoeuvres	G/A and Missed approach
Air work	Holdings
Air work manoeuvres	ILS, VOR, NDB, GPS Approaches, Holdings
BI-manoevres: Constant airspeed climb/descent, timed turns, Climb/descending turns	Inbound and Outbound tracking
Circling approaches	Partial Panel, Recovery from unusual flight attitudes
Circling approaches	Radio Navigation Procedures VOR, NDB, DME Arc, tracking
Compass turns	SID, STAR
G/A and Missed approach	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	23	Advanced IFR	SEP	SPIC	IFR	18:00

**SUMMARY**

Review the Control and Performance Concept while flying IFR.

Basic knowledge of Radio Navigation Procedures

The Student Pilot will review the Control and Performance Concept while flying solely by reference to instruments. He/she will demonstrate sound knowledge of Instrument departure and approach procedures and holdings. He/she will be familiar with different aerodromes, the documentation and the terrain situation.

**OBJECTIVES**

Air work manoeuvres	IFR approaches at different aerodromes
Circling approach	IFR Navigation Planning (WX, NOTAMS, Destinations, Alternates, Performance)
Consolidate checklist procedures, local procedures	Partial Panel flying
Consolidate safety procedures, positional awareness	Precision and non-precision approaches
Continuous descent approach	Radio Navigation Procedures, including tracking, inbound/outbound interceptions of
DME based approaches	Review the Control and Performance Concept while flying solely by reference to instruments full- and partial panel.
DME-Arc approaches	SIDs
GPS approach	Time and distance checks 45° / 80°.
Handling of system malfunctions and abnormal	VOR radials and NDB bearings (QDR/QDM), crossing Nav Fixes.
Holding entries, Holding procedures	

**TRAINING ITEMS**

Air work	SID, STAR, Holdings
Commencement and continuation of approach criteria	Use of checklists
Design criteria of instrument approaches	VOR/NDB tracking
IFR Flight Planning	Weather minima, use of alternate aerodromes
ILS	WX analysis, NOTAM analysis

**BRIEFING ITEMS**

Landing from an instrument approach	IFR Flight Planning
Air work Manoeuvres	ILS, VOR/NDB/DME approach
Function of trim at constant airspeed climb and descent	Landings from IFR Approach
Approach lighting systems	PAPI/VASI/TVASI/other visual aids
BI-maneuvres: Constant airspeed climb/descent, timed turns, Climb/descending turns	Partial Panel, Recovery from unusual flight attitudes
Changeover to visual cues after instrument approach	Radio Navigation Procedures VOR, NDB, DME Arc, tracking
Cold Weather temperature correction of DA/MDA	Recovery from unusual flight attitudes
Commencement and continuation of approach criteria	RT phraseology
Compass turns	Station passage procedures
Constant rate climbs and descents	Terrain Awareness
Control and Performance Concept, Toolbox Concept	Terrain Clearance
G/A and missed approach	Toolbox concept

GPS programming + GPS approach	Turns to headings
Handling of system malfunctions and abnormal	VOR/NDB stations on test/ground checked only
Holdings	WX analysis, NOTAM analysis
IFR approaches at different aerodromes	
<b>AIR EXERCISES</b>	
5 toolbox manoeuvres	G/A and Missed approach
Air work	Holdings
Air work manoeuvres	ILS, VOR, NDB, GPS Approaches, Holdings
BI-manoevres: Constant airspeed climb/descent, timed turns, Climb/descending turns	Inbound and Outbound tracking
Circling approaches	Partial Panel, Recovery from unusual flight attitudes
Circling approaches	Radio Navigation Procedures VOR, NDB, DME Arc, tracking
Compass turns	SID, STAR
G/A and Missed approach	



Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	23	Progress Test F	SEP	DUAL	IFR	2:00

**SUMMARY**

The Student Pilot will prepare and control this lesson in accordance with ATO standards. This lesson will determine the Student Pilot's ability to perform Advanced IFR contents and is designed to meet the tolerances for the Skill Test.

**OBJECTIVES**

Flight Planning	Situational awareness
Departure, Air work, Approaches	

**TRAINING ITEMS**

IFR Flight Planning	Air work
Engine malfunctions in IMC	

**BRIEFING ITEMS**

IFR Flight Planning	Discussion of engine malfunctions in IMC
Clarification of open questions	

**AIR EXERCISES**

SID	Engine failure (simulated discussion)
Air work	Precision and non-precision approaches
Partial Panel, System malfunctions (simulated)	G/A – missed approach

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	25	MEP – Abnormal & Emergency Items	FNPT II	DUAL	IFR	5:00

<b>SUMMARY</b>	
Consolidation ME aircraft handling ME operation in all conditions with system failures and engine failures	
<b>OBJECTIVES</b>	
Advanced use of checklists and abnormal procedures	IFR approaches with one engine inop
Airplane power plant, Check lists and drills	IFR approaches with all engines
ATC considerations	Introduction to the airplane, Explanation of the Cockpit layout, Systems and controls
Handling of Engine failures at various Phases	Stabilisation of handling of system malfunctions
<b>TRAINING ITEMS</b>	
Abnormal procedures	Harness, seat/rudder pedal adjustment
Airplane documentation	Internal checks
Correct lift-off speed, Importance of safety speed	Mass and balance calculations
Crosswind take-off, considerations and procedures	Normal procedures, supplementary procedures
External checks, internal checks	Short field take-off, considerations and procedures
<b>BRIEFING ITEMS</b>	
Checks prior to starting, Checks after starting	Handling of a typical system malfunction (gear/flaps/elec/pneumatic)
CRM/HPL standards	Mass and balance and performance considerations
Engine Failure after T/O and in flight Operational Consequences	Radio nav/com checks, Autopilot operation, Altimeter checks and altitude alert setting procedures, System checks, programming of flight plans airplane serviceability documents
Engine power and system checks	Sequence to handle an engine failure
Escape drills, Location and use of emergency equipment and exits	Starting and shutdowns of engines, Engine Checks
Flight with asymmetric thrust (T/O, cruise, descent, final, landing)	System Malfunctions
FORDEC	Use of Abnormal lists
Use of checklists	
<b>AIR EXERCISES</b>	
Action in the event of fire in the air and on the ground	IFR approaches
Air work	Landing gear operation, Flap operation
Air work Use of A/P and altitude alert	Location and use of emergency equipment and exits
Alternate Gear extension	One engine inop approaches and landing & Single Engine go-Around
ATC considerations	Precision and Non Precision Approaches
Crosswind effects and procedure	Short field take-off and procedure
Directional control and use of power	System failures
Engine synchronization	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	26	MEP – IR Transition Items	FNPT II	DUAL	IFR	5:00

**SUMMARY**

Consolidation ME aircraft handling

ME IFR operation in all conditions with system failures and engine failures.

**OBJECTIVES**

Advanced use of checklists and abnormal procedures

IFR approaches with one engine inop

Airplane power plant, Check lists and drills

IFR approaches with all engines

ATC considerations

Introduction to the airplane, Explanation of the Cockpit layout, Systems and controls

Handling of Engine failures at various Phases

Stabilisation of handling of system malfunctions

**TRAINING ITEMS**

Abnormal procedures

Harness, seat/rudder pedal adjustment

Airplane documentation

Internal checks

Correct lift-off speed, Importance of safety speed

Mass and balance calculations

Crosswind take-off, considerations and procedures

Normal procedures, supplementary procedures

External checks, internal checks

Short field take-off, considerations and procedures

**BRIEFING ITEMS**

Checks prior to starting, Checks after starting

Handling of a typical system malfunction (gear/flaps/elec/pneumatic)

CRM/HPL standards

Mass and balance and performance considerations

Engine Failure after T/O and in flight Operational Consequences

Radio nav/com checks, Autopilot operation, Altimeter checks and altitude alert setting procedures, System checks, programming of flight plans airplane serviceability documents

Engine power and system checks

Sequence to handle an engine failure

Escape drills, Location and use of emergency equipment and exits

Starting and shutdowns of engines, Engine Checks

Flight with asymmetric thrust (T/O, cruise, descent, final, landing)

System Malfunctions

FORDEC

Use of Abnormal lists

Use of checklists

**AIR EXERCISES**

Action in the event of fire in the air and on the ground

IFR approaches

Air work

Landing gear operation, Flap operation

Air work Use of A/P and altitude alert

Location and use of emergency equipment and exits

Alternate Gear extension

One engine inop approaches and landing &amp; Single Engine go-Around

ATC considerations

Precision and Non Precision Approaches

Crosswind effects and procedure

Short field take-off and procedure

Directional control and use of power

System failures

Engine synchronization

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	27	MEP – CR Items	MEP	DUAL	IFR	2:00

SUMMARY	
Introduction to normal ME operation on MEP aircraft	A minimum of 1 hr VFR XC navigation must be performed
Consolidation of ME operation.	Consolidation ME aircraft handling
Introduction of One engine out procedures	Introduction to handling of system failures
The Student Pilot will perform Night Cross country operations.	
OBJECTIVES	
Introduction to the airplane	Night cross country flight planning and navigation
Outside checks	Advanced use of checklists and drills
Normal operation	ATC considerations
Importance of safety speeds	Discussion of System failures
Handling of engine failures during take-off, cruise and descent	Night Operation
Common errors	
TRAINING ITEMS	
Airplane documentation	airplane serviceability documents
Mass and balance calculations	Escape drills, Location and use of emergency equipment and exits
External checks, Internal checks	Sequence to handle an engine failure
Harness, seat/rudder pedal adjustment	Use of Abnormal lists
Airplane documentation	Flight with asymmetric thrust (T/O, cruise, descent, final, landing)
Abnormal procedures concerning engine	Engine Failure after T/O and in flight
Night cross country flight planning in an multi engine environment	Operational Consequences
Simulated emergencies at night	CRM/HPL standards
Departure and Arrival at night	FORDEC
Airplane documentation	System Malfunctions
Air Exercises TM	Optical Visual Illusions at night
Use of checklists	Common navigation failures,
Checks prior to starting, Checks after starting	Special aspects of emergencies at night in unknown terrain
Mass and balance and performance considerations	Engine and system checks
Starting and shutdowns of engines, Engine Checks	Night Operation
Radio nav / com checks, Autopilot operation, Altimeter checks and altitude alert setting procedures, System checks programming of flight plans	Handling of a typical system malfunction (gear / flaps / elec / pneumatic)

AIR EXERCISES	
Directional control and use of power	Engine failure
Landing gear operation, Flap operation	One engine inop operation
Engine synchronization	One engine inop instrument approaches
Air work	Visual Pattern
Use of A/P and altitude alert	Cross country night flight VFR and IFR
Precision and Non Precision Approaches	Crosswind effects and procedure
Action in the event of fire in the air and on the ground	Precision and Non Precision Approaches
Engine Shutdown in flight	Location and use of emergency equipment and exits
Engine restart in flight	

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	28	MEP – IR Transition Items	MEP	DUAL	IFR	2:00

<b>SUMMARY</b>	
Consolidation ME aircraft handling	Introduction to handling of system failures
Consolidation of ME procedures, all engines and one engine out	Preparation for the Stage Check.
Engine Failure in Visual Pattern	
<b>OBJECTIVES</b>	
Abnormal procedures concerning engine	Common errors
Abnormal and Supplementary procedures	Discussion of System failures
Advanced use of checklists and drills	Engine Failure in visual pattern
Air Exercises	Handling of engine failures during take-off, cruise and descent
Aircraft Performance limitations	Holdings
Airplane documentation	IFR Procedures
All kinds of IFR approaches	Importance of safety speeds
ATC considerations	Inflight Performance
Circling Approaches	Pre-flight Planning
<b>TRAINING ITEMS</b>	
Use of alternate aerodromes	XC Preparation
XC Flight Planning	
<b>BRIEFING ITEMS</b>	
Contents of the CPL skill test	Handling of a typical system malfunction (gear / flaps / elec / pneumatic)
CRM / HPL aspects	
Engine and system checks	Operational Consequences
Engine Failure after T/O and in flight	Sequence to handle an engine failure
Engine Failure Visual Pattern	System Malfunctions
Flight with asymmetric thrust (T/O, cruise, descent, final, landing)	Use of Abnormal lists
FORDEC	
<b>AIR EXERCISES</b>	
Aerodrome pattern flying	Engine Failure Visual Pattern
All kinds of IFR approaches	Engine Shutdown in flight and restart in flight (discussion)
Alternate Gear extension (discussion)	Location and use of emergency equipment and exits
Changeover from VFR to IFR or vice versa Holdings	One engine inop instrument approaches (simulated zero thrust)
Circling Approaches / Crosswind effects and procedure	One engine inop operation (simulated zero thrust)
Engine failure (simulated)	Precision and Non Precision Approaches

Phase	Sequence	Content	Type	Control	Rule	Blocktime
4	29	Progress Test G	MEP	SPIC	IFR	2:00

**SUMMARY**

The Student Pilot will prepare and control this lesson in accordance with ATO standards, will demonstrate thorough knowledge and understanding of ME Operation during VFR navigation, traffic pattern, instrument air work, IFR navigation and IFR instrument approaches, including holding entries and holding. . This lesson is designed to meet the tolerances for the Skill Test.

**OBJECTIVES**

Final confirmation of successful progress.

**TRAINING ITEMS**

Aircraft Performance	VFR and IFR procedures
Aircraft documentation	CRM/HPL concepts

**BRIEFING ITEMS**

Repetition of items in the last units

**AIR EXERCISES**

Air work	IFR Approaches, Circling, Holding
VFR XC	Engine Failure (simulated)
Visual Pattern	Engine Failure in VFR Pattern (simulated)

## 2.5 Phase 5 – UPRT

Phase	Sequence	Content	Type	Control	Rule	Blocktime
5	30	Advanced UPRT	SEP	DUAL	VFR	3:00

**Exercise 1**

Recovery from Nose HIGH upsets at various bank angles

**OBJECTIVES**

The student pilot should:

- |   |   |
|---|---|
| 1 | recognise and confirm the Nose HIGH situation (AOA, attitude, energy, trends) |
| 2 | announce 'Nose High'  |
| 3 | apply the correct recovery strategy   |

**TASK**

The student pilot should:

- |    |   |
|----|---|
| 1  | regain situation awareness  |
| 2  | recognise and analyse AOA, pitch, bank, energy state and trends                         |
| 3  | note natural and synthetic indications for AOA, attitude, and energy                    |
| 4  | manage human factors, stress response (startle and surprise, counter-intuitive actions) |
| 5  | take manual control   |
| 6  | identify and apply the Nose HIGH recovery strategy                                      |
| 7  | correct any out-of-trim condition   |
| 8  | manage nose-down movement   |
| 9  | manage g-load   |
| 10 | use the effects of power to assist nose-down movement                                   |
| 11 | use bank to orient the lift vector as necessary   |
| 12 | stabilise the flight path after recovery using basic pitch/power settings               |

**ENABLING OBJECTIVES**

The student pilot should:

- |   |  |
|---|--|
| 1 | decide if Stall Recovery or Nose HIGH recovery is applicable   |
| 2 | perform control inputs deliberately  |
| 3 | use up to full control deflections   |
| 4 | avoid unnecessary low or high loads  |
| 5 | use secondary flight controls (trim/power) as necessary to support primary flight control inputs (i.e. nose-down movement); (vi) apply control inputs in the correct sequence (see Table 1, Nose-HIGH Recovery Strategy); (vii) apply counterintuitive actions as necessary:<br>(A) unloading;<br>(B) power-reduction in Nose-HIGH attitude (depending on engine mounting); and<br>(C) Using bank to orient the lift vector downwards. |



Exercise 2	
Recovery from Nose LOW upsets at various bank angles	
OBJECTIVES	
The student pilot should:	
1	recognise and confirm the Nose HIGH situation (AOA, attitude, energy, trends)
2	announce 'Nose LOW'
3	apply the correct recovery strategy
TASK	
The student pilot should:	
1	regain situation awareness
2	recognise and analyse AOA, pitch, bank, energy state and trends
3	note natural and synthetic indications for AOA, attitude, and energy
4	manage human factors, stress response (startle and surprise, counter-intuitive actions)
5	take manual control
6	identify and apply the Nose LOW recovery strategy
7	correct any out-of-trim condition
8	decide if aircraft is stalled
9	manage g-load
10	identify the correct direction to roll
11	roll to wings level to orient the lift vector upwards
12	manage power and drag
13	stabilise the flight path after recovery using basic pitch/power settings
ENABLING OBJECTIVES	
The student pilot should:	
2	perform control inputs deliberately
3	use up to full control deflections
4	avoid unnecessary low or high loads
5	apply control inputs in the correct sequence (see Table 2, Nose-LOW Recovery Strategy)
6	apply counter-intuitive actions as necessary: (A) apply Stall Recovery in nose low attitude first if needed; (B) unloading instead of pulling; (C) unloading to increase roll rate; (D) avoid 'rolling-pull'; and (E) Accept the priority of rolling to wings level first, before reducing power and before pulling.

Exercise 3	
Recovery from Spiral Dive	
OBJECTIVES	
The student pilot should:	
1	recognise the spiral dive as a result of improper nose-up elevator input during a Nose LOW turning situation;
2	apply the Nose LOW Recovery Strategy
TASK	
The student pilot should:	
1	maintain/regain situation awareness
2	recognise and analyse AOA, pitch, bank, energy state and trends;
3	manage human factors, stress response (startle and surprise, counter-intuitive actions);
4	take manual control;
5	identify and apply the Nose LOW recovery strategy
6	Stabilise the flight path after recovery using basic pitch/power settings.
ENABLING OBJECTIVES	
The student pilot should:	
1	perform control inputs deliberately and in the correct sequence
2	use up to full control deflections, if required; a
3	apply counter-intuitive actions as necessary: (A) unloading instead of pulling; (B) unloading to increase roll rate; (C) avoid 'rolling-pull'; and (D) accepting the priority of rolling to wings level first, before reducing power and before pulling.

Exercise 4	
Recovery from Stall event	
OBJECTIVES	
The student pilot should:	
1	recognise and confirm the situation (AOA, attitude, energy, trends);
2	announce 'Stall';
3	apply the Stall Event Recovery Strategy.
TASK	
The student pilot should:	
1	regain situation awareness
2	recognise and analyse AOA, pitch, bank, energy state and trends
3	note natural and synthetic indications for high AOA/stall,
4	manage human factors, stress response (startle and surprise, counter-intuitive actions)
5	recover from: (A) approach to stall (B) full stall, wings level and during turn (C) slipping stall (D) skidding stall (E) accelerated stall (F) secondary stall
6	take manual control
7	identify and apply the Stall Event Recovery Template or the aircraft manufacturer Stall Recovery SOP
8	apply nose-down elevator input to reduce AOA
9	manage trim
10	consider power reduction (if engine mounting induces a nose-up effect);
11	accept altitude loss
12	identify the correct direction to roll to wings level;
13	manage power and drag
14	manage g-load and energy to avoid secondary stall;
15	stabilise the flight path after recovery using basic pitch/power settings.
ENABLING OBJECTIVES	
The student pilot should:	
1	perform control inputs deliberately
2	use up to full control deflections, if required
3	apply control inputs in the correct sequence (see Table 3, Stall Event Recovery Strategy Template);
4	apply counter-intuitive actions as necessary: (A) unloading to reduce AOA; (B) unloading before rolling; (C) power reduction if necessary; (D) accepting altitude loss; and (E) waiting for airspeed increase before loading again.

Exercise 5	
Recovery from incipient spin	
OBJECTIVES	
The student pilot should:	
1	recognise and confirm the spin (AOA, yaw, attitude, energy, roll, trends);
2	apply the OEM Incipient Spin Recovery procedure.
TASK	
The student pilot should:	
1	be aware of the aircraft response to all possible pitch and roll control inputs and to thrust/power changes during (incipient) spin;
2	maintain/regain situation awareness;
3	recognise and analyse AOA, attitude, energy, yaw, roll, trends);
4	note natural and synthetic indications for high AOA, stall, spin;
5	manage human factors, stress response (startle and surprise, counter-intuitive actions);
6	take manual control
7	identify and apply the OEM Incipient Spin Recovery Procedure;
8	manage AOA, g-load and energy to avoid secondary stall
9	stabilise the flight path after recovery using basic pitch/power settings.
ENABLING OBJECTIVES	
The student pilot should:	
1	perform control inputs deliberately and in the correct sequence
2	use up to full control deflections as required by the procedure;
3	apply counter-intuitive actions as necessary;
4	avoid unreflected control inputs;
5	allow time for control inputs to show results.

## 2.6 Phase 6 – MCC

Phase	Sequence	Content	Type	Control	Rule	Blocktime
6	31	MCC	FNPT II	PF & PNF	IFR	15:00

SUMMARY	
Student occupies RH or LH pilots seat, depending on planned position	Assisting commander will be assigned (if necessary)
Instructor (acc. Instr. Qualification) occupies instructors station	Student acts as pilot flying (PF) and pilot not flying (PNF)
OBJECTIVES	
Engine failure drill, decision making	Pitch&Power concept review, Abnormal & Emergency operation
Instructor (acc. Instr. Qualification) occupies instructors station	Student acts as pilot flying (PF) and pilot not flying (PNF)
Introduction to Simulator and MCC, Pitch & Power Concept, use of SOPs, attitude flying, AP/FD-intro.	Student occupies RH or LH pilots seat, depending on planned position
Navigation procedures, low speed manoeuvres, wind effects	
<u>NOTE:</u> Before the lesson, the training crew must be briefed on the emergency equipment of the trainer (Emergency Shutdown, Fire Extinguisher, Flash Light, Escape Routings)	
TRAINING ITEMS	
Individual checklist flows	Working through all individual checklists with using the expanded checklist
Use of SOPs during abnormal procedures (drills, flows)	
BRIEFING ITEMS	
Abnormal / Emergency operation	Minimum-equipment-list (MEL)
Abnormal / Emergency Philosophy	MSA/MOCA/MORA checks / RA
Aircraft performance, passenger load, fuel load, aircraft weights	Non-precision approach
Air work - Stall / Steep turn	Normal descent/descent planning/over speed warning during Descent/VMO/MMO/Mach-buffet
Basic attitude exercises	Normal take off, climb and cruise, Configuration changes
Cat II demonstration/monitored approach	Partial panel
Challenge and Response (C+R) vs. Read and Reconfirm (R+R)	Pitch and power requirements (different flap settings)
CM 1/2 incapacitation	Pitch power concept review
CRM/FORDEC part	Precision approach
Crosswind T/O and landing	Prop fail/Over speed
Decision making (FORDEC, PPAA)	Rejected T/O / On Ground Emergency
Engine fail after V1 / during G/A	RTO due to severe failure before V1
Engine failure during Cruise / Approach / Go Around	Smoke emergency
Engine failure/fire after V1 / during G/A	Stall
Engine failure/fire during G/A	Stall exercises (clean / landing configuration)
Engine restart in flight	Steep turns
Engine shutdown	System failures à Electric, Hydraulic, Environmental
Engine start malfunctions	System procedure training / use of Autopilot and FD
Engine start, Taxi / pre-take off checks	TCAS/GPWS intro
Enroute Navigation, Fuel Management	Two pilots concept PF-PNF; LP-RP

Flight planning, Weather Charts, Approach and T/O minima, Weight and Balance, Departure Slots/CTOT	Unusual attitudes
FORDEC exercise	Use of brakes, steering and asymmetric power
Go around (G/A), missed approach (MAP)	Use of checklist, SOP's, QRH, Cockpit preparation
Handling of Checklists	Use of FD/AP (Best use of equipment)
ILS approach and landing (AP/FD/-FD)	Volcanic ash encounter
ILS, NDB Apps (raw data/FD)	Wind Shear during T/O and landing
Inadvertent stall	Windshear
Individual problems – deficit	May Day/Pan Call
<b>AIR EXERCISES</b>	
Abnormal operation	Handling of volcanic ash encounter
Aircraft – Handling	Handling of wind shear
Approach / Landing	IFR – Navigation
Approach briefing	ILS approach / landing with AP
Cat II demo	ILS approach manually with F/D
Checklist work	ILS approach manually without F/D
Climb / Cruise	Inadvertent stall
Climb / Cruise / Descent	Landing techniques
Configuration changes	MCC
Crewmember incapacitation	Missed approach
CRM	MSA/MOCA/MORA check
Decision making	NDB approach
Descent / Approach	Normal take off
Descent planning	Pitch Power exercise
Emergency operation	RTO / On ground emergency
Engine failure aft. V1	Stall / clean
Engine failure during G/A	Stall / landing configuration
Engine failure enroute	Stall exercises
Engine failure/fire after V1	Steep turns
Engine failure/fire during G/A	Take Off
FORDEC	Take off (X-wind)
Go around	Take off / Climb / Cruise
Handling of Decompression	Turns
Handling of RTO a/p	Unusual attitudes
Handling of RTO f/p	Use of AP / FD
Handling of RTO PF	Use of Nav aids
Handling of RTO PM	Weather Consideration
Handling of system failures	Windshear recovery

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