Student Name:

Training Syllabus—Component Completion

		Check	Student	Instructor
1	**FAMILIARISATION WITH AIRCRAFT**			
	External features - Major components, without excessive detail			
	Cockpit layout - Name each instrument (use checklist)			
	Aircraft systems - Introduction			
	Logbook - How to complete and maintain			

1E   EMERGENCY DRILLS (with respect to ground emergencies)

	Check	Student	Instructor
Emergencies carried out as per aircraft Ops Manual			
Engine fire on ground			
Electrical cabin fire on ground			

2   PREPARATION FOR AND ACTION AFTER FLIGHT

	Check	Student	Instructor
Electrical system			
Position of aircraft for starting			
Authorisation			
External inspection			
Position of aircraft for starting			
Entering cockpit			
Availability of fire extinguishers			
Seating (comfortable, adequate visibility, able to manipulate controls freely)			
Internal inspection			
Pre and after start checks (Student to do first start-up)			
Power checks			

The aircraft systems

	Check	Student	Instructor
Static system			
Pitot system			
Ignition system			
Hydraulic system			
Philosophy: Cockpit - flow patterns, memory and action items			
Checklist:: Practical use of, availability			

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Training Syllabus—Component Completion

	Check	Student	Instructor
Action after flight			
After landing checks			
Where to park/flight line/refueling			
Shutdown (method)			
Danger of leaving ignition and master on			
Securing the- controls			
Park brake			
Tidying up the cockpit			
Post flight inspection and chocks			
Flight folio and reporting of snags			
3 AIR EXPERIENCE *(Depending on previous experience)*			
Introduction to the sensation of flight			
New aspect of ground seen from air			
Introduction to attitude flying concept			
Set the tone for all subsequent training			
Radio - Use of formal terminology and standard phraseology to simplify			
4 EFFECTS OF CONTROLS			
Basic level flight attitude			
Primary effects (Banked and level attitude)			
Secondary effects			
Aileron and rudder coordination -Further effects			
Trimmers (elevator, rudder fixed tab, NB to focus on external attitude)			
Effect of airspeed on the controls: effectiveness, yaw, pitch			
Slipstream			
Throttle: pitch and yaw			
Effect of flap - coordinated pitch attitude change			
Effect of airspeed on the controls			
Slipstream			
5 TAXYING			
Inertia: the need for excess power to get moving			
Power reduction once moving to control speed			
Avoid repetitive opening and closing of throttle			
Correct use of power and brakes			
Speed control: acceleration/deceleration			
High speed taxying, smooth but positive control and correction			
Directional control			
Where to taxy			
Keeping aircraft moving during turns			

Student Name:

Training Syllabus—Component Completion

TAXYING (Continued)

	Check	Student	Instructor
Straightening nose wheel before stopping			
Instrument serviceability - AH, TC, DI Compass and ADF			
High speed taxing, smooth but positive directional control and correction			
Stopping, use of brakes while maintaining direction			

6   STRAIGHT AND LEVEL

	Check	Student	Instructor
Initial height control - Co-ordinated application and attitude change			
Subsequent height control - Anticipate effect of drag, allow for inertia			
Trimming – Remove control pressure only when finally settled			
Slow flight - Anticipate effect of drag, allow for inertia			
Basic attitude – Correct use of trimmer			
Height - Correct attitude control for specific power/speed will maintain height			
Instruments - Limited use to indicate performance only not for control			
Throttle/Rudder coordination - lateral level, direction/balance with rudder			
Trimming - Pressure off once aircraft is settled			
Straight and Level – Slow Safe Cruise			
Flying at various airspeeds - Attitude, power setting and configuration			
Entry - Correct sequence and attitude control throughout transition			
Maintaining - Correct pitch attitude will maintain speed			
Wings level and balance, will maintain direction			

7   CLIMBING

	Check	Student	Instructor
Entry - Correct sequence and attitude control throughout deceleration			
Speed control - Instruments only for indication of performance			
Measured attitude changes for control			
Performance—Effect of incorrect attitude / speed on ROC			
Leveling off—Specific altitude			
Maintaining—Correct pitch attitude will maintain speed			
Wings level and balance will maintain direction			

8   DESCENDING

	Check	Student	Instructor
Entry			
Slope - Variable from level flight to glide			
Speed - Attitude and trim adjustment :required with every power change			
Range - Combined use of flap and power to control			
Speed control -Using performance instruments / measured attitude changes			
Performance - How correct speed affects ROD / Range			
Leveling off (No specific altitude)			
Maintaining			

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Training Syllabus—Component Completion

9 TURNING	Check	Student	Instructor
Medium Turns			
Coordinated aileron and rudder for entry			
Coordinated controls for countering rolling tendency in the turn			
Attitude for height control - Basic medium turn attitude			
Coordinated aileron/rudder to roll out of turn			
Attitude back to normal for straight & level			
Climbing turns—rate one turns			
More opposite aileron required in climbing turn			
Attitude control for steady climb while turning			
Descending turns - less opposite aileron required			
Attitude control for various rates of descent (glide and powered)			
Coordinated controls on entry and exit.			
Awareness of effect of excessive AoB on rate of climb/descent			

10A SLOW FLIGHT			
2 speeds for one power setting			
Flap settings			
Speed/attitude relationship			
Minimum power setting required to maintain altitude			
Awareness			
Sluggishness of controls - gentle control input with attention to coordnation			

10B STALLING			
Safety - Hasell checks			
Entry - external reference for pitch, lateral and directional control			
Approaching the stall - minimal use of ailerons, use rudder to keep wings level			
Symptoms of the approach to the stall and the actual stall			
Recovery using external reference - avoid steep nose down attitude			
Recovery with / without power. The effect on height lost.			
Entry to stall with / without flaps			
Stalling in landing configuration			
Effect of g-force on stall speed (steep turns)			

11 SPIN AVOIDANCE			
Safety. Utility category: Mass and balance calculation in training file			
Entry - Positive application of controls			
Recovery - correct sequence: power off, opposite rudder, stick forward			
Avoid development of the spin - recover during incipient phase			
Very important: absolutely no use of ailerons during recovery			

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Training Syllabus—Component Completion

12 TAKE OFF AND CLIMB TO DOWNWIND POSITION	Check	Student	Instructor
Briefing - Informal assessment of actual conditions and subsequent decisions			
Demonstration - runway centerline & reference point, positive control			
Rotate - Elevator control to allow aircraft to rotate and fly itself off			
Lift-off - use horizon to control attitude and direction			
Positive rate of climb, after take-off checks when safely clear of ground			
Position in relation to runway - building awareness			
maintaining good square circuit - using reference points			
Accuracy - not at expense of technique			
Geometry - Based on runway			
Short field take off			

13 CIRCUIT APPROACH AND LANDING			
Demonstration - runway centreline & reference point, positive control			
Immediate action based on own judgement			
Heading control - use of DI in circuit			
Glide Approach			
Go around- A bad approach is a bad landing			
Landing - positive control near ground during flare and hold off			
Balloon recovery			
Directional and Lateral control and correction before touchdown			
Directional control and correction during and after touchdown			

Sideslipping			
Entry - Rudder to align the aircraft with a line feature			
Aileron to control bank			
Maintaining - Controlling airspeed with Attitude control			
Transition from the sideslip to normal descent - coordination			

12/13E EMERGENCIES (with respect to take offs, landings, go-arounds and engine failure)

EFATO demo - shortly after take-off, field selection, procedures			
EFATO - student competent with reaction time, procedures			
Engine failure in the circuit - procedures, confidence			
Emergencies during hi-speed taxy (loss of direction)			
Go-around - positive and prompt action			
Short-field landing			
Bounce recovery - avoiding nose-down reactions by sudent			

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Training Syllabus—Component Completion

14 FIRST SOLO	Check	Student	Instructor
Briefing: differences in handling of lighter aircraft - what to expect			
Debrief			
Completion of logbook			

15 ADVANCED TURNING

Steep Turns

	Check	Student	Instructor
45 Degrees - attitude control, maintaining adequate back pressure			
Maintaining bank angle, accuracy of height control			
Spiral dive recovery			

16 FORCED LANDING WITHOUT POWER

Setting up the glide, speed control			
Glide - Entry and trimming for attitude/speed			
Field selection - Large field will improve chances of success			
Field selection - Awareness of wind direction			
Field selection - Field within easy range			
Plan the approach - Choice of altitude check points			
Base position - Familiar situation (normal glide approach)			
Approach judgment- Dangers of attempting to stretch the glide			
Losing excess height - Side slipping, zigzagging, flaps			

17 PRECAUTIONARY LANDING

Briefing - The motivation for attempting precautionary landing			
Choice of field (WOSSS)			
Radio calls			
Setting up slow safe speed			
First pass overhead field at 500', joining on downwind for inspection			
Method of choosing reference points for proper inspection circuit			
Commencing the approach for first and second inspection passes			
Inspection pass checks - first pass and second pass			
Maintaining proper altitude/speed and accuracy of procedures			
Preparation for the landing - pax briefing, downwind checks			
Actions on finals - preparation for the touch down.			
Short field landing execution			

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Training Syllabus—Component Completion

18A *NAVIGATION*

	Check	Student	Instructor
Preparation - maps, flight plan, nav log, W&B, fuel requirements etc.			
Passing overhead, set heading, time, ETA			
DR navigation - times, map-reading, position fixes			
FREDAS checks			
Maintaining heading, altitude			
Nav log, regular entries, awareness of time/distance errors			
Recognition of ground features and significant points			
Ability to correct navigational discrepancies			
Approaching and joining at manned airfields			
Approaching and joining at unmanned airfields			
Accuracy of ETA predictions, keeping log of ETA vs ATA			
Diversions- calculating time, distance, heading			
Execution of diversion			

18B *NAVIGATION* problems at lower levels and in reduced visibility

Brief: CATS and CARs requirements			
Review procedures and check list for low level flying			
Actions prior to descending			
Descending to minimum safe altitude			
Effect of speed and inertia: from straight and level to the climb			
Effect of speed and inertia: during a turn			
Effect of wind: crosswind, turning downwind/into wind			
Turbulence - effect of terrain, heat of the sun, wind			
Bad weather: simulated bad weather landing at a suitable field			