EASA publish the syllabus for each of the nine ground school subjects. Shown below is the extract that PPLmentor.com is based on. The original can be found by searching for 'Easy Access Rules EASA Part-FCL'

5.	**PRINCIPLES OF FLIGHT**
5.1.	**PRINCIPLES OF FLIGHT: AEROPLANE**
	Subsonic aerodynamics
	Basics concepts, laws and definitions
	Laws and definitions:
	(a) conversion of units; (b) Newton´s laws; (c) Bernoulli's equation and venture; (d) static pressure, dynamic pressure and total pressure; (e) density; (f) IAS and TAS.
	Basics about airflow: (a) streamline; (b) two-dimensional airflow; (c) three-dimensional airflow.
	Aerodynamic forces on surfaces: (a) resulting airforce; (b) lift; (c) drag; (d) angle of attack.
	Shape of an aerofoil section: (a) thickness to chord ratio; (b) chord line; (c) camber line; (d) camber; (e) angle of attack.
	The wing shape: (a) aspect ratio; (b) root chord; (c) tip chord; (d) tapered wings; (e) wing planform.
	The two-dimensional airflow about an aerofoil
	Streamline pattern
	Stagnation point
	Pressure distribution
	Centre of pressure
	Influence of angle of attack
	Flow separation at high angles of attack
	The lift – α graph
	The coefficients
	The lift coefficient C_l: the lift formula
	The drag coefficient C_d: the drag formula
	The three-dimensional airflow round a wing and a fuselage
	Streamline pattern: (a) span-wise flow and causes; (b) tip vortices and angle of attack; (c) upwash and downwash due to tip vortices; (d) wake turbulence behind an aeroplane (causes, distribution and duration of the phenomenon).

	Induced drag: (a) influence of tip vortices on the angle of attack; (b) the induced local α; (c) influence of induced angle of attack on the direction of the lift vector; (d) induced drag and angle of attack.
	Drag
	The parasite drag: (a) pressure drag; (b) interference drag; (c) friction drag.
	The parasite drag and speed
	The induced drag and speed
	The total drag
	The ground effect
	Effect on take off and landing characteristics of an aeroplane
	The stall
	Flow separation at increasing angles of attack: (a) the boundary layer: (1) laminar layer; (2) turbulent layer; (3) transition. (b) separation point; (c) influence of angle of attack; (d) influence on: (1) pressure distribution; (2) location of centre of pressure; (3) $C_{L;}$ (4) $C_{D;}$ (5) pitch moments.
	(e) buffet; (f) use of controls.
	The stall speed: (a) in the lift formula; (b) 1g stall speed; (c) influence of: (1) the centre of gravity; (2) power setting; (3) altitude (IAS); (4) wing loading; (5) load factor n: (i) definition; (ii) turns; (iii) forces.
	The initial stall in span-wise direction: (a) influence of planform; (b) geometric twist (wash out); (c) use of ailerons.
	Stall warning: (a) importance of stall warning; (b) speed margin; (c) buffet; (d) stall strip; (e) flapper switch; (f) recovery from stall.

	Special phenomena of stall: (a) the power-on stall; (b) climbing and descending turns; (c) t-tailed aeroplane; (d) avoidance of spins: (1) spin development; (2) spin recognition; (3) spin recovery. (e) ice (in stagnation point and on surface): (1) absence of stall warning; (2) abnormal behaviour of the aircraft during stall.
	CL augmentation
	Trailing edge flaps and the reasons for use in take-off and landing: (a) influence on C_L - α-graph; (b) different types of flaps; (c) flap asymmetry; (d) influence on pitch movement.
	Leading edge devices and the reasons for use in take-off and landing
	The boundary layer
	Different types: (a) laminar; (b) turbulent.
	Special circumstances
	Ice and other contamination: (a) ice in stagnation point; (b) ice on the surface (frost, snow and clear ice); (c) rain; (d) contamination of the leading edge; (e) effects on stall; (f) effects on loss of controllability; (g) effects on control surface moment; (h) influence on high lift devices during takeoff, landing and low speeds.
	Stability
	Condition of equilibrium in steady horizontal flight
	Precondition for static stability
	Equilibrium: (a) lift and weight; (b) drag and thrust.
	Methods of achieving balance
	Wing and empennage (tail and canard)
	Control surfaces
	Ballast or weight trim
	Static and dynamic longitudinal stability
	Basics and definitions: (a) static stability, positive, neutral and negative; (b) precondition for dynamic stability; (c) dynamic stability, positive, neutral and negative.
	Location of centre of gravity: (a) aft limit and minimum stability margin; (b) forward position; (c) effects on static and dynamic stability.
	Dynamic lateral or directional stability
	Spiral dive and corrective actions
	Control
	General
	Basics, the three planes and three axis
	Angle of attack change
	Pitch control

	Elevator
	Downwash effects
	Location of centre of gravity
	Yaw control
	Pedal or rudder
	Roll control
	Ailerons: function in different phases of flight
	Adverse yaw
	Means to avoid adverse yaw: (a) frise ailerons; (b) differential ailerons deflection.
	Means to reduce control forces
	Aerodynamic balance: (a) balance tab and anti-balance tab; (b) servo tab.
	Mass balance
	Reasons to balance: means
	Trimming
	Reasons to trim
	Trim tabs
	Limitations
	Operating limitations
	Flutter
	V_{fe}, V_{no}, V_{ne}
	Manoeuvring envelope
	Manoeuvring load diagram: (a) load factor; (b) accelerated stall speed; (c) v_a; (d) manoeuvring limit load factor or certification category.
	Contribution of mass
	Gust envelope
	Gust load diagram
	Factors contributing to gust loads
	Propellers
	Conversion of engine torque to thrust
	Meaning of pitch
	Blade twist
	Effects of ice on propeller
	Engine failure or engine stop
	Windmilling drag
	Moments due to propeller operation
	Torque reaction
	Asymmetric slipstream effect
	Asymmetric blade effect
	Flight mechanics
	Forces acting on an aeroplane
	Straight horizontal steady flight
	Straight steady climb
	Straight steady descent
	Straight steady glide

	Steady coordinated turn: (a) bank angle; (b) load factor; (c) turn radius; (d) rate one turn.