



AERO CLUB CREMONA

Associazione Sportiva Dilettantistica

IT.DTO.021
CREMONA

THEORETICAL KNOWLEDGE

PRIVATE PILOT LICENCE - AEROPLANE

SUBPART C PRIVATE PILOT LICENCE (PPL) AMC1 FCL.210; FCL.215 Training course and theoretical knowledge

54t PPL PPL (A) COURSE

N°	DAY	DATE	TIME	SUBJECT	APPLICABLE ITEMS (PPL AIRPLANE)
1	MAR	18/10/2022	18-21	AIR LOW & ATC PROCEDURES	Preface of AIR LAW & ATC Procedures: conventions, agreements and organisations;
2	GIO	20/10/2022	18-21	AIR LOW & ATC PROCEDURES	International law, Doc.7300/6 Part I and II (ICAO); Annexes: 1,2,7 and 8
3	MAR	25/10/2022	18-21	AIR LOW & ATC PROCEDURES	Procedures for air navigation: aircraft ops doc. 8168-ops/611, vol.1; Altimeter setting procedures (including IACO doc. 7030 reg. supplm. Procedures)
4	GIO	27/10/2022	18-21	AIR LOW & ATC PROCEDURES	Annex 11: Doc. 4444 air traffic management; Annex 12: Search and rescue; Annex 13: Aircraft accident investigation; Annex 14, volume 1 and 2: Aerodromes; Annex 15: Aeronautical information service; Annex 17: Security; National law.
5	GIO	03/11/2022	18-21	HUMAN PERFORMANCE	Human factors: basic concepts, Human factors in aviation, Basic aviation physiology and health maintenance, Man and environment, Health and hygiene
6	MAR	08/11/2022	18-21	HUMAN PERFORMANCE	Basic aviation psychology, Human information processing, Human error and reliability, Decision making, Avoiding and managing errors: cockpit management, Human behavior, Human overload and underload.
7	GIO	10/11/2022	18-21	METEOROLOGY	The atmosphere: Composition, extent and vertical division; Air temperature; Atmospheric pressure; Air density;
8	MAR	15/11/2022	18-21	METEOROLOGY	ICAO standard atmosphere; Altimetry; Wind; Thermodynamic; Cloud and fog
9	GIO	17/11/2022	18-21	METEOROLOGY	Precipitation; Air masses and front; Pressure systems; Climatology;
10	MAR	22/11/2022	18-21	METEOROLOGY	Flight hazard, Meteorological information
11	GIO	24/11/2022	18-21	COMMUNICATIONS	VFR Communications, General operating procedures
12	MAR	29/11/2022	18-21	COMMUNICATIONS	General operating procedures, Relevant weather information terms (VFR)
13	GIO	01/12/2022	18-21	COMMUNICATIONS	Distress and urgency procedures; General principles of VHF propagation and allocation of frequencies
14	MAR	06/12/2022	18-21	PRINCIPLES OF FLIGHT	Aeroplane Subsonic aerodynamics, Basics concepts, laws and definitions
15	MAR	13/12/2022	18-21	PRINCIPLES OF FLIGHT	The two-dimensional airflow about an aerofoil, the Coefficients, The three-dimensional airflow round a wing and a fuselage
16	GIO	15/12/2022	18-21	PRINCIPLES OF FLIGHT	Drag; The ground effect; The stall; CL augmentation, The boundary layer, Special circumstances
17	MAR	20/12/2022	18-21	PRINCIPLES OF FLIGHT	Stability: Condition of equilibrium in steady horizontal flight, Methods of achieving balance, Static and dynamic longitudinal stability, Dynamic lateral or directional stability;
18	GIO	22/12/2022	18-21	PRINCIPLES OF FLIGHT	Control: general, Pitch control, Roll control, Means to reduce control forces; Mass balance; Trimming; Limitations: Operating limitations, Manoeuvring envelope, Gust envelope
19	MAR	27/12/2022	18-21	PRINCIPLES OF FLIGHT	Propellers; Conversion of engine torque to thrust, Engine failure or engine stop, Moments due to propeller operation;

					Flight mechanics: Forces acting on an airplane
20	GIO	29/12/2022	18-21	OPERATIONAL PROCEDURES	Operation of aircraft: ICAO Annex 6, General requirements;
21	MAR	03/01/2023	18-21	OPERATIONAL PROCEDURES	Special operational procedures and hazards (general aspects): Noise abatement, fire or smoke
22	GIO	05/01/2023	18-21	OPERATIONAL PROCEDURES	Special operational procedures and hazards (general aspects): Windshear and microburst, Wake turbulence
23	MAR	10/01/2023	18-21	OPERATIONAL PROCEDURES	Special operational procedures and hazards (general aspects): Emergency and precautionary landings, Contaminated runways
24	GIO	12/01/2023	18-21	FLIGHT PERFORMANCE AND PLANNING	Purpose of mass and balance considerations: Mass limitations, CG limitations; Loading: Terminology, Mass limits, Mass calculations, Fundamentals of CG calculations;
25	MAR	17/01/2023	18-21	FLIGHT PERFORMANCE AND PLANNING	Mass and balance details of aircraft: Contents of mass and balance documentation, Extraction of basic mass and balance data from aircraft documentation, Determination of CG position, Load and trim sheet
26	GIO	19/01/2023	18-21	FLIGHT PERFORMANCE AND PLANNING	Performance airplanes: Introduction, SE aeroplanes, Take-off and landing Performance, Climb and cruise performance,
27	MAR	24/01/2023	18-21	FLIGHT PERFORMANCE AND PLANNING	Flight planning for VFR flights; VFR navigation plan;
28	GIO	26/01/2023	18-21	FLIGHT PERFORMANCE AND PLANNING	Fuel planning; Pre-flight calculation of fuel required; Pre-flight preparation: AIP and NOTAM briefing, Meteorological briefing
29	MAR	31/01/2023	18-21	FLIGHT PERFORMANCE AND PLANNING	ICAO flight plan (ATS flight plan), Individual flight plan Flight monitoring and in-flight replanning
30	GIO	02/02/2023	18-21	AIRCRAFT GENERAL KNOWLEDGE	System design, loads, stresses, maintenance; Airframe: Wings, tail surfaces and control surfaces, Fuselage, doors, floor, wind-screen and windows; Hydromechanics: basic principles; Hydraulic systems; Landing gear, wheels, tyres and brakes; Flight controls; Secondary flight controls; Anti-icing systems; Fuel system; Piston engine: general, fuel, carburetor or injection system, air cooling system, lubrication system, ignition circuits, mixture, propellers, performance and engine handling; Electrics: general and definitions, batteries, static electricity general, generation: production, distribution and use, electric components
31	MAR	07/02/2023	18-21	AIRCRAFT GENERAL KNOWLEDGE	Instrument and indication systems: Pressure gauge, Temperature sensing, Fuel gauge, Flow meter, Position transmitter, Torque meter, Tachometer, Measurements of aerodynamic parameters: pressure parameters, temperature parameters, altimeter, Vertical speed indicator, Air speed indicator; Magnetism: direct reading compass, Earth magnetic field; Gyroscopic instruments: basic principles, Turn and bank indicator, Attitude indicator, Directional gyroscope; communication systems: Transmission modes: VHF, HF and SATCOM, Voice communication; Alerting systems and proximity systems: Flight warning systems, Stall warning, Display units
32	GIO	09/02/2023	18-21	NAVIGATION	Basics of navigation; The earth; Time and time conversions, Directions, Distance
33	MAR	14/02//223	18-21	NAVIGATION	Magnetism and compasses: General principles, Aircraft magnetism; Charts: General properties of miscellaneous types of projections, The representation of meridians, parallels, great circles and rhumb lines, The use of current aeronautical charts;
34	GIO	16/02/2023	18-21	NAVIGATION	DR navigation: Basis of DR, Use of navigational computer, The triangle of velocities, Measurements of DR elements;

35	MAR	21/02/2023	18-21	NAVIGATION	In flight navigation: Use of visual observations and application to in-flight navigation;
36	GIO	23/02/2023	18-21	NAVIGATION	Radio navigation: Basic radio propagation theory, Antennas, Wave propagation; Radio aids: Ground DF, NDB/ADF
37	MAR	28/02/2023	18-21	NAVIGATION	Radio aids: VOR, DME; Radar: Ground radar, Secondary surveillance radar and transponder; GNSS: GPS, GLONASS or GALILEO
38	GIO	02/03/2023	18-21	GENERAL REVIEW	All topics
39	MAR	07/03/2023	18-21	QUIZZES PRE-EXAMINATION	Simulation of the theoretical examination

Note:

Il corso teorico è ritenuto valido e completato qualora l'allievo sia risultato presente ad almeno 100 ore delle lezioni teoriche in aula.

Materiale necessario per la parte teorica: Libro di testo “ Teoria del volo”, regolo aeronautico, plotter aeronautico