

Course Title	<b>PPL Theory</b>				
Course Code	AVM111				
Course Type	Compulsory				
Level	Bachelor (1 <sup>st</sup> cycle)				
Year / Semester	1 <sup>st</sup> Year / 1 <sup>st</sup> Semester				
Instructor's name	TBA				
ECTS	5	Lectures / week	3 Hours / 14 Weeks	Laboratories / week	None
Course Purpose and Objectives	<p>The PPL (Private Pilot License) theory course's purpose is to provide the knowledge necessary for the student to take the PPL theoretical examination, which together with the respective practical examination (flight test) leads to the PPL qualification (awarded by the Department of Civil Aviation). The course trains students on all the necessary subjects that include: Air Law and ATC procedures, Human Performance, Meteorology, Communications, Principles of Flight (Airplane), Operational Procedures, Flight Performance &amp; Planning, Aircraft General Knowledge and Navigation.</p>				
Learning Outcomes	<p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> <li>• Define all the necessary laws according to which private flight operations are conducted</li> <li>• Demonstrate knowledge of all ATC procedures relating to private flights</li> <li>• Demonstrate understanding of the human performance factors that affect flying abilities</li> <li>• Define the meteorological terms relating to general aviation</li> <li>• Demonstrate knowledge of the meteorological factors that may affect general aviation</li> <li>• Demonstrate knowledge of the air-traffic related communication procedures</li> <li>• Demonstrate abilities of effective air-traffic communication</li> <li>• Define the basic terms relating to principles of flight of aeroplanes</li> <li>• Demonstrate knowledge regarding the application of principles that affect the flights of aeroplanes</li> </ul>				

	<ul style="list-style-type: none"> <li>• Demonstrate clear knowledge of the main operating and emergency procedures that may be applied during a general aviation flight</li> <li>• Define the main terms relating to flight performance and planning</li> <li>• Demonstrate ability to successfully use the main procedures for flight planning</li> <li>• Demonstrate knowledge of all SEP aeroplane systems, their usage and checking procedures.</li> <li>• Define the navigation terms that relate to general aviation.</li> <li>• Demonstrate abilities for effectively applying general aviation navigation techniques.</li> </ul>		
Prerequisites	None	Co-requisites	None
Course Content	<p>The material included in this course cover the following subjects:</p> <ul style="list-style-type: none"> <li>• <b>Air law and ATC procedures:</b> The Convention on International Civil Aviation - Air Navigation, Airworthiness of Aircraft, Aircraft Nationality and Registration Marks, Personnel Licensing, Rules of the Air, Air Operations, Air traffic management, Aeronautical Information Service, Aerodromes, Search and Rescue, Security, Aircraft, Accident Investigation, National Law.</li> <li>• <b>Human Performance:</b> Basic concepts, Human Factors in aviation, Basic Aviation Physiology and Health Maintenance, Man and Environment, Basic. Aviation Psychology, Human error and reliability, Decision making, Avoiding and managing errors - cockpit management, Human behaviour, Identification of hazardous attitudes (error proneness).</li> <li>• <b>Meteorology:</b> The Atmosphere, Air temperature, Atmospheric pressure, Air density, ISA, Altimetry, Wind, Turbulence, Thermodynamics, Clouds, Fog, Mist, Haze, Precipitation, Air masses and fronts, Pressure systems, Climatology, Flight hazards (Icing, Turbulence, Wind shear, Thunderstorms, Inversions, Hazards in mountainous areas, Visibility reducing phenomena), Meteorological information, Weather charts, Information for flight planning, Meteorological services.</li> <li>• <b>Communications:</b> VFR Communications, Definitions, General Operating Procedures, Relevant Weather Information Terms (VFR), Communication Failure, Distress And Urgency Procedures, General Principles of VHF Propagation and Allocation of Frequencies.</li> <li>• <b>Principles of flight (aeroplanes):</b> Subsonic Aerodynamics, Basics concepts, laws and definitions, Two-dimensional airflow about an aerofoil, Coefficients, Three-dimensional airflow round a wing and a fuselage, Drag, Ground effect, Stall, CL</li> </ul>		

	<p>augmentation, boundary layer, Stability, Control, Mass balance, Trimming, Limitations, Manoeuvring envelope, Gust envelope, Propellers, Flight Mechanics.</p> <ul style="list-style-type: none"> <li>• <b>Operational procedures:</b> General, Operation of aircraft, Special Operational Procedures and Hazards (general aspects), Noise abatement, Fire/smoke, Windshear and microburst, Wake turbulence, Emergency and precautionary landings, Contaminated runways.</li> <li>• <b>Flight Performance &amp; Planning:</b> Mass and Balance, Loading, Mass and Balance Details of Aircraft, Determination of CG position, Performance – Aeroplanes (Introduction, Single-Engine Aeroplanes, Take-off and landing performance), Flight Planning and Flight Monitoring: Pre-flight Preparation, Extraction and analysis of relevant data from meteorological documents, ICAO Flight Plan (ATS Flight Plan), Flight Monitoring and In-flight Re-planning.</li> <li>• <b>Aircraft General Knowledge:</b> Airframe and Systems (Airframe, Hydraulics, Landing Gear, Wheels, Tyres, Brakes, Flight Controls, Anti-icing Systems, Fuel System, Electrics, Piston engines), Instrumentation (Instrument and Indication Systems, Measurement of Aerodynamic Parameters, Magnetism – Direct Reading Compass, Gyroscopic Instruments), Communication Systems, Alerting Systems, Proximity Systems, Integrated Instruments – Electronic Displays.</li> <li>• <b>Navigation:</b> General Navigation, Basics of Navigation (The solar system, The earth, Time and time conversions, Directions, Distance), Magnetism and Compasses, Charts, Dead Reckoning Navigation (DR), Use of the navigational computer, In-Flight Navigation, Radio Navigation (Ground D/F, NDB/ADF, VOR, DME), Radar, Global Navigation Satellite Systems (GPS/GLONASS/GALILEO).</li> </ul>
Teaching Methodology	Face – to – face
Bibliography	<ul style="list-style-type: none"> <li>• PPL Course Manuals (e.g. <b>Trevor Thom</b>, <i>The air pilot's manual</i>) <ul style="list-style-type: none"> <li>○ Vol.1: Flying Training</li> <li>○ Vol. 2: Aviation Law &amp; Meteorology</li> <li>○ Vol. 3: Navigation</li> <li>○ Vol. 4: The aeroplane technical</li> <li>○ Vol. 5: Radio Navigation &amp; Instrument flying</li> <li>○ Vol. 6: Human Performance &amp; Operational Procedures</li> <li>○ Vol. 7: Communications</li> </ul> </li> <li>• PPL CBT Software</li> <li>• EASA Part-FCL (A) Syllabus and Student Record of Training.</li> </ul>

Assessment	<table border="1"><tr><td data-bbox="472 191 1011 268">Examinations</td><td data-bbox="1011 191 1489 268">90%</td></tr><tr><td data-bbox="472 268 1011 306">Participation</td><td data-bbox="1011 268 1489 306">10%</td></tr><tr><td data-bbox="472 306 1011 373">TOTAL</td><td data-bbox="1011 306 1489 373">100%</td></tr></table>	Examinations	90%	Participation	10%	TOTAL	100%
Examinations	90%						
Participation	10%						
TOTAL	100%						
Language	English						