Private Pilot Course Outline

PVT #1 Introduction and SMS
This lesson covers the basic rules and regulations of the Brampton Flying Club, licensing requirements for PPL and RPP, and also covers operational procedures for our Safety Management System.

PVT #2 Principles of Flight
During this session we will discuss airframe construction, forces acting on an aircraft in flight, movements and controls, aircraft stability and flight performance.

PVT #3 Flight Instruments
This lesson will involve an analysis of atmospheric pressure, the pitot static system, gyroscopic theory and associated instruments. The magnetic compass will also be discussed.
Reference: From the Ground Up: pages 33 – 47.

PVT #4 Canadian Air Regulations (CARs) and Flight Operations
Topics to include aerodrome layout, traffic procedures, the Canadian Airspace System, radio wave theory and frequency bands, radio communication facilities and procedures.

PVT #5 Engines and Aircraft Systems
Topics covered will include types of combustion engines, the four stroke cycle, engine timing, cooling, lubrication, fuel systems, carburetors, mixture control, exhaust system, ignition system, electrical system, propellers, engine instruments and engine operation considerations.

PVT #6 Flight Operations: Airmanship and Performance
During this session we will discuss care of the airplane, weight and balance, factors affecting aircraft performance and performance charts, wake turbulence, and handling flight abnormalities.
Reference: From the Ground Up: pages 263 – 298, AIM AIR section, POH

PVT #7 Air Law and PSTAR
The aim of this class is to review rules of the air and procedures. Students are expected to study the AIM references outlined in the PSTAR study guide PRIOR to attending this class. Please come prepared to write the PSTAR exam.
Reference: PSTAR study guide, AIM and CARs

PVT #8 Meteorology I: Basic Theory
In this class we will discuss the atmosphere, clouds, pressure, winds, humidity, temperature and stability.

PVT #9 Meteorology II: Air Masses, Fronts and Hazards
Topics will include air masses, fronts, precipitation, fog types, thunderstorms, icing and turbulence.

PVT #10 Meteorology III: Weather Interpretation
This lesson will involve a look at available sources of weather data, decoding and analyzing weather observations and forecasts such as METARs, TAFs, FDs, and GFAs.
Reference: From the Ground Up: pages 163 – 177, AIM MET section, Aviation Weather Services Guide

PVT #11 Flight Computer
During this session we will discuss how to use your E6B flight computer. Time, speed and distance, fuel consumption, fuel burn, true altitude and wind correction calculations plus many more.

PVT #12 Navigation I: Basic Theory
During this session we will discuss latitude and longitude, the earth’s magnetism and aeronautical charts.
Reference: From the Ground Up: pages 176 – 192,

PVT #13 Navigation II: Introduction to Flight Planning
This is a practical class involving navigation problems as well as preparing the chart and flight log for a cross country trip: Brampton to Collingwood to Muskoka and return via the same route. By the end of the class, initial preparation for the trip is completed including topics such as extracting info from the CFS, preparing the chart, checking NOTAMs and filling up the Nav log without any weather info.

PVT #14 Navigation III: More Flight Planning
Continuation of PVT #12 with focus on getting weather info, using the flight computer to come up with navigational and performance figures, filling and using en route log, filling out an ICAO flight plan form and role of FSS. This class relies on the skills learnt during the previous two Nav classes.

PVT #15 Radio Aids to Navigation
In this class we will discuss radio wave theory, the theory of operation, application of various radio aids to navigation including VORs, NDBs & ADFs, DME, VORTACS, TACANs, GPS, radar, transponders and ELTs.

PVT #16 Aviation Physiology, Human Factors and Pilot Decision Making
During this session we will discuss medical factors affecting pilots such as; hypoxia, carbon monoxide poisoning, hyperventilation, decompression sickness, sensory illusions, alcohol, drugs, blood donation, fatigue, pregnancy, nutrition, stress and physical fitness. Also this class analyzes the pilot decision making process and other related issues such as pilot attitude, the “DECIDE” process, human factors, and air safety.
Reference: From the Ground Up: pages 309 – 323 and AIM AIR section

AIM = Aeronautical Information Manual
CARs = Canadian Aviation Regulations
CFS = Canadian Flight Supplement
POH = Pilot Operating Handbook
PSTAR = Student Pilot Permit Exam
RTOC = Radio Telephone Operator’s Certificate study guide
VNC = VFR Navigation Chart