COPA University
2025 CPPP Course Descriptions

32 REASONS WHY THE TRAFFIC PATTERN MATTERS
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY CHUCK CALI AND DENNIS MAHAN
This is an Essential Knowledge Class. Recent accident history for all aircraft shows that many –far too many –mishaps have occurred during approach, in the traffic pattern, or when landing. This presentation identifies the major reasons for 32 (now 61) mishaps in the traffic pattern and describes how to best avoid.

ABNORMALS AND EMERGENCIES
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY BILL FRANK AND JOHN GRESSETT
This is an Essential Knowledge Class. Incident scenarios happen when they are least expected. In this presentation 10 selected problems are discussed, from Rough Running Engine, Engine Failure, Smoke and Fire via Electrical Malfunctions, Turbo Abnormalities, Tire and Brake Failures to Pitot/Static Problems.

ACCIDENT DATA AND TRAINING PRIORITIES
FROM THE COLLEGE OF AVIATION SAFETY
BY MARK WADDELL
This is an Essential Knowledge Class. Safety results from combination of proficiency and good judgment. COPA University studies each accident report to identify threats and errors. This data steers our course development. The objectives of this class are to discuss threats, errors, and corrective actions taken or, more typically, not taken. Examples for individual flight analysis and fleet analysis are provided.

LEGACY AVIONICS Q&A SESSION
FROM THE COLLEGE OF ADVANCED AVIONICS
BY THOMAS DANIEL AND BRIAN TURRISI
Avidyne IFD Series and Garmin GNS or GTN Series navigators are present in many G1, G2 or G3 Cirrus aircraft. If you fly with one of them, come to the Q&A session with any questions about their functionality, flying scenarios, best operating procedures or common mistakes.

AUTOMATION MANAGEMENT
FROM THE COLLEGE OF ADVANCED AVIONICS
BY THOMAS DANIEL
This is an Essential Knowledge Class. The presentation describes techniques for selecting the best level of automation for the task at hand. Workflows to efficiently take command of the flight management systems (Garmin & Avidyne FMS) and autopilots (S-TEC, DFC, GFC) are discussed. Typical autopilot gotchas and best practices for mastering the different automation modes are covered.

ENGINE DATA IN REAL TIME
FROM THE COLLEGE OF AIRCRAFT TECHNOLOGY
BY PAUL NEW
This is an Essential Knowledge Class. There is so much data available on our engine management screens, do you know how to use them? This class focuses on the in-flight use of on-board engine management systems and how to use them to spot issues and how to get the maximum value from them. The attendee will be introduced to methods to read and interpret the data to identify problems both in-flight and post flight.

FLY THE MIXTURE KNOB
FROM THE COLLEGE OF AIRCRAFT TECHNOLOGY
BY ROGER WHITTIER
This is an Essential Knowledge Class. The presentation explores in depth the effects of mixture management on engine performance and metrics. It focuses heavily on the normally aspirated SR22 engine. This is simply because it is the most difficult engine in the fleet to manage correctly. It will leave the pilot with methods and tools to better understand how to select a mixture target that yields high power and cool cylinder temperatures.

FLYSTO FOR YOU
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY MARK WADDELL
This is an Essential Knowledge Class. The FlySto App has developed into a great tool for individual flight analysis, pilot evaluation, and fleet behavior analysis. The class describes how to get access to FlySto, which avionic suites are supported, and how to upload data. The tools available in FlySto for flight data analysis are discussed. Examples for individual flight analysis and fleet analysis are provided.

G7 DIFFERENCES
FROM THE COLLEGE OF ADVANCED AVIONICS
BY LEX CROSETT
The Cirrus SR22 G7 represents a significant advancement over previous generations of the SR22, showcasing enhancements in technology, comfort, and performance. One of the key differences is the integration of the Cirrus Perspective Touch+ avionics system in the G7, which offers improved graphics, more intuitive controls, and enhanced safety features, such as the new Active Traffic system and advanced weather capabilities.

GRANDCHILDREN OF THE MAGENTA
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY CHUCK CALI
This is an Essential Knowledge Class. The recent generational shift in automation is from tools to assist the pilot (AFCS, FMS) to machinery that protects pilots from themselves (auto-yaw damper, auto-slewing, ESP). Grandchildren of the Magenta attempts to help pilots manage this next generation automation by evaluating case studies using Critical Decision Making.

ICING TACTINGS
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY BILL FRANK AND JERRY SECKLER
This is an Advanced Topics Class. IFR Operations are challenging. Add inflight icing and challenging goes to life threatening. This presentation will help to bring you up to speed on tactical best practices for coping with inflight airframe icing. Focus areas will include how not get into ice, strategies for FIKI using TKS systems, and how to develop valid, realistic escape plans.

IFR REFRESHER
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY BILL FRANK AND JOHN GRESSETT
This is an Essential Knowledge Class. This presentation is designed for the active instrument pilot as well as the pilot that has lost instrument currency. The focus is to review updates and changes to managing an instrument flight, how to avoid mistakes and possible pilot deviations, as well as a comprehensive refresher to improve your IFR skills. In this presentation we will take you from obtaining a clearance, departure, enroute, arrival and approach in one informative session.

MASTERING AIRCRAFT OWNERSHIP: ESSENTIAL INSIGHTS FROM AN AIRCRAFT MECHANIC
FROM THE COLLEGE OF AIRCRAFT TECHNOLOGY
BY ROGER WHITTIER AND PAUL NEW
This is an Essential Knowledge Class. Not all aircraft mechanics and inspectors are pilots –some are, and some are experienced pilots. This presentation is about how a very experienced mechanic and pilot would teach you flying from a mechanic's perspective. Naturally this view is biased but that's the beauty of this presentation. A mechanic does some things different from a flight instructor, starting with flight planning via pre-flight run-ups and flight execution, especially if it's the first flight after maintenance, to monitoring your engine and cooling it down after landing.

PARTNER IN COMMAND
FROM THE COLLEGE OF AVIATION SAFETY
BY MARK WADDELL
Available to non-pilot flying companions during 3-day CPPP events, this course is intended to teach you how to be a confident and active participant during a flight as well as a resource to the pilot. Participants engage in a Saturday morning classroom session where they learn about aircraft components and the availability and use of safety equipment in an emergency including Cirrus Airframe Parachute System (CAPS). After lunch participants gather at the flight simulator where they learn to control the autopilot and practice the use of safety equipment.

PERSPECTIVE DEPARTURES AND VNAV
FROM THE COLLEGE OF ADVANCED AVIONICS
BY THOMAS DANIEL
This is an Essential Knowledge Class. This class is composed of three sections. The first two apply to other Garmin Navigators such as GNS430, GTN650 or Touch+ (G7). The Flight Management Modes section describes FMS sequencing and non-sequencing (OBS) modes, describes how the FMS sequences your flight plan and encourages pilots to monitor cross-track error. These concepts are then used to fly a simple departure from Santa Monica airport. The instrument departure section expands departures to discuss textual and graphical Obstacle Departure Procedures and Standard Instrument Departures. The Vertical Navigation section demystifies vertical navigation and discusses how it can be used enroute and during approaches.

PERSPECTIVE INSTRUMENT PROCEDURES
FROM THE COLLEGE OF ADVANCED AVIONICS
BY THOMAS DANIEL
This is an Advanced Topic class. This course discusses how to fly instrument approaches with Cirrus Perspective or Perspective+. The concepts discussed are also applicable to other Garmin Navigators such as GNS430, GTN650 or Touch+ (G7). After reviewing different types of approaches and which vertical guidance are provided, reviewing using GPS on radio-based approaches and when the FMS automatically switches the navigation source, the class discusses best practices for loading approaches and selecting transitions. We explain when to fly procedure turns, when to activate vectors to final and when to avoid it, before describing the missed approach and providing recommendations on how to fly non-precision approaches.

PERSPECTIVE TRAPS AND MALFUNCTIONS
FROM THE COLLEGE OF ADVANCED AVIONICS
BY THOMAS DANIEL
This is an Advanced Topic class. This class includes a description of Cirrus Perspective behavior during GPS malfunctions and follows with a discussion of common Garmin traps and pilot mistakes. While the class focuses on the Cirrus Perspective, most subjects apply to other Garmin FMS systems such as GNS430, GTN650, and Touch+ (G7). The GPS outage section starts with WAAS outages, describes avionics behavior, and recommends pilot actions depending on when the outage occurs. The Garmin traps section includes a discussion of known Garmin traps causing common pilot mistakes and how to recover from them.

POWERPLANT MAINTENANCE
FROM THE COLLEGE OF AIRCRAFT TECHNOLOGY
BY ROGER WHITTIER
This is an Essential Knowledge Class. Owning and managing an aircraft engine is a complex process. In this presentation you will learn about common maintenance events and intervals, examine areas of frequent repair and examine an aircraft engine compartment. Remove some of the mystery from the maintenance process by learning how to access technical publications.

THUNDERSTORM TACTICS
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY BILL FRANK AND JOHN GRESSETT
You are on your way on an instrument flight when convective activity begins to build along your route. The decisions you make in the next several minutes will be critical to the successful completion of your flight. Understanding how thunderstorms form, and the different types of thunderstorms is imperative to those decisions. What options you have, what tools you can use and how to interpret the available information will be covered in this presentation. This course may save your life.

TURBO ENGINE MANAGEMENT
FROM THE COLLEGE OF AIRCRAFT TECHNOLOGY
BY ROGER WHITTIER
This is an Advanced Topic Class. Understanding the Turbo Engine and exploring engine management options available to the pilot are the main topics of this presentation. The differences between normalizing and charging systems are explained. The consequences of pumping hot, pressurized air into the engine are discussed. The equipment–the turbo itself, the exhaust system, the controllers, wastegates and other components are described.

UNDERSTANDING APPROACHES
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY BILL FRANK
This presentation is an in-depth, avionics agnostic, look at instrument approach plates and procedures. You will gain an understanding of where to look on an approach plate to find the critical information you need and the nuances of how that information is presented. We will discuss how to properly brief an approach and then what triggers to use for configuration and power changes. Finally, we will review various approaches that can catch the inattentive pilot off guard. This course reviews practical information that you can use on your way home.

SKEW T
FROM THE COLLEGE OF FLIGHT OPERATIONS
BY BILL FRANK, JOHN GRESSETT AND BRIAN TURRISI
This is an Essential Knowledge Class. Soundings, sometimes called Skew T diagrams, are a powerful tool in weather prediction. This class will discuss the basics of reading and understanding soundings and how to use them to help predict convection, ice, cloud tops and turbulence.

WEATHER BRIEF/CDM

FROM THE COLLEGE OF FLIGHT OPERATIONS

BY ED WATTERS AND SHANE VANDE VOORT

This is an interactive class where all attendees are encouraged to participate. The moderator will solicit your destinations and then together with the class, you will review all applicable information pertaining to the flight. What better way to prepare for your flight home than to attend this class.