



Cessna 421A&B Initial Training

Course MAS 421A-101 Syllabus

Cessna 421A&B Initial training provided (MAS 421A-101) assumes that the student has a multi-engine rating with a minimum of 50 Hours of multi-engine time. The student must possess an instrument rating, a current medical, a high-altitude endorsement, and must have a current BFR.

Day 1

Class Introduction **0.5 Hours**

- Instructor & Student Introductions, Class description, expectations, and questions specific to the student's mission

Introduction & Engines **2.5 Hours**

- Construction, Interior, Passenger Compartment, Ground Handling, Engines, Engine Operation & Instruments, Servicing, Turbocharger, Fuel System, Propeller

Limitations **0.5 Hours**

- V-Speeds, Engine Operational Limitations, Markings, CG and Weight Limitations

Landing Gear & Brakes **1.5 Hours**

- Nose Gear & Main Gear Description, Operation, Emergency Extension, Brakes, Indicators

Electrical System **1.5 Hours**

- Battery, Alternator, Power Distribution, Main Bus, Hot Bus, Avionics Bus, Operation, Protection Systems, Lighting, Electrical Anti-Ice

Simulator - Normal Procedures **2.0 Hours**

- Using our flight simulator, the student will be taken through normal procedures associated with takeoff, cruise, and landing.

Day 2

Environmental Systems **2.5 Hours**

- Ambient Air Distribution, Heater & Air Conditioning System, Oxygen System Operation, Pressurization System Description & Operation, Controls

Fuel Systems **1.5 Hours**

- Description, Capacity, Operation, Usage, and Malfunctions

Anti-Ice / Deice Systems **2.0 Hours**

- Known Icing Requirements, System Components & Description, System Testing, Inspection, Limitations

Performance & Flight Planning **2.0 Hours**

- CG, CG Limits, Weight & Balance, Performance Charts, Range, Examples, Classroom Examples

Day 3

Emergency Procedures **3.0 Hours**

- Safe Operation Envelope, Various Engine and System Failures, Feathering, Restarting, Electrical Failures, Pressurization Failures, Emergency Decent

Single Engine Operations **1.5 Hours**

- Detail discussion of single engine operation failures, Case Studies, Outcomes

Simulator - Emergency Procedures **3.5 Hours**

- Simulator scenarios incorporating engine failures, electrical failures, pressurization failures, during takeoff, cruise, landing, Vmc Demonstration in VFR and IFR conditions

Day 4

Federal Aviation Regulations **1.0 Hours**

- A review of new/updated FARs

Student Ship Specific Weight and Balance **1.0 Hours**

- W&B examples that take into account ship specific configuration and missions

Emergency Procedures Review **1.5 Hours**

- Specific Review of 421A&B emergency procedures and operation

Course Review **2.5 Hours**

- A review of all non-emergency elements of the 421A&B course

Final Exam **1.0 Hours**

- Written Exam

Day 5

Flight Review **8.0 Hours**

- Optional In-Flight operational review using student supplied aircraft (an additional fee applies) Takeoff, Cruise Ops, & Landing