Ground Training: 10 Hours

Prior to Start of Course:

- Provide materials and set expectations (Begin reading ASA textbook, Review POH and Study Guide, Read ACS)
- Ensure proper documentation has been acquired
- Brief student on syllabus and scheduling

Ground 1 (2hr): Intro to airplane, multi-engine aerodynamics and prepare for flight 1

Resources: Study Guide, Checklist, Official W/B, ASA Textbook

- Introduction and get to know student
- Introduction to course (expectations, materials, syllabus, SOP's, etc.)
- Create student folder, ensure documents are copied
- V speeds
- Weight and Balance (calculate prior to each future flight)
- Max Weights
- Max Fuel
- Engine Failure Aerodynamics
- Vyse
- Critical Engine (PAST)
- Vmc (SMACFUM)
- Performance introduction (Ceilings, Accelerated Stop/Go, Landing Distance, Single Engine Climb, etc.) Lay-out expectation of having these calculated prior to each flight
- Normal Takeoff and Traffic Pattern (GUMP Check)
- Slow Flight and Steep Turns (CRAAC Checklist)
- Engine Failure Memory Flow
- Stalls (How they differ from single-engine (accelerated slipstream))

Homework:

- Chair fly maneuvers and engine failure memory flow
- Study critical engine factors (past) and Vmc factors (SMACFUM)
- Review everything covered during the next flight using the study guide
- W/B and performance calculations for next flight

Ground 2 (2hr): Emergency Procedures, Systems, POH, and Maneuvers not covered in ground/flight 1

Resources: POH, Study Guide, Emergency Checklist, System Print Outs

- Engine Failures (different phases of flight) focus on when to feather and when to troubleshoot
- Vmc and Vmc Demo
- Engine
- Flight Controls and related emergencies
- Prop System and related emergencies
- Gear System and related emergencies
- Fuel System and related emergencies
- Limitations (utilize POH)
- Airplane Airworthiness
- Review Maneuvers
- Short Field TOL's (POH)
- Single Engine approaches (DA, MDA, Circling)
- Single Engine landings

Homework:

- Study systems introduced during this lesson
- Read and familiarize with POH
- Chair fly maneuvers and emergency procedures
- Prepare for items introduced during your next flight using study guide
- Calculate W/B and performance for next flight

Ground 3 (2hr): Remaining Systems and Emergencies, Deeper Aerodynamics, Weather, Checkride Eligibility

Resources: POH, Emergency Checklist, ASA Textbook, Foreflight, ACS

- Electrical system and related emergencies (alternator failure, flaps, gear, etc)
- Vacuum System and related emergencies
- Hydraulic system and related emergencies
- Review critical engine factors in depth
- Review Vmc factors in depth
- Most unfavorable weight
- Maneuvering speed
- Load factor
- Stability
- Stalls
- Spin recovery
- Engine failure during climb (significance of pitching down for blue line)
- Review weather briefing in depth

Homework:

- Review systems introduced during this lesson
- Read thru ACS and determine any week areas you would like to discuss
- Chair fly all maneuvers and procedures to prepare for stage check
- Continue reading ASA Multi-Engine Textbook

Ground 4: Stage check with Jim

- Mock checkride oral using Commercial Multi-Engine Add-On ACS to identify any deficiencies prior to checkride endorsement

Homework:

- Study deficiencies identified by Jim
- Continue preparing for checkride
- Finish reading ASA Multi-Engine Textbook

Ground 5: Review deficiencies identified by Jim and quiz student to determine endorsement eligibility

- Review deficiencies identified by Jim in detail
- Quiz student using ACS to determine if further ground is needed prior to endorsement

Homework:

- Prepare for checkride to the fullest extent
- Reach out to to me with any last minute questions or uncertainties

Flight Training: 10 Hours

Prior to each flight:

- Review W/B and Performance Calculations
- Brief flight overview and review maneuvers/procedures to be flown
- Answer any questions
- Pre-Flight Inspection

Flight 1 (2hr): Familiarize with aircraft and introduce maneuvers

- Pre-flight
- Duchess Familiarization
- Checklist Introduction
- Safety briefing
- Starting and run-up procedures
- Taxi procedures and differential thrust
- Pre takeoff briefing
- Normal Takeoff and climb
- Straight and level flight, Turns, Climbs and descents (clean and landing configuration at various airspeeds)
- Slow Flight
- Steep Turns
- Stall Demonstration
- Simulated engine failure at altitude
- Traffic pattern and landings (3)
- Post-flight procedures

Flight 2 (2.2hr): Review maneuvers and introduce short field takeoffs/landings, engine failures and emergency scenarios

- Short field takeoff
- Slow flight
- Stalls
- Steep Turns
- Vmc Demo
- Engine failure at altitude (troubleshoot prior to feather)
- Engine fire into emergency descent
- Instrument approach with both engines
- Engine failure in pattern (feather immediately) to single engine landing at RMN
- Engine failure during takeoff at RMN
- Short field landings at RMN

Flight 3 (2.3hr): Introduce anything that hasn't already been flown, clean up deficiencies and prepare for stage check.

- Short field Takeoff
- Engine failure during climb (at least 2000 AGL)
- Review deficiencies and maneuvers
- Vmc Demo
- Full engine shut down and airstart
- Electrical failure scenario (discuss gear and flaps)
- Single engine approach to landing at RMN
- Engine failure in pattern leading to single engine landing at RMN
- Short field landings at RMN
- Back to deficiencies with any remaining time

Flight 4 (1.8hr): Stage Check with Jim

- Mock Checkride covering everything in ACS
- Identify and work on deficiencies with any remaining time
- Be sure to include: Full shutdown and airstart, emergencies scenarios and single engine approach to landing

Flight 5 (1.8hr): Review deficiencies identified by Jim and Mock Checkride/Endorsement Flight

- Review deficiencies identified by Jim
- Mock Checkride covering entire ACS to determine if student is endorsable or if additional flight time is needed