

**Pacific Union College
Department of Technology
Course Outline**

Commercial & CFI Theory

AVIA 375

Spring 2006

Instructor

Nathan Tasker

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965-3141 (before 9:30pm)

Course Objectives

- Pass the FAA Advanced Ground Instructor, Commercial Pilot and Certificated Flight Instructor written tests.
- Demonstrate mastery of high-performance powerplant theory and operation.
- Explain complex systems theory and operation.
- Demonstrate mastery of multi-engine systems, performance, and aerodynamics (with emphasis on the Piper Seminole).
- Explain emergency procedures for multi-engine aircraft (with emphasis on the Piper Seminole).
- Teach and analyze commercial and multiengine flight maneuvers from an instructional perspective.

Course Requirements

- Meet all class periods (Attendance will be taken).
- Participate in class discussions and turn in homework assignments by the beginning of the class in which homework is due.
- Have available all required items for all class sessions.
- Take all three required FAA Knowledge Exams (AGI, CAX and FIA).

Required Materials

- Jeppesen *Instrument Commercial Manual (ICM)*
- Jeppesen *Multi-Engine Manual (MEM)*
- Gleim Commercial Knowledge Study Guide
- Gleim Flight Instructor Test Prep
- Commercial Pilot Practical Test Standards
- Current FAR/AIM
- Seminole Pilot's Operating Handbook

Attendance

Regular attendance is vital to your success in this course and in your career. If circumstances require you to be absent, you must make arrangements with the instructor prior to the absence and make up all work by the next class period. ***Each unexcused absence (or two tardies) will, at the instructor's discretion, result in grade reduction of one letter grade.***

Grading

Chapter Quizzes	35%
CAX Exam	30%
AGI / FIA Exam	35%

100-95%	A	82-80%	B-
94-90%	A-	79-76%	C+
89-86%	B+	75-73%	C
85-83%	B	72-70%	C-

Any grade below 70% will not be considered a passing grade.

Course Schedule

Date	Topic	Textbook Chapter	Quiz / Assignment
Apr. 4	High-Performance Powerplants, Constant Speed Propellers, Examining Systems	ICM 11A MEM 2A	
Apr. 6	Environmental and Ice Control Systems, Retractable Landing Gear	ICM 11B, 11C MEM 2A	
Apr. 11	Advanced Aerodynamics	ICM 12A	Ch 11 Quiz
Apr. 13	Predicting Performance, Controlling Weight & Balance	ICM 12B, 12C MEM 2B	
Apr. 18	Emergency Procedures, Commercial Decision-making, Making Decisions	ICM 13A, 13B MEM 5D	Ch 12 Quiz
Apr. 20	Maximum Performance Takeoffs and Landings, Steep Turns	ICM 14A, 14B	Ch 13 Quiz
Apr. 25	Chandelles, Lazy Eights, Eights on Pylons	ICM 14C, D, E	
Apr. 27	CAX Practice Test		
May 2	Considering Human Factors	MEM 1B	CAX Practice
May 4	FAA Exam - CAX (Room 210)		
May 9	FARs, Privileges and Limitations etc		
May 11	Determining Performance	MEM 2C	
May 16	Normal Operations, Maneuvers	MEM 4A, 4B	Ch 2 Quiz
May 18	Multi-Engine Aerodynamics	MEM 3A	Ch 4 Quiz
May 23	Engine-Out Aerodynamics	MEM 3B	Ch 3 Quiz AGI Practice
May 25	AGI Practice Test		
May 30	FAA Exam – AGI (Room 210)		
June 1	Engine Failures	MEM 5A, 5B	
June 6	Operating on Instruments	MEM 5C	FIA Practice
June 8	FIA Practice Test		Ch 5 Quiz
June 13	FAA Exam – FIA (7:15-9:15 p.m.)		