AERO 51L Course Outline as of Spring 2011

CATALOG INFORMATION

Dept and Nbr: AERO 51L Title: INST PILOT RATING
Full Title: Instrument Pilot Rating Course, Lab/Lecture
Last Reviewed: 5/8/1998

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	1.00	17.5	Lecture Scheduled	17.50
Minimum	2.00	Lab Scheduled	3.00	8	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00 Total Student Learning Hours: 105.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Expansion of material presented in Aero 51. Instrument flight conditions as they relate to pilot and aircraft; basic aerodynamics; IFR preflight procedures including regulations and procedures for IFRVOR flight; navigation relating to departure, enroute, arrival, landing, and emergency procedures IFR.

Prerequisites/Corequisites:

Recommended Preparation:
Aero 50L or equivalent FAA rating; concurrent enrollment in Aero 51.

Limits on Enrollment:

Schedule of Classes Information:
Description: Expansion of material presented in AERO 51. Instrument flight conditions on pilot & aircraft; basic aerodynamics; intro to IFR pre-flight procedures including regulations & procedures for IFR VOR flight; navigation relating to departure, enroute, arrival, landing & emergency procedures IFR. (Grade or P/NP)
Prerequisites/Corequisites:

Recommended: Aero 50L or equivalent FAA rating; concurrent enrollment in Aero 51.
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
PHASE I: Attitude Instrument Flying, 32 hours. Attitude instrument flying four fundamentals of flight, flight and engine instruments, aircraft performance, stability, and control.
Objective: To lay a foundation of understanding and student knowledge of the skill needed for attitude instrument flying (i.e.flying instruments on a continuing basis.)
To review flight instruments and engine instruments and their unique operating characteristics.
To develop the students' skill in scan techniques, cross-check, interpretation and aircraft control by presenting a series of increasingly demanding simulator exercises.
Content:
1. Instrument systems review (4 hrs)
2. Instrument calibration exercises (2 hrs)
3. Four fundamentals of flight (8 hrs)
4. Attitude Instrument Flying (8 hrs)
5. Instrument scan, interpretation and recovery (4 hrs)
6. Interpretation, cross-check, and aircraft control in standard ATC procedures (6 hrs).

PHASE II: INSTRUMENT FLYING OPERATIONS, 32 HOURS. The IFR environment, ATC System, ATC Clearances, enroute procedures, instrument departures and approaches.
Objectives: To expand students' understanding of the radio navigation system.
To increase student skill in functioning within that system.
To provide IFR flight scenarios requiring the student to respond within accepted IFR standards and procedures for IFR departure, enroute and

arrival segments of an IFR flight.

Topics and Scope:

PHASE I CONTENT:
1. Instrument systems review (4 hrs)
2. Instrument calibration exercises (2 hrs)
3. Four fundamentals of flight (8 hrs)
4. Attitude Instrument Flying (8 hrs)
5. Instrument scan, interpretation and recovery (4 hrs)
6. Interpretation, cross-check and aircraft control in standard ATC procedures (6 hrs)

Completion Standards: Each maneuver must be demonstrated by the student in the simulator within the following parameters:
- þ5 degrees of heading
- þ5 seconds
- þ100 feet of altitude

Phase I final check will consist of a completed monitored "A" or "B" pattern with climbs and descents on the simulator with the plotter attached and tracking. The above standards must be met for a passing grade.

PHASE II CONTENT:
1. Radio navigation review (2 hrs)
2. Pattern "B" oriented on a navigation aid (4 hrs)
3. Holding patterns (6 hrs)
4. DME Arcs (4 hrs)
5. Instrument approaches (6 hrs)
6. Complete IFR flight (8 hrs)

Completion Standards: A final course written exam will be included with a completed IFR flight executed on the simulator. Student will be graded on written exam and practical standards.

Assignment:

Weekly reading and homework assignments.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework	Writing 10 - 15%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Quizzes, Exams	Problem solving 10 - 15%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, Performance exams	Skill Demonstrations 10 - 15%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion	Exams 60 - 75%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Instrument Flying Handbook, U.S. GOVT. Pub., 1980, Doc. #AC 61-27C
Aviation Weather, 1976, AC00-6A
U.S. Govt. Publications, Current Year: Aviation Weather Services,1995, AC00-45D, FAR'S and Aeronautical Information Manual