

CATALOG INFORMATION

Dept and Nbr: AERO 51 Title: INSTRU PILOT GR SCH
Full Title: Instrument/Pilot Ground School
Last Reviewed: 5/14/2007

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

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

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:
Instrument flight conditions as they relate to pilot and aircraft: basic aerodynamics; IFR preflight procedures including regulations and procedures for IFR VOR flight; navigation relating to departure, en route, arrival, and landing.

Prerequisites/Corequisites:

Recommended Preparation:
Aero 50 or possession of private pilot's certificate. Concurrent enrollment in Aero 51L.

Limits on Enrollment:

Schedule of Classes Information:
Description: Preparation for instrument pilot & higher ratings. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Aero 50 or possession of private pilot's certificate. Concurrent enrollment in Aero 51L.
Limits on Enrollment:
Transfer Credit: CSU;

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:	Transferable	Effective:	Fall 1981	Inactive:	Spring 2011
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

Phase 1: Basic Flight Information and regulations (12 hours).

Objective:

To acquaint the student with the basic flight information and ATC procedures needed to fly the airways in a safe and orderly manner, and in compliance with all Federal Aviation Regulations (FAR's).

Completion Standards:

At the completion of this phase, the student should have completed the homework assignment sheets and obtained sufficient knowledge of the above material to be able to pass the Phase 1 written examination with a grade of 70% or higher.

Phase 2: Flight and Navigation Instruments (6 hours).

Objective:

To acquaint the student with the operation, limitation, and the use of the Basic Flight and Navigation Instruments necessary for Aircraft Control and Safe Flight.

Completion Standards: At the end of this phase, the student should have completed the homework assignments and obtained sufficient knowledge of the above material to be able to pass the Phase 2 written examination with a grade of 70% or higher.

Phase 3: Instrument Cross-Country Navigation (12 hours)

Objective: To acquaint the student with the legend and symbols found on the ENROUTE LOW ALTITUDE CHART; The Airport/Facility Directory; The Standard Terminal Arrival Charts (STAR); the Standard Instrument Departure Charts (SID); and The Instrument Landing Systems Charts (ILS). Also, a review of the E6B Computer, and a Flight Plan and Log.

Completion Standards: At the completion of this phase the student should have completed the homework assignments and obtained sufficient knowledge of the above material to be able to pass the phase 3 written examination with a grade of 70% or higher.

Phase 4: Aviation Weather (9 hours)

Objective: To acquaint the student with how to obtain a good preflight weather briefing before attempting any cross-country flight in VFR or IFR weather conditions.

Completion Standards: At the completion of this phase the student should have completed the homework assignments and obtained sufficient knowledge of the above material to be able to pass the phase 4 written examination with a grade of 70% or higher.

Phase 5: Course Review (3 hours)

Objective: To review with the student all the principal highlights of the 4 phases of instruction and questions relating to these phases found in the FAA instrument rating question book.

Completion Standard: At the completion of this phase the student should be prepared well enough to pass the final examination with a grade of 70% or higher.

Phase 6: Final Course Examination (3 hours)

Objective: To ascertain the knowledge of information that the student has obtained from participating in this program, by means of a written examination.

Completion Standard: A minimum of 70% is required for the satisfactory completion of this examination. The results of this examination and the average grade of the 4 phase examinations will then be averaged to obtain a course grade.

Topics and Scope:

PHASE 1: AIRMAN'S INFORMATION MANUAL (AIM) AND FAR'S

Content:

1. Airman's Information Manual (AIM)
2. Federal Aviation Regulations (FAR's)
 - Part 1: Definitions and Abbreviations
 - Part 61: Pilot Certification
 - Part 67: Medical Standards and Certification
 - Part 71: Designation of Federal Airways, Area Low Routes, Controlled Airspace, and Reporting Points.
 - Part 91: General Operation and Flight Rules
 - Part 97: Standard Instrument Approach Procedures

NTSB Part 830: Notification and Reporting of Aircraft Accidents

PHASE 2: BASIC LIGHT INSTRUMENTS AND NAVIGATION INSTRUMENTS, AND THEIR

USE, OPERATION, AND LIMITATIONS.

Content:

1. Flight Instruments
2. Navigation Instruments

PHASE 3: INSTRUMENT CROSS-COUNTRY FLIGHT PLAN AND LOG

Content:

1. ENROUTE LOW ALTITUDE CHART LEGEND.
2. The Airport/Facility directory legend.
3. The Standard Terminal Arrival Chart Legend.
4. The Standard Instrument Departure Chart Legend.
5. The symbols used on the different types of approach procedures such as, the Instrument Landing System (ILS); NDB; ILS/DME; and VDR.

6. Filing a flight plan for a cross-country navigation flight after obtaining a pre-flight weather briefing.

PHASE 4: AVIATION WEATHER SERVICES AND AVIATION WEATHER

Content:

1. The aviation Weather Service Program.
2. Surface Aviation Weather Reports.
3. Aviation Weather Forecasts.
4. Surface Analysis.
5. Weather Depiction Chart.
6. Radar Summary Chart.
7. Significant Weather Prognostics.
8. Winds and Temperature Aloft.
9. Severe Weather Outlook Chart.
10. Constant Pressure Chart.
11. Tropopause Data Chart.
12. The Earth's Atmosphere.
13. Temperature Atmospheric Pressure and Altimetry.
14. Wind, Moisture, Cloud Formation, and Precipitation.
15. Stable and Unstable Air, Clouds, Air Masses and Fronts, Turbulence.
16. Icing, Thunderstorms, Fog, Artic Weather, Tropical Weather.
17. Clear Air Turbulence and Wind Shear.

PHASE 5: INSTRUMENT RATING GROUND SCHOOL COURSE REVIEW

Content:

1. Review material content and questions pertaining to phase 1 exam.
2. Review material content and questions pertaining to phase 2 exam.
3. Review material content and questions pertaining to phase 3 exam.
4. Review material content and questions pertaining to phase 4 exam.

PHASE 6: INSTRUMENT RATING COURSE FINAL EXAMINATION

Content:

1. A final course written examination will be given to all students who have completed the required course of study.

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

Skill Demonstrations
10 - 15%

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

Multiple choice, 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.l 1980, Doc # AC 61-27C

Aviation Weather Services, 1995, AC00-45D

U.S. Govt. Publications, Current year: Aeronautical Information Manual

FAR's, and Aviation Weather, AC00-6A