

AERO 55 Course Outline as of Spring 2011**CATALOG INFORMATION**

Dept and Nbr: AERO 55 Title: AVIATION WEATHER

Full Title: Aviation Weather

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	17.5	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:

Practical application of weather data to flight planning for the general aviation and professional pilot. Course is designed to develop the pilot's understanding of the atmospheres and ability to utilize available weather service data to safely plan flights and effectively make sound "go" or "no go" decisions.

Prerequisites/Corequisites:

Completion of or concurrent enrollment in AERO 50 OR possession of private pilot certificate.

Recommended Preparation:**Limits on Enrollment:****Schedule of Classes Information:**

Description: Practical application of weather data to flight planning for the general aviation and professional pilot. Course is designed to develop the pilot's understanding of the atmospheres and ability to utilize available weather service data to safely plan flights and effectively make sound "go" or "no go" decisions. (Grade or P/NP)

Prerequisites/Corequisites: Completion of or concurrent enrollment in AERO 50 OR possession

of private pilot certificate.

Recommended:

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:

Upon completion of this course, the student will be able to:

1. Identify and access the variety of public and private sources of weather information available.
2. Decode weather reports, charts and forecasts available from the National Weather Service for flight planning.
3. Utilize basic meteorological theory and weather service data to make effective weather-related flight decisions.
4. Recognize potentially hazardous weather and make effective flight decisions while en-route.
5. Describe the primary meteorological flight precautions and considerations for flying in a variety of locations and at high altitude.
6. Evaluate weather data for a departure point and destination and make a "go" or "no go" decision.

Topics and Scope:

PHASE I -- Nature of the Atmosphere:

1. Earth's Atmosphere
2. Temperature
3. Atmospheric Pressure and Altimetry
4. Wind
5. Moisture, Cloud Formation, and Precipitation
6. Stable and Unstable Air
7. Clouds
8. Airmasses and Fronts
9. Turbulence

10. Icing
11. Thunderstorms
12. Common IFR (Instrument Flight Rules) Producers
13. High Altitude Weather

PHASE II -- Aviation Weather Services:

1. The Aviation Weather Service Program
2. Aviation Weather Reports and Satellite Pictures
3. Aviation Weather Forecasts
4. Surface Analysis Chart
5. Weather Depiction Chart
6. Radar Summary Chart
7. Constant Pressure Analysis Charts
8. Composite Moisture Stability Chart
9. Winds and Temperatures Aloft Chart
10. Significant WX (Weather) Prognostic Charts
11. Consecutive Outlook Chart
12. Volcanic Ash Advisory Center Products
13. Miscellaneous Tables and Information
14. Availability of Weather Service Products - Private and Public

PHASE III -- Advanced Weather Theory:

1. High Altitude Weather
2. Arctic Weather
3. Tropical Weather
4. Soaring Weather

PHASE IV -- Review:

1. Phase I Written Exam Content Review
2. Phase II Written Exam Content Review
3. Phase III Written Exam Content Review
4. Aviation Weather Course Final Examination

Assignment:

1. Reading: 15 - 30 pages per week.
2. Completion of a weather-related flight planning project.
3. Midterm; final examination.

Completion Standards: Final course exam must be passed with a 70% or higher, and an average score of 70% or higher must be maintained by the student when the midterm and final exam scores are averaged.

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.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.

Writing
0 - 0%

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

Project

Problem solving
20 - 40%

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

None

Skill Demonstrations
0 - 0%

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

Multiple choice, True/false, Matching items, Completion, Short answer

Exams
40 - 60%

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

Attendance and participation

Other Category
10 - 20%

Representative Textbooks and Materials:

Aviation Weather for Pilots and Flight Operations Personnel, AC-00-6A.

U.S. Department of Transportation, Federal Aviation Administration and Department of Commerce, National Weather Service, current edition.

Aviation Weather Services, AC 00-45E. Federal Aviation Administration and National Weather Service, 1999.