

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

Transfer course A.A. degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: AERONAUTICAL SCIENCES 210
Aviation Safety and Accident Investigation

UNIT VALUE: 3

MINIMUM NUMBER OF SEMESTER HOURS: 48

BASIC SKILLS REQUIREMENTS:

Appropriate language and computational skills

ENTRANCE REQUIREMENTS

PREREQUISITE: AERO 105 or Private Pilot Certificate

COREQUISITE: None.

RECOMMENDED PREPARATION: None.

SCOPE OF COURSE:

Accident prevention principles through a study of recent mishaps.
Pilot physical and psychological factors and their role in mishaps.
A study of crash survival and post-crash survival techniques.
Fundamentals of mishap investigation and reporting.

SPECIFIC COURSE OBJECTIVES:

Successful students will be able to:

1. understand his/her physical and psychological conditions bearing on a safe flight.
2. analyze others' mistakes so that he/she is less likely to repeat the error(s).
3. explain how to apply survival techniques in the event of a mishap.
4. explain proper reporting procedures in the event of a mishap.
5. identify post-crash investigation procedures.
6. synthesize ways to be a safer pilot.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Survey of recent preventable accidents
 - A. Pilot physical factors as a cause
 - B. Pilot psychological factors as a cause

- C. Weather as a cause
 - 1. Pilot judgment during preflight
 - 2. Changing weather and when to update
- D. Aircraft component failure as a cause
 - 1. Handling common equipment failures
 - 2. Prevention of common equipment failures
- E. Miscellaneous factors as a cause
- II. Physical limitations of a pilot
 - A. Eyesight
 - B. Equilibrium/Vertigo
 - C. Stress & Fatigue
 - D. Emotional States
 - E. Medicine & Drugs
 - F. Effects of High Altitudes
 - G. Miscellaneous Pilot Factors
- III. Crash Survival
 - A. Off airport crash landings
 - B. On airport crash landings
 - C. Emergency water landings (ditching)
 - D. Mountain landings
 - E. Ice/Snow landings
- IV. Post-Crash Survival
 - A. Desert techniques
 - B. Mountain techniques
 - C. Water techniques
- V. Mishap Investigation & Reporting
 - A. Preservation of Wreckage
 - B. Accident Investigation Techniques
 - 1. Gathering of Data
 - 2. Interpretation of Data
 - 2. Implications for future accident prevention

REQUIRED READING:

Handouts - NTSB reports, safety articles, & FAA articles (To vary frequently as new materials become available)

SUGGESTED READING: None.

REQUIRED WRITING:

A three page paper on a specific item of aviation safety. To be selected individually with the instructor's approval.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

Reading and studying of handout materials. Studying of lecture notes. Writing a paper.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply.

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

2 True/false, multiple choice, and fill-in type exams and an assigned paper on a safety related item.

- 2 Exams = 60%
- Paper = 20%
- Class participation = 20%

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes No Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

CONTACT PERSON:

Jerry Houser, ext. 2518

SIGNATURES:

SIGNATURES ON FILE