

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

XX Transfer Course XX A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE:

AERONAUTICAL SCIENCES 105 - Basic Pilot Ground School

UNIT VALUE: 3

MINIMUM NUMBER OF SEMESTER HOURS: 48

BASIC SKILLS REQUIREMENTS:

Appropriate language skills.

ENTRANCE REQUIREMENTS

PREREQUISITE: None

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE:

A study of Federal Aviation Regulations, flight data, aerodynamics, weather and navigation, radio communications, aircraft and engine operation, flight instruments, and aircraft performance. Prepares the student for the Federal Aviation Administration's Private Pilot written examination.

SPECIFIC COURSE OBJECTIVES:

The successful student will be able to:

1. pass the FAA written exam for Private Pilot Airplane.
2. apply the principles learned to pass the practical flight test for Private Pilot Airplane.
3. analyze the factors and regulations as they apply to planning and making a safe flight.
4. pose problems which may occur during a flight and arrive at safe and satisfactory solutions.
5. apply principles learned to solve aircraft weight & balance and performance problems.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Principles of Flight - Aerodynamics
 - A. Airplanes
 - B. Four Forces of Flight
 - C. Aerodynamics of Maneuvering Flight
 - D. Stability
- II. The Flight Environment
 - A. Safety of Flight
 - B. Airports & Traffic Patterns
 - C. Airspace
 - D. Radio Communications
 - E. Radar and ATC Services
- III. Aircraft Systems and Performance
 - A. Pilot-Static Instruments
 - B. Gyroscopic Instruments
 - C. Engine and Propeller
 - D. Fuel and Electrical Systems
 - E. Predicting Performance
 - F. Weight and Balance
- IV. Meteorology for Pilots
 - A. Basic Weather Theory
 - B. Weather Patterns
 - C. Weather Hazards
- V. Interpreting Weather Data
 - A. Printed Reports and Forecasts
 - B. Graphic Weather Products
 - C. Sources of Weather Information
- VI. Basic Navigation
 - A. Aeronautical Charts
 - B. E6-B Flight Computer Computations
 - C. Pilotage and Dead Reckoning
 - D. Sources of Flight Information
- VII. Radio Navigation Systems
 - A. VHF Omnidirectional Range
 - B. Automatic Direction Finder
 - C. Advanced Navigation
- VIII. Aviation Physiology
 - A. Vision in Flight
 - B. Spatial Disorientation
 - C. Respiration and Altitude
 - D. Alcohol, Drugs, and Performance
- IX. Flight Planning and Decision Making
 - A. Planning and Organizing Flight
 - B. Factors Affecting Decision Making
- X. Federal Aviation Regulations (FAR's)
 - A. Part 1
 - B. Part 61
 - C. Part 91

REQUIRED READING:

Jeppesen. Private Pilot Manual. 18th edition. Englewood, CO: Jeppesen, 2001.

Jeppesen. Private Pilot FAA Airman Knowledge Study Guide. Englewood, CO: Jeppesen, 2001.

Houser, J. Summary of Federal Aviation Regulations. San Marcos, CA: Palomar College, 2001.

SUGGESTED READING: None

REQUIRED WRITING:

Several problem solving exercises of approximately 1 page each are more appropriate. Problems include aircraft performance, weight & balance, and navigation.

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.

Outside assignments will include reading the text, working problems in the study guide, and studying class notes.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

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

DISTANCE LEARNING:

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):

Four tests and a comprehensive final. All five items will be averaged.

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

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

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

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SIGNATURES ON FILE
