

Course Outline

COURSE: AFT 134 **DIVISION:** 50 **ALSO LISTED AS:**

TERM EFFECTIVE: Spring 2014 **Inactive Course**

SHORT TITLE: AVIATION FLIGHT TECH

LONG TITLE: Aviation Flight Technology

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
3	18	Lecture:	3	54
		Lab:	0	0
		Other:	0	0
		Total:	3	54

COURSE DESCRIPTION:

This course includes all aerodynamics, navigation, regulations, airport and airspace requirements, meteorology, and emergency procedures necessary to qualify for a private pilot certificate. **ADVISORY:** Completion of English 250 and English 260.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES

L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion

STUDENT LEARNING OUTCOMES:

1. Analyze forces on aircraft in flight and apply them to practice situations.

ILO: 2,7,1

Measure: written exam

2. Describe factors related to flight safety, including airport lights, signs, markings and human physiology.

ILO: 2,7,1,4

Measure: oral exam,
quizzes

3. Describe the types of federal airspace systems.

ILO: 7,2,1

Measure: quiz, class discussion

4. Explain aviation radio and radar procedures and demonstrate their application.

ILO: 7,2,1,4

Measure: written exam, role playing

5. Describe the appropriate sections of 14 CFR 61 and 91.

ILO: 2,7,1

Measure: written exam, oral report

6. Analyze basic weather trends, weather reports, and forecasts as they relate to aviation and apply them to various situations.

ILO: 2,3,7,1

Measure: written exam,
class discussion

7. Compute aircraft performance data and apply them to given situations.

ILO: 2,7,1

Measure: written exam,
demonstration

8. Complete a cross country flight plan.

ILO: 2,7,3,1

Measure: written exam, demonstration

9. Complete a practice test for the Federal Aviation Administration private pilot certificate.

ILO: 2,7

Measure: written exam

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS

Inactive Course: 10/28/2013

2 Hours

CONTENT: Introduction, description of flight training, and basic aerodynamic forces.

PERFORMANCE OBJECTIVES: The student will be able to describe the process required to obtain a Private Pilot's Certificate. They will be able to explain the most basic aerodynamics of flight.

HOMEWORK ASSIGNMENT: Read appropriate chapter in the text.

3 Hours

CONTENT: Aircraft stability and maneuverability.

PERFORMANCE OBJECTIVES: The student will be able to discuss how pitch, roll, and yaw stability are achieved in aircraft design. The control inputs necessary for maneuvering and the forces involved in this maneuvering will also be explained.

HOMEWORK ASSIGNMENT: Read corresponding chapter in the text.

3 Hours

CONTENT: Aircraft engines and propellers.

PERFORMANCE OBJECTIVES: The student will recognize the operation and hazards of aircraft engine operation.

HOMEWORK ASSIGNMENT: Read appropriate chapter in the textbook and complete related section.

3 Hours

CONTENT: Aircraft instruments.

PERFORMANCE OBJECTIVES: The student will be able to identify the mechanics of basic aircraft instruments, their significance to flight safety, and be able to recognize and compensate for their failure.

HOMEWORK ASSIGNMENT: Read related chapter in the text.

3 Hours

CONTENT: Airport lights, signs, and markings.

PERFORMANCE OBJECTIVES: The student will be able to distinguish all airport lights, signs, and runway and taxiway markings and their significance to the safety of flight.

HOMEWORK ASSIGNMENT: Read appropriated sections in the textbook.

3 Hours

CONTENT: Aeronautical charts.

PERFORMANCE OBJECTIVES: The student will be able to recognize basic chart symbols and be able to calculate latitude and longitude.

HOMEWORK ASSIGNMENT: Read section of the chapter related to the topic. Complete calculations.

3 Hours

CONTENT: National airspace system.

PERFORMANCE OBJECTIVES: The student will list the different types of airspace and the operational restrictions in each.

HOMEWORK ASSIGNMENT: Read corresponding section of the chapter.

3 Hours

CONTENT: Radio and radar procedures.

PERFORMANCE OBJECTIVES: The student will describe how to use ground radio and radar facilities and how to communicate with them.

HOMEWORK ASSIGNMENT: Read appropriate chapter in the textbook.

5 Hours

CONTENT: Basic weather theory, weather reports, and forecasts.

PERFORMANCE OBJECTIVES: The student will recognize basic weather patterns, as well as when and how they impact the safety of flight.

They will be able to read and interpret both textual and graphic weather reports and forecasts.

HOMEWORK ASSIGNMENT: Read related chapters in the text. Complete weather reports.

3 Hours

CONTENT: General operating and flight rules.

PERFORMANCE OBJECTIVES: The student will recall the parts of 14 CFR 91 (Federal Aviation Regulations, General Operating and Flight Rules) that are appropriate to operations as a private pilot.

HOMEWORK ASSIGNMENT: Read 14 CFR 91, General Operating and Flight Rules and Visual Flight Rules.

3 Hours

CONTENT: 14 CFR 61 (Certification, Pilots and Flight Instructors) and National Transportation Safety Board Part 830.

PERFORMANCE OBJECTIVES: The student will discuss regulations pertaining to a private pilot and NTSB Part 830: "Preservation of Wreckage, Mail and Cargo".

HOMEWORK ASSIGNMENT: Read 14 CFR 61, "Certification: Private Pilots" and NTSB Part 830.

3 Hours

CONTENT: Aircraft performance charts.

PERFORMANCE OBJECTIVES: The student will be able to apply and perform calculations of takeoff and landing distance, climb performance, and cruise performance and explain the factors that affect each.

HOMEWORK ASSIGNMENT: Read appropriate section in the textbook and perform calculations from aircraft performance charts.

3 Hours

CONTENT: Aircraft weight and balance.

PERFORMANCE OBJECTIVES: The student will recognize aircraft weight and balance calculations and how critical they are to flight safety. They will be able to perform weight and balance calculations.

HOMEWORK ASSIGNMENT: Read appropriate section in the text and perform calculations from aircraft weight and balance charts.

3 Hours

CONTENT: Flight planning.

PERFORMANCE OBJECTIVES: The student will examine and plan flights using weather reports and aircraft performance charts.

HOMEWORK ASSIGNMENT: Read related section of the chapter and plan a theoretical flight using current weather forecasts.

6 Hours

CONTENT: Radio navigation. VOR, ADF, and GPS.

PERFORMANCE OBJECTIVES: The student will explain the use of VHF Omni-directional Range (VOR) navigation and plan a flight using this system. Automatic Direction Finding (ADF) and Global Positioning System (GPS) navigation systems will be discussed by the student.

HOMEWORK ASSIGNMENT: Read appropriate sections in the textbook. Plan a theoretical flight using VOR navigation.

3 Hours

CONTENT: Human factors and flight physiology.

PERFORMANCE OBJECTIVES: The student will be able to discuss basic flight physiology and human factors and explain how they affect flight safety.

HOMEWORK ASSIGNMENT: Read corresponding chapter in the text.

2 Hours

Final.

METHODS OF INSTRUCTION:

Lecture, discussion groups, class participation.

METHODS OF EVALUATION:

The types of writing assignments required:

Written homework

The problem-solving assignments required:

Homework problems

The types of skill demonstrations required:

None

The types of objective examinations used in the course:

Multiple choice

Other category:

None

The basis for assigning students grades in the course:

Writing assignments: 10% - 20%

Problem-solving demonstrations: 20% - 30%

Skill demonstrations: 0% - 0%

Objective examinations: 60% - 80%

Other methods of evaluation: 0% - 0%

REPRESENTATIVE TEXTBOOKS:

Jeppesen Sanderson Private Pilot Manual, 2004 or other appropriate college level text.

Reading level of text: 10th grade. Verified by: Gloria Curtis

Other Materials Required to be Purchased by the Student: Navigation Computer and Plotter

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Transferable CSU, effective 200730

UC TRANSFER:

Not Transferable

SUPPLEMENTAL DATA:

Basic Skills: N

Classification: I

Noncredit Category: Y

Cooperative Education:

Program Status: 2 Stand-alone

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department: AFT

CSU Crosswalk Course Number: 134

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: C

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000435820

Sports/Physical Education Course: N

Taxonomy of Program: 095000