

## **Attachment 2 to Annex B - AFROTC/AFJROTC Orientation Flight Syllabus.**

**I. Flight No. 1 -- Preflight Inspection, Takeoff, and Landing.** The pilot will perform the following duties:

a. Preflight: Brief IAW the checklist at Attachment 3 to Annex B. Discuss the basics of light aircraft aerodynamics. Using the appropriate aircraft checklist, demonstrate routing of preflight inspections, showing the cadet what is inspected, what to look for, and why.

b. Before Takeoff:

(1) Using the checklist, show cadets how routine cockpit checks are made prior to takeoff.

(2) Point out procedures in starting the engine and the safety precautions to be observed.

(3) Describe the use of controls while taxiing and point out safety precautions to be observed.

(4) Explain selection of runway and engine run-up.

c. In Flight:

(1) Point out familiar position and attitude of the aircraft in normal flight with various throttle and control positions.

(2) Point out familiar landmarks, prominent ground features, and position of airport with respect to surrounding community.

(3) Describe approach to traffic pattern, explain reasons for contact with control tower or transmissions on common air traffic frequency at uncontrolled fields. Call attention to correct procedure for entering traffic pattern, glide angle, normal landing, taxiing aircraft to parking area, and engine shutdown.

d. Post Flight: Answer questions pertaining to the flight and stress safety.

## **II. Flight No. 2 -- Normal Flight Maneuvers:**

a. Preflight: Brief IAW the checklist at Attachment 3 to Annex B. Discuss Flight No. 1 as appropriate.

b. In Flight: The pilot will perform the following flight maneuvers at a minimum altitude of 2,500 feet above ground level (AGL):

(1) Point out how aircraft will regain normal attitude "hands-off" from a shallow (not to exceed 5 degrees of pitch) climb or dive. Demonstrate use of trim controls.

(2) Point out how aircraft will maintain turn, with controls neutral.

(3) Demonstrate effects of drift and methods of corrections.

(4) Demonstrate coordinated and uncoordinated shallow turns.

(5) Demonstrate straight and level flight, flying with visual reference to checkpoint and horizon.

- c. Post Flight: Answer questions pertaining to the flight and stress safety.

### **III. Flight No. 3 -- Use of Instruments In Flight:**

- a. Preflight: Brief IAW the checklist at Attachment 3 to Annex B. Discuss previous flight as appropriate.

- b. In Flight:

- (1) Explain use and relationship between altimeter and the vertical velocity indicator.

- (2) Demonstrate effect of shallow (not to exceed 5 degrees of pitch) dives and climbs on RPM (fixed pitch prop).

- (3) Point out how altitude and airspeed are related.

- (4) Demonstrate effect of turns on compass.

- (5) Demonstrate uses of other instruments installed on aircraft.

- c. Post Flight: Answer questions pertaining to flights and stress safety.

### **IV. Flight No. 4 -- Navigation:**

- a. Preflight: Brief IAW the checklist at Attachment 3 to Annex B. Discuss previous flights as appropriate.

- (1) Explain use of basic navigation instruments (e.g.: altimeter, airspeed indicator, compass).

- (2) Explain use of pilotage and dead reckoning.

- (3) Assist the cadet in planning a 30-minute flight using pilotage or dead reckoning.

- (4) Demonstrate preflight weather briefing and its importance.

- (5) Assist the cadet in making and filing a flight plan.

- (6) Chart course, using pilotage or dead reckoning navigational procedures; plan estimated time of arrival (ETA).

- b. In Flight:

- (1) Assist cadet in navigating.

- (2) Show cadet desirable checkpoints along routes.

- c. Post Flight: Answer questions pertaining to flight and stress safety.