

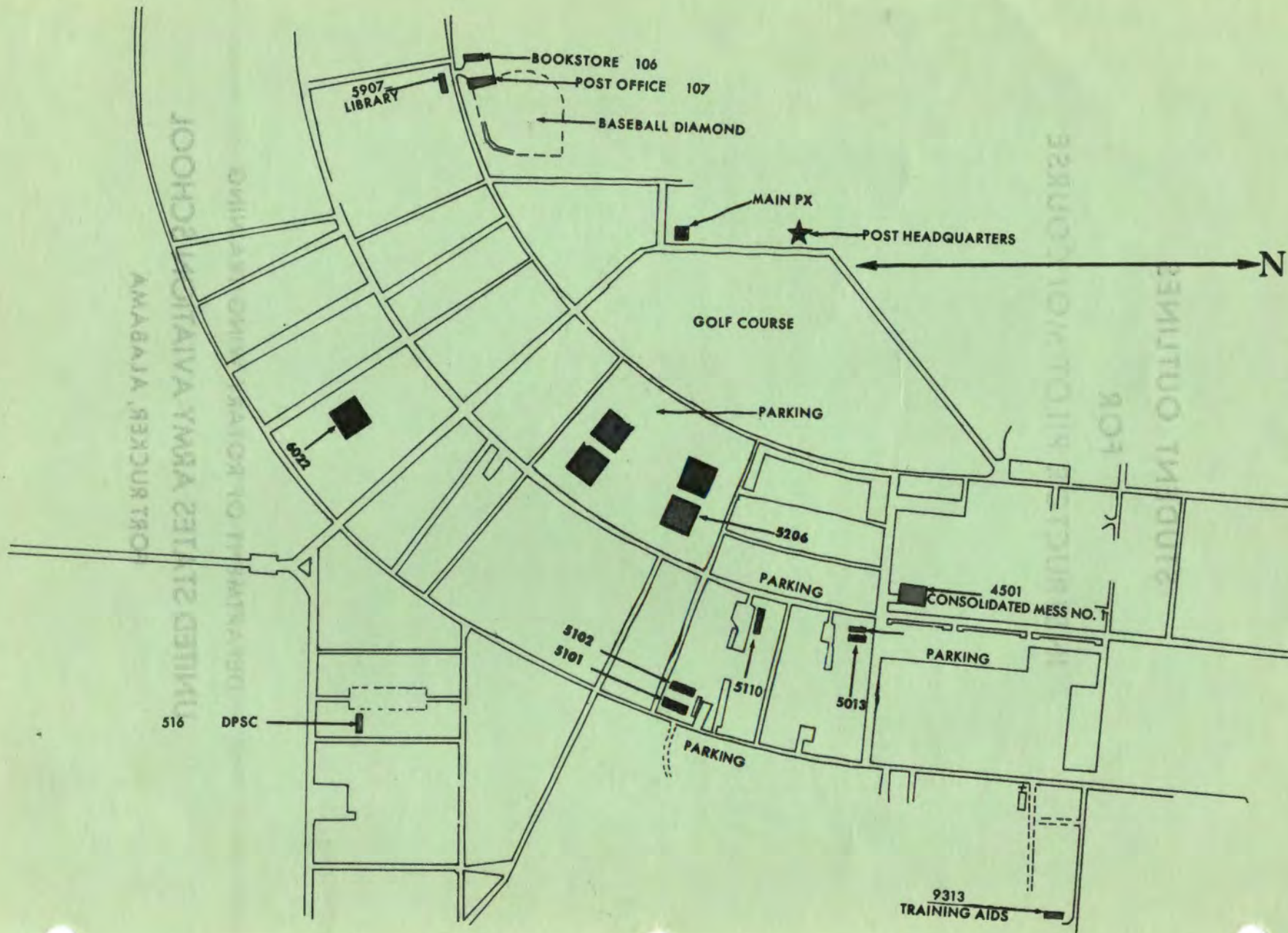
**STUDENT OUTLINES  
FOR  
INSTRUCTOR PILOT MOI COURSE**

29  
~~24~~ SERIES



**JANUARY 1969**

**DEPARTMENT OF ROTARY WING TRAINING  
UNITED STATES ARMY AVIATION SCHOOL  
FORT RUCKER, ALABAMA**



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### COURSE REQUIREMENTS

1. Attendance at all scheduled classes. Request for absences must be approved and coordinated with class leader.
2. One written multiple choice examination on the operators handbook (open book) with a pass/fail point score of 70%.
3. One written comprehensive multiple choice examination on all academic subjects covered within this booklet with a pass/fail point score of 70%.
4. Purpose of course - to augment and implement flight instruction requiring less flight time to produce a proficient IP.
5. Behavior - classes are not strictly formal. You are an officer and are expected to act as such. Normal classroom rules will be adhered to, no cups or bottles in classrooms, no loud talking, no sleeping, and at end of class chairs on tables and ash trays emptied and stacked near entrance to classroom.

## HOW TO STUDY

It is a known fact that what you learn by yourself is the best learning. Instructors, films, and charts are only to assist you. One should never feel that the classroom takes the place of one's own study and concentration.

First, an individual must develop the proper mental attitude so that his mind not only desires, but is anxious, to learn. Daily habits of study, in an undisturbed environment, at a prescribed time, for a specified period of time, are absolutely mandatory. Regularizing your study efforts requires more effort and patience in the beginning, but will become habit-forming if you stick to a schedule.

To learn, you must do these things-

1. Decide that you must exercise your brain just like you would any other muscle. Studying is hard work, because to learn, one must change his ideas that he has formed before entering the course.
2. Know where and when you are going to study. This means every day at the same time for about the same number of hours. The best place to study is where it is quiet, where you are comfortable, where you can see, and where there will be no disturbances-including no radio or TV playing. Search for such a place. The rewards will be high. Don't skip study periods ever.
3. Know what manuals, books, and handouts you want to use. Check and see whether you have them.
4. Find out what pages of the manuals you should study. (When in school, you will find these listed on the advance sheet. If you are not sure, ask the instructor before leaving class each day.)
5. Know the reason you are studying. Is it to learn the principles of direct support? The procedure for inspecting a truck? Jot this reason down on a piece of paper.
6. Read once to get the feel of what the words say.
7. Read again. This time, write down (brief and in your own words) the important points.
8. When reviewing for an examination, study all of the important points you have written in your notes as a result of the previous steps.

There is no mechanical process that will make learning easy or automatic. The above requirements will meet all your needs. All else merely adds to them.

STUDENT HANDOUT

File No

24-4210-1

FUNDAMENTALS OF LEARNING

TRAINING OBJECTIVES

1. KNOWLEDGES - Without the aid of notes or reference material the student will be able to:
  - a. Write the definitions, discussed in class, of the following:
    - (1) Learning
    - (2) Perception
    - (3) Insights
  - b. Write the three aspects of learning in order.
  - c. Write the two types of motivation and define each.
  - d. Write three of the obstacles to learning.
  - e. Write four of the seven most common misconceptions of learning.

SKILLS: None

STUDENT OUTLINE

1. Learning
  - a.
  - b.
  - c.
2. Factors affecting learning.
  - a. Perception

(1) Senses

(a)

(b)

(c)

(d)

(e)

(2) Factors affecting perception

(a)

(b)

(c)

(d)

(e)

(f)

b. Insights

(1)

(2)

(3)

3. Motivation

a. Negative

(1)

(2)

b. Positive

(1)

(2)

(a)

(b)

(c)

(d)

(e)

4. Obstacles

a.

b.

c.

d.

e.

f.

5. Misconceptions

a.

b.

c.

d.

e.

f.

g.

(1)

(2)

FUNDAMENTALS OF LEARNINGPERFORMANCE CHECK

1. Define the following:

a. Learning

b. Perception

c. Insight

2. The triple aspect of learning is \_\_\_\_\_.

3. The senses most important to learning to fly are \_\_\_\_\_.

4. A man is enrolled in a college to attain a degree in business administration. He fears the disapproval of his father if he fails. Is this positive or negative motivation? \_\_\_\_\_.

5. Apathy is said to be usually fostered by \_\_\_\_\_.

6. List 3 of the 6 obstacles to learning.

a.

b.

c.

7. List 4 of the 7 most common misconceptions of learning.

a.

b.

c.

d.

STUDENT HANDOUT

File No.

24 -4211-1

EFFECTIVE TEACHING METHODS

TRAINING OBJECTIVES

1. KNOWLEDGES - Without the aid of notes or reference material, the student will be able to:
  - a. Define professionalism in instruction.
  - b. Explain a good instructor-student relationship with an apt student and a slow student.
  - c. Write the four steps to the teaching process and the actions of the instructor during each one.
  - d. Recognize a good question when given a choice.
  - e. Write two of the four steps to maintain the students interest.
2. SKILLS: None

STUDENT OUTLINE

1. Teaching to help student learn.
  - a. Professionalism.
  - b. Considerations and qualifications.
    - (1)
    - (2)
    - (3)
    - (4)
    - (5)
    - (6)

2. The student-instructor relationship.

a.

(1)

(2)

(3)

b. Slow student

(1)

(2)

c.

(1)

(2)

(3)

(4)

(5)

d.

(1)

(2)

(3)

e.

(1)

(2)

(3)

(4)

(5)

(6)

(a)

(b)

(c)

(d)

f. Apt student.

(1)

(2)

(3)

(4)

(a)

(b)

3. The teaching process.

a.

(1)

(2)

(a)

(b)

(3)

(4)

(a)

1.

2.

3.

4.

5.

6.

7.

4.

a.

b.

c.

d.

(1)

(2)

5.

a.

b.

EFFECTIVE TEACHING METHODS

File No.

24 -4211-1

PERFORMANCE CHECK

1. Professionalism in instruction exists when an instructor \_\_\_\_\_  
\_\_\_\_\_ and \_\_\_\_\_.
2. The purpose of instruction is to help \_\_\_\_\_.
3. Why should we prepare a lesson plan?
  - a. To aid our memory.
  - b. To insure logical sequence and standardization.
  - c. The school requires it.
  - d. In order that the student cannot confuse the issues.
4. When dealing with an apt student we should.
  - a. Raise standards and demand greater effort.
  - b. Assign sub goals.
  - c. Go on to more interesting maneuvers.
  - d. Give him time off until rest of class catches up.
5. What are the four steps in the teaching process?
  - a.
  - b.
  - c.
  - d.
6. The first step in the planning and preparation stage is:
  - a. Identify blocks of learning.
  - b. Procure syllabus.

- c. Determine the objectives.
  - d. Prepare lesson plan.
7. Two methods of maintaining a students's interest are:
- a.
  - b.
8. The application stage is when the students \_\_\_\_\_ and \_\_\_\_\_ the maneuvers.
9. The review and critique should be an intergral part of the lesson plan. \_\_\_\_\_ True \_\_\_\_\_ False
10. The demonstration should always \_\_\_\_\_ the demonstration.

STUDENT HANDOUT

File No

24 -4212-1

PRINCIPLES OF FLIGHT INSTRUCTION

TRAINING OBJECTIVES

1. KNOWLEDGES: Without the aid of notes or reference material, the student will be able to:

- a. Write the two basic differences in ground and flight instruction.
- b. List at least five reasons why the helicopter is a poor classroom.
- c. Define anxiety in his own words.
- d. Match stated reactions as to their basic type (normal or abnormal).
- e. Write two means of controlling fear.
- f. Write two means of minimizing anxieties.
- g. Write the five basic principles of flight instruction.

2. SKILLS: None.

STUDENT OUTLINE

1. Basic differences.

a.

b.

(1)

(2)

(3)

(4)

(5)

(6)

2. Psychological aspects.

a.

b.

3. Stress and tension.

a. Normal

(1)

(2)

(3)

b. Abnormal

(1)

(a)

(b)

(c)

(2)

(a)

(b)

(c)

(d)

(e)

(f)

4. Handling psychological problems.

a.

(1)

(2)

b.

(1)

(2)

(3)

c.

5. Basic principles.

a.

b.

(1)

(2)

c.

d.

(1)

(2)

e.

6. Memory and forgetting.

a.

b.

c.

d.

e.

(1)

(2)

(3)

PRINCIPLES OF FLIGHT INSTRUCTIONPERFORMANCE CHECK

1. What are the basic differences in flight and ground instruction?
  - a.
  - b.
2. List five reasons the helicopter is a poor classroom.
  - a.
  - b.
  - c.
  - d.
  - e.
3. The instructor must gear his instruction to \_\_\_\_\_.
4. In your own words, define anxiety.
5. We look upon the student as being \_\_\_\_\_ and having a basic \_\_\_\_\_.
6. Identify the following by placing an X next to the reactions which are abnormal and XX next to the ones which are normal.
  - a. Autonomic response \_\_\_\_\_
  - b. Higher adrenalin count \_\_\_\_\_
  - c. Excessive sweating \_\_\_\_\_

- d. Nervous laughter \_\_\_\_\_
  - e. Over-cooperation \_\_\_\_\_
  - f. Paleness \_\_\_\_\_
  - g. Rapid and exact response within training limits \_\_\_\_\_
7. Name two means of controlling student fear.
- a.
  - b.
8. Name two means of minimizing anxieties.
- a.
  - b.
9. What are the five basic principles of flight instruction?
- a.
  - b.
  - c.
  - d.
  - d.
10. When should a student be eliminated?
- a. As a last resort.

b. When he has a psychological problem.

d. When he violates airspace.

d. If he has air or motion sickness.

11. Meaningful repetition aids \_\_\_\_\_

STUDENT HANDOUT

File No.

24 -4213-1

FLIGHT INSTRUCTORS RESPONSIBILITIES

TRAINING OBJECTIVES

1. KNOWLEDGES: Without the aid of notes or reference material, the student will be able to:

- a. Write the five steps of effective training.
- b. Write the five characteristics of a good instructor.
- c. Write and identify the two types of grading.
- d. Write and identify the two types of ratings.
- e. Write and explain the 5 most common rater errors.
- f. Briefly describe, in his own words, the flight instructor's image to the student.

2. SKILLS: None

STUDENT OUTLINE

1. Providing adequate instruction.

a.

(1)

(2)

(3)

(4)

(5)

b.

(1)

(2)

(3)

(4)

(5)

2. Transferring responsibility to student.

a.

b.

(1)

(2)

(3)

(4)

c.

d.

3. Evaluations

a.

(1)

(2)

(3)

(4)

b. Grading

(1)

(2)

c. Ratings

(1)

(2)

4. Rating errors

a.

b.

(1)

(2)

c.

(1)

(2)

d.

(1)

(2)

5. Image

a.

b.

(1)

(2)

(3)

c.

(1)

(2)

(3)

d.

(1)

(2)

e.

(1)

(2)

(3)

f.

g.

FLIGHT INSTRUCTORS RESPONSIBILITIESPERFORMANCE CHECK

1. The five steps of effective training in order are
  - a.
  - b.
  - c.
  - d.
  - e.
2. Three of the five characteristics of a good instructor are
  - a.
  - b.
  - c.
3. Objective grading is defined as what?
4. Relative rating is defined as what?
5. Four characteristics of a good evaluation or test are
  - a.
  - b.
  - c.
  - c.

6. Define the following rating errors:

- a. Leniency
- b. Central tendency
- c. Halo

7. List 4 of the 7 considerations in flight instructor's image to the student.

- a.
- b.
- c.
- d.

8. Explain in your own words what is meant by transferring responsibility to the student.

## STUDENT HANDOUT

File No. -4214-1

### LOCAL FLYING REGULATIONS

#### TRAINING OBJECTIVES

1. KNOWLEDGES: Without the aid of notes or reference material, the students will be able to perform the following:

- a. Describe boundaries of local flying area.
- b. Describe the five training areas.
- c. Name training sites for rotary wing aircraft.
- d. Use of stagefields.
- f. Visual flight rules.
- g. Explain ground operations.
- h. Authorized landing areas.
- i. Restriction on low altitude flying.
- j. Explain procedures for reporting inflight or near-accident reporting.

2. SKILLS: None

#### STUDENT OUTLINE

1. Local flying area

a.

b.

2. Training areas

a.

b.

c.

d.

e.

3. Condition Alpha

a. Area I

b. Area II

c. Area III

d. Area IV

e. Area V

4. Condition Bravo

a. Area I

b. Area II

c. Area III

d. Area IV

e. Area V

5. Flight training sites

a.

b.

c.

d.

e.

6. Stagefields

a.

b.

c.

d.

7. Accidents or incidents

a.

b.

c.

8. Visual flight rules

a.

b.

c.

d.

e.

9. Ground operations

a.

b.

c.

d.

10. Landing areas

a.

b.

c.

d.

11. Low altitude flying

a.

b.

c.

12. Inflight hazard or near-accident reporting

a.

b.

LOCAL FLYING REGULATIONS

PERFORMANCE CHECK

1. Without the aid of notes, define the following stagefield flags or lights.

- a. Red -
- b. Green -
- c. Red and green -

2. Complete the following:

- a. Condition Alpha exists when ceiling is \_\_\_\_\_.
- b. Condition Bravo exists when ceilings are \_\_\_\_\_ and \_\_\_\_\_.

3. Check True or False.

- a. \_\_\_\_\_ Aircraft will remain 1500' MSL or above within one mile of stagefield or airfield, except for entering or departing traffic.
- b. \_\_\_\_\_ Aircraft may be flown in vicinity of stagefields when they have radio contact.
- c. \_\_\_\_\_ Helicopters may operate on training flights within the Dothan Control Zone.

4. In the event of forced or precautionary landing - accident or incident - aviators will:

- a.
- b.
- c.
- d.

5. In event of accident or incident, an aviator should immediately contact.

- a.

b.

c.

6. Special VFR helicopter operations are permitted in the Fort Rucker Control Zone with -

a. Weather minimums:

b. Approved by:

STUDENT HANDOUT

File No

-4215-2

IN FLIGHT GRADING AND GRADE BOOK SOP

PERFORMANCE OBJECTIVES

1. KNOWLEDGES:

Without the aid of notes or reference material, the student will be able to perform the following.

- a. State the utilized grades and their numerical values.
- b. Select and correctly prepare the proper grade slip for any given situation.
- c. Correctly fill in all applicable blanks on flight insert for any given situation.
- d. Correctly fill in all applicable blanks on the grade book folder for any given situation or student.

STUDENT OUTLINE

1. Grade slips

- a.
- b.
- c.
- d.

2. Preparation of grade slip

- a. Maneuver Procedure Section
- b. Basic Quality Section
- c. Stage and Type Training Section
- d. Administrative Section

3. Types of grade slips

a. White

b. Pink

c. Green

d. Blue

e. Yellow Comment Slip

4. Flight Insert

a.

b.

c.

5. Grade Book Folder

a.

b.

c.

d.

STUDENT HANDOUT

File No.

-4215-2

IN FLIGHT GRADING AND GRADE BOOK SOP

PERFORMANCE CHECK

1. Name the four types or colors of grade slips.
  - a.
  - b.
  - c.
  - d.
2. A green grade slip is used for what purpose?
3. What Basic Qualities are not graded on a blue grade slip by an evaluation pilot?
4. What is a white grade slip used for?
5. A green grade slip must be prepared no more than \_\_\_\_\_ days prior to an evaluation flight.
6. Blue grade slips are prepared in \_\_\_\_\_ copies and one copy goes to Quality Control Branch within \_\_\_\_\_ hours.
7. All NFA entries on flight insert must be substantiated by a \_\_\_\_\_ in the grade book folder.
8. The \_\_\_\_\_ and \_\_\_\_\_ method is the only approved method of correction on the flight insert.
9. A work copy of the flight insert must be posted to the original at least \_\_\_\_\_.

STUDENT HANDOUT

File No. 24-21-3

PRE-SOLO FLIGHT MANEUVERS, OH-13

TRAINING OBJECTIVES

1. KNOWLEDGE:

a. Without the aid of notes, the student will be able to either write or give orally the requirements, analysis and performance objectives of the following:

- (1) Takeoff to hover.
- (2) Hovering Turns.
- (3) Sideward flight.
- (4) Rearward flight.
- (5) Landing from hover.
- (6) Taxiing on the ground.
- (7) Normal takeoff.
- (8) Traffic pattern.
- (9) Normal approach.
- (10) Straight and level flight.
- (11) Normal climb.
- (12) Normal descent.
- (13) Level turns.
- (14) Climbing and descending turns.
- (15) Decelerations.
- (16) Hovering autorotations.
- (17) Basic autorotations.

b. The student will be familiar with instructional techniques, common errors, and safety for each maneuver.

2. SKILLS: None.

#### STUDENT OUTLINE

File No. 24-21-3

1. Takeoff to hover.
2. Hovering turns.
3. Sideward flight.
4. Rearward flight.
5. Landing from hover.
6. Taxiing on the ground.
7. Normal takeoff.
8. Traffic pattern.
9. Normal approach.
10. Straight and level flight.
11. Normal climb.
12. Normal descent.
13. Level turns.

14. Climbing and descending turns.

15. Decelerations.

16. Hovering autorotation.

a. Requirements and analysis

b. Common errors.

(1)

(2)

(3)

(4)

c. Performance requirements.

(1)

(2)

(3)

(4)

17. Basic autorotation

a. Requirements and analysis.

(1)

(2)

(3)

(4)

(5) Entry

(6) 100 ft.

(7) 10-15 ft

b. Common errors.

(1)

(2)

(3)

(4)

(5)

(6)

(7)

(8)

c. Performance requirements:

(1)

(2)

STUDENT HANDOUT

File No. 24-21-3

PRE-SOLO FLIGHT MANEUVERS, OH-13

PERFORMANCE CHECK

1. What is the maximum hovering speed?
2. List the requirements for landing from a hover.
  - a.
  - b.
3. During an approach, which control in the aircraft is used to maintain the angle?
4. What is the approach angle for the normal approach?
5. What are the performance objectives for the traffic pattern?
  - a.
  - b.
  - c.
6. Which control in the aircraft controls speed while taxiing on the ground?
7. What two things are a result of a deceleration during an autorotation?
  - a.
  - b.
8. What are the performance requirements for a basic autorotation?
  - a. Heading \_\_\_\_\_

b. Altitude \_\_\_\_\_

c. Airspeed \_\_\_\_\_

d. Rotor speed \_\_\_\_\_

9. During a basic autorotation at what altitude is the initial pitch application?

10. The collective pitch may be used for braking action to slow or shorten the ground slide during a basic autorotation at the stage-field. TRUE \_\_\_ FALSE \_\_\_

11. The most common error of a student during a hovering autorotation which relates directly to safety is \_\_\_\_\_

12. The maximum altitude from which a hovering autorotation should be practiced with a student is \_\_\_\_\_ ft.

STUDENT HANDOUT

File No. 24-90-2

INTERMEDIATE AND ADVANCED MANEUVERS, OH-13

TRAINING OBJECTIVES

1. KNOWLEDGE:

a. Without the aid of notes, the student will be able to either write or give orally, the requirements, analysis, and performance objective of the following:

- (1) Maximum performance takeoff.
- (2) Steep approach.
- (3) Running takeoff.
- (4) Shallow approach and running landing.
- (5) Confined area operation.
- (6) Pinnacle and ridgeline operations.
- (7) Slope operations.

b. The student will be familiar with instructional techniques, common errors, and safety for each maneuver.

2. SKILLS: None.

STUDENT OUTLINE

File No. 24-90-2

INTERMEDIATE AND ADVANCED MANEUVERS, OH-13

1. Maximum performance takeoff.

2. Steep approach.

3. Running takeoff.

4. Shallow approach and running landing.

5. Pinnacle and ridgeline operations.

6. Slope operations.

PERFORMANCE CHECK

INTERMEDIATE AND ADVANCED MANEUVERS, OH-13

File No. 24-90-2

1. During a maximum performance takeoff, until clear of barrier, what attitude should be maintained?
2. What is the approach angle for the steep approach?
3. During a running takeoff, at what altitude should you reach 40 knots?
4. During the running landing, which control in the aircraft is used to keep aircraft on centerline of lane?
5. During a confined area operation, what altitude is used for the high reconnaissance?
6. What approach angle is used for a confined area operation?
7. Name the four items you are checking during a high reconnaissance.
8. What approach angle is used during a pinnacle or ridgeline operation?

9. What is the most common error during an approach to a pinnacle?

10. If the cyclic contacts the stops during a slope operation, what action should be taken?

## STUDENT HANDOUT

File No. 24 -4219-2

### HELICOPTER AERODYNAMICS

#### TRAINING OBJECTIVES

1. KNOWLEDGES - Without the use of notes or reference material, the student will be able to explain:

- a. Atmosphere
- b. Symmetrical airfoil
- c. Lift
- d. Torque
- e. Translating tendency
- f. Effective translational lift
- g. Dissymmetry of lift
- h. Retreating blade stall
- i. Gyroscopic precession
- j. Autorotations

#### STUDENT OUTLINE

- 1. Atmosphere
- 2. Symmetrical airfoil
  - a.
  - b.
- 3. Lift
  - a.
  - b.

4. Torque - "Newton's Third Law of Motion."
5. Translating tendency.
  - a. Caused by:
  - b. Counteracted by:
6. Effective translational lift.
7. Dissymmetry of lift.
  - a.
  - b.
8. Retreating blade stall.
9. Gyroscopic precession.
10. Autorotation.
  - a.
  - b.
  - c.

HELICOPTER AERODYNAMICS

PERFORMANCE CHECK

1. Write, without the use of notes, the answer to the following:
  - a. Density altitude is:
  - b. Helicopters normally use what type airfoil?
  - c. The lift created on the bottom of an airfoil is referred to as:
  - d. Newton's Third Law of Motion is:
  - e. Dissymmetry of lift is caused by:
  - f. When blade stall is encountered, the pilot should:
  - g. Explain gyroscopic precession.
  - h. What portion of the rotor radius is the driving region during autorotation?

## STUDENT HANDOUT

File No. 24-92-2

### AUTOROTATIONS

#### TRAINING OBJECTIVES

1. KNOWLEDGES - without the aid of notes or reference material, the student will be able to give an oral or written presentation of the forced landing. Precision autorotation and 180 autorotation to include.

- a. Requirements.
- b. Common errors.
- c. Analysis.
- d. Safety precautions.
- e. Instructional technique.

2. SKILLS: None.

### STUDENT OUTLINE

File No. 24-92-2

### AUTOROTATIONS

1. Forced landings.

a. Requirements:

- (1) attached eye for power recovery
- (2) air speed in eye limits 60-80
- (3) suitable landing area.
- (4) rotor RPM in green.
- (5)

For open power recovery  
100 feet above objects

School in flight do recovery  
at 200 feet.

52

{at night low}  
RPM at 500'

b. Analysis of maneuver:

- (1) forced landing till student at school
- (2) plan approach
- (3) into the wind or next as possible.
- (4) call rotor RPM & engine also.
- (5) air speed 0-80, 60 on final.
- (6) power recovery establish 2500 RPM, flaps
- (7) & full the power in climb out,
- (8) item with power, 5 to 5 ft lower.
- (8) power recovery at input turn a landing light.

c. Instructional techniques:

- (1) explain to the student
- (2)

d. Common student errors:

- (1) excessive rotor RPM loss,
- (2) fix aileron on the area,
- (3) fail use to ride area
- (4) poor trip control on power recovery.

(5) clearing them on the way down.

e. Safety:

(1) ~~clear~~ collective full down

(2) clearing turns

(3) don't get in bad situations

f. Performance requirements:

(1)

(2) heading  $\pm 5^\circ$  last 500 ft.

(3) turn with power 3'  $\pm 1$  ft.

(4) air speed  $\pm 5$  K.

(5) ALT.  $\pm 100'$

(6)

(7)

2. Precision autorotations.

a. Requirements and analysis.

(1)

(2)

(3)

(4)

(5)

(6) Variables.

(a) air speed.

(b) rotor RPM

(c) entry point.

(d) decelerating attitude  
amount of collective pitch.

b. Common errors.

(1) good briefing ~~to~~ before going out.

(2) good demonstration with student  
following through

(3) slow cross check rotor High or low.

(4) uses rotor RPM too high in the air.

(5) collective pitch too fast or too slow,  
low air speed high rate of descent a killer

c. Performance requirements.

Touchdown.

(a)

(b)

3. 180 degree autorotations.

a. Requirements and analysis.

(1)

(2)

(3)

(4)

(5)

(6)

(7) Entry.

(a)

(b)

(c)

(d)

(8) 180 degree turn.

(a)

(b)

(c)

(d)

(9) 100 ft.

low level auto rotator.  
decad on final down to 75'  
50' on short final.  
enter 80 K.  
flame had to 80 K. 80+5K  
is in alignment input.

errors.  
projective due to low alt,  
higher air speed requires  
larger turning radius.

is a typo  
don't over shoot lanes.

(a)

(b)

(c)

(d)

**b. Common errors**

(1)

(2)

(a)

(b)

(3)

(a)

(b)

(c)

(d)

(4)

(a)

(b)

(5)

(a)

(b)

c. Performance requirements.

STUDENT HANDOUT

PERFORMANCE CHECK

AUTOROTATIONS OH-13

File No. 24-92-2

1. The attitude during the turn portion of a 180 degree autorotation should be a \_\_\_\_\_ knot attitude.

2. Low airspeed and out of trim results in what condition?

\_\_\_\_\_

3. The driven portion of rotor radius is from the \_\_\_\_\_ % region to the \_\_\_\_\_ region.

4. After closing the throttle the student should announce:

a. \_\_\_\_\_

b. \_\_\_\_\_

5. How does a precision autorotation differ from a basic autorotation?

\_\_\_\_\_

\_\_\_\_\_

6. Name three of the reasons, discussed in class, for overshooting the 180 degree autorotation lane.

a.

b.

c.

7. During an autorotation, at what altitude do we begin our deceleration?

8. Maximum glide is obtained by what airspeed?

\_\_\_\_\_

9. What are the four variables of a precision autorotation?
- a.
  - b.
  - c.
  - d.
10. The touchdown requirements for a precision autorotation are within \_\_\_\_\_ helicopter lengths of the predetermined spot \_\_\_\_\_ out of \_\_\_\_\_ times.
11. The requirements for a 180 degree autorotation are:
- a. Heading \_\_\_\_\_
  - b. Altitude on entry \_\_\_\_\_
  - c. Entry airspeed \_\_\_\_\_
  - d. Turn \_\_\_\_\_
12. Airspeed during a forced landing should be \_\_\_\_\_ below 100 ft, above 100 ft \_\_\_\_\_.
13. Termination with power is authorized only at the stagefield autorotation lanes at Fort Rucker.
- True \_\_\_\_\_ False \_\_\_\_\_
14. Power recovery will be accomplished prior to reaching \_\_\_\_\_ feet above the highest obstacle or barrier.
15. Rotor RPM during a forced landing autorotation should be \_\_\_\_\_ RPM.
16. The final portion of a forced landing should be planned whenever possible, \_\_\_\_\_.
17. The airspeed and altitude requirements for a forced landing are \_\_\_\_\_.
18. The \_\_\_\_\_ initiates the initial throttle reduction.

19. When the instructor states power recovery, when should the student recover the aircraft? \_\_\_\_\_.

STUDENT HANDOUT  
EMERGENCY PROCEDURES  
PERFORMANCE OBJECTIVES

File No 24-52-2

1. KNOWLEDGES - without the aid of notes or reference material, the student will be able to perform the following:

a. Discuss precautionary measures and critical conditions applicable to rotary wing flight.

b. Give the emergency procedures for the following emergency conditions:

- (1) Anti-torque failure.
- (2) Engine failure.
- (3) Fire, engine, and fuselage.
- (4) Electrical system malfunction or fire.
- (5) Ditching.
- (6) Fuel system failure.
- (7) Hydraulic system failure.
- (8) Stabilizer bar resonance.
- (9) Blade stall.

2. SKILLS: None.

STUDENT OUTLINE

File No. 24-52-2

1. Precautionary measures:

a.

b.

c.

d.

e.

f.

g.

h.

i.

j.

k. Rotor limits:

(1)

(2)

(3)

l. Engine limits.

(1)

(2)

m. Overspeeds.

(1) Engine.

(a)

(b)

(2) Rotor

2. Critical conditions.

a. Carbureter ice.

(1)

(2)

(3)

b. Bubble ice.

c. Precipitation.

(1)

(2)

(3)

(4)

d. Operation in reduced visibility.

(1)

(2)

(3)

e. Blade stall.

(1)

(2)

(3)

f. Settling with power.

(1)

(a)

(b)

(c)

(2)

g. Hot weather.

h.

(1)

(2)

(3)

(4)

3. Emergency procedures.

a. Engine failure.

(1)

(a)

(b)

(c)

(2)

(a)

(b)

(c)

(d)

(e)

(3)

(a)

(b)

(c)

(d)

(4)

(a)

(b)

(c)

(d) Engine fire.

1.

2.

3.

4.

(e) Electrical fire.

1.

2.

3.

(f) Ditching without power.

1.

2.

3.

(g) Ditching with power.

1.

2.

3.

4.

5.

6.

(h) Bail out.

1.

2.

3.

4.

(i) Fuel System failure.

1.

2.

a.

b.

(j) Electric system failure.

1.

2.

3.

4.

(k) Hydraulic failure.

1.

2.

3.

(l) Landing in trees

1.

2.

3.

STUDENT HANDOUT  
EMERGENCY PROCEDURES  
PERFORMANCE CHECK

File No. 24-52-2

1. The maximum main rotor RPM in autorotation is \_\_\_\_\_.
2. The normal operating RPM for the OH-13s is \_\_\_\_\_ to  
\_\_\_\_\_ RPM.
3. The RPM on an overspeed which requires an engine change is in excess of \_\_\_\_\_ RPM.
4. The corrective action for blade stall is:
  1. \_\_\_\_\_.
  2. \_\_\_\_\_.
5. The corrective action for settling with power is: \_\_\_\_\_  
\_\_\_\_\_.
6. What are three indications of engine failure in an OH-13?
  1. \_\_\_\_\_.
  2. \_\_\_\_\_.
7. Describe the procedure for an engine failure takeoff.
8. If anti-torque failure occurs, the aircraft will initially yaw to the \_\_\_\_\_.
9. Describe the correct procedure for an induction fire upon starting.

10. What is the primary purpose of the auxiliary fuel pump?

## STUDENT HANDOUT

File No. 67, 99, 24-4223-2

### CHECK RIDE TECHNIQUES

#### PERFORMANCE OBJECTIVES

1. KNOWLEDGES: The student, without the aid of notes, will be able to answer (written or oral) questions relating to the technique of conducting a check ride and during his final MOI check ride, display these techniques to the check pilot.

2 SKILLS: None

### STUDENT OUTLINE

1. Check pilot guides.
2. Flight planning.
3. Preflight briefing.
4. ORWAC/WORWAC check rides.
5. Annual Standardization rides.
6. Medical evaluation rides.
7. MOI check rides.

CHECK RIDE TECHNIQUES

PERFORMANCE CHECK

SITUATION: You are to conduct a WORWAC advance check in a UH-1D:

1. The degree of skill the student must demonstrate on a check ride may be found in the
2. Prior to the flight you should coordinate with?
3. Your best guide during this check ride will be?
4. During your debriefing you should bring out his weak points and
5. During a pre-check ride briefing, in regards to the student, you as the check pilot should attempt to ease his anxiety by
6. The maneuvers on a medical evaluation check ride are directed by the
7. What should your reaction to checkitis be?
8. On an annual standardization ride what grades should be used?