40 HOUR SYLLABUS
ROTARY WING

TACTICAL FLIGHT TRAINING

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UNITED STATES ARMY AVIATION SCHOOL
FORT RUCKER, ALABAMA

DEPARTMENT OF TACTICS
UNITED STATES ARMY AVIATION SCHOOL
FORT RUCKER, ALABAMA 36360

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BRIEFINGS

Preceding each flight period the students will be briefed on the objectives of the mission and the pertinent procedures and techniques involved in the accomplishment of these objectives. The time allocated for each briefing session will be determined by the type of mission and the conditions under which it is to be flown.

CRITIQUE

Subsequent to each flying mission the flying instructor, flight commander or the operations officer will conduct a critique on the individual and collective student accomplishments of the objectives of the mission. The time allocated each critique will be determined by the type of mission and the extent of the individual student accomplishments and understanding.

DEFINITIONS

1. Knowledge type objectives are utilized when the conference method of instruction is employed and skills are not taught.

2. Skill type objectives are used when demonstrations and practical exercises comprise at least a portion of the instruction and skills are taught.

STANDARDS

Students will be expected to employ knowledges and skills which have been previously taught not only in previous flight training but also in ground school. Failure to meet the minimum performance objectives levels contained in each period of instruction or from previous instruction, constitutes unsatisfactory progress. Students with persistent unsatisfactory performance or retention will be evaluated and appropriate corrective action taken.

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL
1	Demonstrate and practice a. Types of formation to include: (1) Trail. (2) Staggered Trail. (3) Vee. (4) Tactical Heavy left, Heavy right. (5) Echelon b. Changing Formation. c. Rendezvous and join up. d. Inadvertent IFR procedure. e. Formation takeoff. f. Formation approach.		1:15	1:15

PERFORMANCE OBJECTIVES

SKILLS

1. Each student will plan and plot on a tactical map, a given mission. To be satisfactory the map preparation will include a course line with time tick marks every two (2) minutes, headings and air control points.

2. As pilot, the student will:

a. Maintain not less than two (2) rotor disc diameters and not more than two and a half ($2\frac{1}{2}$) rotor disc diameters between helicopters while maintaining a relative angle of 45^{o} with three (3) feet vertical separation while flying in formation.

KNOWLEDGES

None

b. Change position in formation to all the assigned formations from the formation currently being flown.

c. Execute a formation landing to the ground and formation take off from the ground.

To be satisfactory the student must be able to perform all the above using the proper techniques and procedures at all times.

3. As copilot/observer the student will:

a. Navigate the assigned route and maintain constant orientation of his position over the ground.

b. Monitor all flight instruments during the flight.

c. Observe instruction and techniques used in formation flying.

To be satisfactory the student must be able to locate his position on the map at any time within 500 meters of his actual location.

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL
2	Demonstrate and practice a. Route reconnaissance. b. Reconnaissance of a landing zone. c. FM Homing. d. High Altitude Approach. e. Low level navigation.		1:15	2:30

PERFORMANCE OBJECTIVES

SKILLS

1. Each student will plan and plot on a tactical map a given mission. To be satisfactory the map preparation will include a course line with time tick marks every two (2) minutes, headings, check points, and air control points.

2. As a pilot and copilot team, the students will be responsible for the successful completion of the mission.

3. As pilot, the student will:

a. Maintain an altitude of 300 feet absolute, airspeed of 60K and maintain the A/C in a position which will provide the greatest degree of observation of the route.

b. Furnish verbally a complete reconnaissance of the route.

c. Conduct a reconnaissance of a landing zone.

d. Using proper FM homing procedures, the student will home to an FM radio.

e. Execute a high altitude approach to a landing zone.

To be satisfactory the pilot must hold an altitude within 50 feet of assigned altitude; verbally provide all information on the route recon; the approximate dimensions, type of terrain, obstacles, (by type and height) location, suggested headings for approaches and departure of the LZ being reconnoitered. Execute FM homing, checking his on course signal frequently during the flight, identify station passage and visually locate the transmitter. Execute a high altitude approach terminating to the ground with power.

KNOWLEDGES

None

PERFORMANCE OBJECTIVES

SKILLS

4. As copilot/observer the student will:

a. Navigate the assigned route and arrive at the designated ACP's within 3 minutes of the planned time.

b. Maintain constant orientation of his position over the ground.

c. Using a current SOI and correct tactical radio procedure, he will submit position reports as required.

d. Write down all information given by the pilot on the route and LZ reconnaissance.

To be satisfactory the copilot must be able to locate his position on the map at any time within 500 meters of his actual location. Submit position reports when required using proper radio procedure and techniques. He must have written down all essential information obtained during the flight to include the position of all bridges and obstacles so that he can submit to the operations officer a complete route reconnaissance, LZ reconnaissance with sketch of the LZ, and the coordinates of the FM homer within 500 meters.

KNOWLEDGES

None

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL
3	Initial evaluation of individual navigational proficiency to include a. Use of radio aids in navigation. b. Navigation by means of pilotage. c. Navigation by dead reckoning. d. Area and operational site orientation. e. Reaction to inflight mission change.	1:15		3:45

PERFORMANCE OBJECTIVES

SKILLS

1. Each student will plan and plot on a tactical map, a given mission.

To be satisfactory the map preparation will include a course line with time tick marks every two (2) minutes, headings, check points and air control points.

2. As a pilot and copilot team, the student will be responsible for the successful completion of the mission.

3. As pilot, the student will:

a. By using a given frequency of a radio aid, either FM or ADF, identify the station, establish his relative bearing to the station and home inbound, determining station passage.

b. Fly the assigned flight route maintaining the proper altitude and headings.

To be satisfactory, the student must identify the station, determine his relative bearing within 10 degrees and be able to give the coordinates of the transmitter location within 500 meters of its actual location.

4. As copilot/observer the student will:

a. Navigate the assigned route.

b. Up date the map being used during the flight.

c. Be able to abort the mission, plan a new mission within three (3) minutes and proceed to the new location using any means of navigation he may choose.

To be satisfactory the student must navigate the assigned flight route within 250 meters of center line. Be able to plot

KNOWLEDGES

None

a new mission in three minutes to 100 meters accuracy. navigate the new mission within 250 meters of center line of the new route, and determine within 500 meters the actual location of the coordinates on the ground. Have all changes noted during the route marked on his map, such as new roads, bridges, towers, and any other man made structures or natural features that were not printed on the map.

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL TIME
4	Demonstrate and practice a. Night traffic pattern. b. Approach to minimum lighted helipads utilizing various field lighting expedients. c. Night formation flight. d. Approach utilizing glide scope. e. Night formation takeoff. f. Night formation approach. g. Night navigation.		1:15	5:00

PERFORMANCE OBJECTIVES

SKILLS

1. Each student will plan and plot on a tactical map a given mission:

To be satisfactory the map preparation will include a course line with time tick marks every two (2) minutes, check points, headings and air control points.

2. As a pilot and copilot team the students will be responsible for the successful completion of the mission.

3. As pilot, during the hours of darkness, the student will:

a. Execute night traffic pattern.

b. Accomplish approaches and take offs to a minimum lighted helipad.

c. Execute an approach with the aid of the visual glide scope.

d. Execute night formation take-offs and landings to the ground.

To be satisfactory the student must be able to perform the above using the proper techniques and procedures.

4. As copilot/observer the student will:

a. Maintain constant geographical orientation.

b. Observe the flight instruments during formation flying.

To be satisfactory he must be able to locate his position at any time on a map within 500 meters of his actual location.

KNOWLEDGES

None

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL TIME
5	Demonstrate and practice a. Low level navigation. b. Dangers of low level flight. c. Contour flight. d. Low level observation techniques.		1:15	6:15

PERFORMANCE OBJECTIVES

SKILLS

1. Each student will plan and plot on a tactical map, low level and contour routes.

To be satisfactory the map preparation will include course lines with time tick marks every (2) minutes, headings, check points and air control points.

2. As a pilot and copilot team the students will be responsible for the successful completion of the mission.

3. As pilot, the student will:

a. Navigate the aircraft over the planned contour route.

b. Fly the assigned low level route, maintaining the proper altitude and headings.

KNOWLEDGES

None

To be satisfactory the student must remain within 250 meters of the center line of the low level course, be able to navigate and maintain constant geographical orientation on the map during the contour flight, and make the proper radio calls when required.

4. As copilot/observer the student will:

Maintain constant orientation of his position over the ground.

To be satisfactory he must be able to locate his position on the map at any time within 500 meters of his actual location.

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL
6	Practice a. Route reconnaissance. b. Radiological Survey. c. FM Homing.	1:15		7:30

PERFORMANCE OBJECTIVES

SKILLS

1. The student will plan and plot on a tactical map a given mission. To be satisfactory the map preparation will include course lines, two minute tick marks for every two (2) minutes of flight, heading, check points, and air control points.

2. As a pilot/copilot team the students will be responsible for the successful completion of the mission.

KNOWLEDGES

None

3. As pilot, the student will:

a. Maintain an altitude of 300 feet absolute, airspeed of 60 Kts and maintain a position which will provide the greatest observation of the route.

b. Furnish verbally a complete reconnaissance of the route.

c. Submit a complete DA Form 1971-1-R on the radiological survey.

d. FM home to a prepositioned radio.

To be satisfactory the student will maintain an altitude within 50 feet of assigned altitude. Use proper procedure while homing to the radio facility; identify station passage and visually locate the transmitter. Submit a complete DA Form 1971-1-R and give the coordinates of the location of the FM homer within 500 meters of its actual location.

4. As copilot/observer the student will:

a. Navigate the low level route reconnaissance flight over the assigned flight route.

b. Arrive over ACP's within 3 minutes of planned time.

c. Perform a radiological survey over the preplanned course.

d. Maintain a constant orientation over the ground.

To be satisfactory the student will navigate a track within 250 meters of center of course line, and be able to locate his position on the map within 500 meters of his actual location. Have all information written down obtained during the flight and brief the operations officer on the route.

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL
7	Practice Formation Flight a. Types of formation to include: (1) Vee. (2) Staggered trail. (3) Trail. (4) Tactical Heavy left, heavy right. (5) Echelon. b. Changing formation. c. Rendezvous and join up. d. Formation takeoffs. e. Formation approaches.	1:15		8:45

PERFORMANCE OBJECTIVES

SKILLS

1. Each student will plan and plot on a tactical map, a given mission. To be satisfactory the map preparation will include a course line with time tick marks every two (2) minutes, headings and air control points.

2. As a pilot/copilot team the students will be responsible for the successful completion of the mission.

3. As pilot, the student will:

a. Maintain not less than two (2)

KNOWLEDGES

None

rotor disc diameters between aircraft and not more than two and a half ($2\frac{1}{2}$) rotor disc diameter separation while maintaining a relative 45° angle and 3 feet vertical separation while flying formation.

b. Change position while in flight to all of the assigned formations from the formation currently being flown.

c. Execute formation take offs and formation landings to the ground.

To be satisfactory the student will perform all the above using the proper techniques and procedures at all times.

4. As copilot/observer the student will:

a. Monitor the flight instruments during formation flight.

b. Maintain constant orientation of his position over the ground.

To be satisfactory the student must be able to locate his position on the map at any time within 500 meters of his actual location, and navigate the assigned route within 250 meters of center line of the course flown.

PERIOD	MANEUVER	PERIOD SOLO	TIME DUAL	TOTAL TIME
8	Demonstrate and practice a. External load techniques. b. Confined area operation. c. Formation flight with external load.		1:15	10:00

PERFORMANCE OBJECTIVES

SKILLS

1. As pilot the student will in accordance with current procedures:

a. Hover for hookup, takeoff, fly the traffic pattern, make an approach and releases the external load.

b. Make an approach to a confined area with an external load.

c. Fly formation with an external load.

d. To be satisfactory the student must be able to perform the above using proper techniques and procedures.

2. As copilot/observer the student will:

a. Monitor the flight instruments during formation flight.

b. Maintain constant orientation of his position over the ground and navigate the assigned route.

c. Observe the techniques and procedures used during external load operations.

d. To be satisfactory the student must be able to locate his position at any time on a map within 500 meters of his actual location and navigate the assigned route within 250 meters of center line.

KNOWLEDGES

None

PERIOD	MANEUVER	PERIOD DUAL	TIME SOLO	TOTAL
9	Practice a. Night traffic pattern. b. Night navigation. c. Approach to minimum lighted helipads utilizing various field lighting expedients. d. Approach utilizing glide scope.		1:15	11:15

PERFORMANCE OBJECTIVES

SKILLS

1. Each student will plan and plot on a tactical map a given mission:

To be satisfactory the map preparation will include a course line with time tick marks every two (2) minutes, check points, headings and air control points.

2. As a pilot/copilot team the students will be responsible for the successful completion of the mission.

3. As pilot, the student will:

a. Execute a night traffic pattern in accordance with current procedures.

KNOWLEDGES

None

SKILLS

KNOWLEDGES

b. Accomplish approaches, landings, and take offs using a minimum lighted helipad.

c. Using proper techniques, execute an approach with the aid of the visual glide scope.

To be satisfactory the student will perform all of the above using the proper techniques and procedures.

4. As copilot/observer the student will:

a. Navigate the assigned route.

b. Maintain a constant geographical location.

To be satisfactory the student will navigate the assigned route within 250 meters of center line, and be able to locate his position on a map within 500 meters of his actual position.

5. Arrive over ACP's within 3 minutes of the planned time.

NOTES