

**TAC SYLLABUS  
COURSE 105106B**

**USAF  
SPECIAL OPERATIONS TRAINING COURSE  
UC-123K**

**SPRAY PILOT**



**JANUARY 1972**

**TACTICAL AIR COMMAND**

DEPARTMENT OF THE AIR FORCE  
Headquarters Tactical Air Command  
Langley Air Force Base, Virginia 23365

TAC SYLLABUS  
COURSE NO 105106B  
January 1972

### Syllabus of Instruction

#### USAF SPECIAL OPERATIONS TRAINING COURSE 105106B, UC-123K

1. This syllabus reflects the general nature of the training required to enable graduates of this course to achieve the standards of proficiency set forth in the training standard contained herein. It prescribes grading criteria to be used in the achievement of stated training standards. It prescribes the overall plan of instruction for this course and the approximate time required for the average student to attain the required proficiency in individual subjects. The level of instruction and time devoted to the individual elements/events, subjects, or phases should be adjusted, as required, to meet the needs of the individual students and to assure that each graduate possesses the skills, knowledge and levels of proficiency set forth in the referenced course training standard.
2. Recommended revisions of this publication will be forwarded to TAC/DO for approval in accordance with the provisions of TAC directives.



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SECTION A  
GENERAL INFORMATION

1. Course Description:

a. Title. USAF Special Operations Training Course, UC-123K Spray Pilot.

b. Number. 105106B

c. Purpose. To train pilots in the fundamentals of UC-123 combat spray operations; also to qualify pilots as UC-123 aircraft commanders in accordance with current directives, when total flying experience permits.

d. Location. Hurlburt Field (Eglin Aux #9), Florida.

e. Duration. Two (2) ground and 17 flying training days. (19 calendar training days).

f. Status Upon Graduation. Upon satisfactory completion of the course of instruction prescribed each graduate will be a combat capable spray pilot and will be awarded a certificate of proficiency in accordance with AFR 53-15.

2. Phases of Training:

a. Flying Phase:

(1) Phase Training:

<u>Description</u>	<u>Missions</u>	<u>Hours</u>
*Transition and Instrument Review	1	4.0
**Assaults, Formation	2	8.0
Formation and Right Seat Performance	1	4.0
Right Seat Performance	2	4.0
Left Seat Performance	3	6.0
Formation Spray Maneuvers	3	6.0
Combat Profile Mission	2	4.0
Evaluation (Combat Profile)	1	3.0
	<u>15</u>	<u>39.0 ***</u>

\* Students completing Phase II training and going directly into spray training need not accomplish this mission. Students not requiring this mission will receive local area orientation on the first mission flown.

\*\* Students who have completed Phase II training need not accomplish the assault portion of these missions. These missions may be reduced to 2.0 hours if used only for formation training.

\*\*\* Prescribed course time for students not requiring Mission II-1 and assault portions of II-2 & 3 is 31 hours.

(2) Mission Support Time:	<u>Hours</u>
Briefing/Debriefing (2.0 hrs/sortie)	30.0
Abort (10% sortie)	<u>7.0</u>
Flying Phase Total	76.0

b. Academic and Ground Training:

<u>Description</u>	<u>Hours</u>
Phase Briefing	
Special Orientation	6.0
Local Area Briefing	2.0
Assault Operations	2.0
Spray Course Briefing	2.0
SEAOC	<u>7.0</u>
	19.0

3. Training Standards and Grading Criteria:

a. Academic Training Standard. Each major phase in academics will be evaluated by written examination or by problem solving. A score of 69 percent or below will be considered failing. A passing grade is required prior to graduation. All examinations will be corrected to 100 percent.

b. Performance Training Standards:

(1) The course training standards reflect the overall course objectives. These standards enable instructors and supervisors to identify by job element those areas requiring instructional emphasis. The standards also describe the ability of the graduate to perform his job element to the gaining unit. The level of proficiency at which the graduate should be able to perform the job elements reflected in each syllabus is indicated by the following training standards:

<u>Level</u>	<u>Description of Performance</u>
1	Performs safely but has limited proficiency. Makes errors of commission or omission. Requires close supervision. Additional training and practice is required.
2	Performs in an essentially correct manner. Recognizes and corrects errors. Requires normal supervision.

<u>Level</u>	<u>Description of Performance</u>
3	Performs correctly, efficiently, skillfully and without hesitation. Requires minimum supervision.

(2) Graduates will be proficient in the employment of UC-123K and in all phases of their utilization in accordance with the accepted standards and safety procedures. The required proficiency levels are:

<u>Pilots Events</u>	<u>Performance Level</u>
Assault Landing	2
Random Pattern Approaches	2
Formation Procedures	3
360 degree Overhead Pattern	3
Downwind Recoveries	3
Aircraft Backing Procedures	2
Piggy Back Formation	3
Right Seat Power Control	3
Right Seat Landings	2
Formation Spray Maneuvers	3
Power Control in Formation	3
Emergency Procedures in Formation	3
Target Planning and Orientation	2
Crew Coordination in Spray Operations	3

Graduates will have knowledge and/or proficiency in:

- Aircraft Systems
- Spray Equipment Preflight
- Spray Systems Servicing
- Care and Use of Personal Equipment
- Ground Egress in a Hostile Environment

c. Grading Criteria. The following grading criteria are designed to relate directly to Course Training Standards. Training standards specified for each job element are required prior to entry into the next phase of training. Students failing to achieve the desired standard in the prescribed time period require faculty board authorization for additional training. Failure to achieve the training standards outlined will result in elimination from the course.

<u>Grade</u>	<u>Explanation of Grade</u>
Unknown	Performance not observed or the element was not performed.
Dangerous	Performance was unsafe.



GradeExplanation of Grade

- 0 Performance indicates a lack of ability or knowledge. Requires maximum supervision. Additional training is necessary to reach an acceptable standard.
- 1 Performance is safe but indicates limited proficiency. Makes errors of commission or omission which require close supervision. Additional training and practice will be required.
- 2 Performance is essentially correct. Recognizes and corrects errors. Requires normal supervision.
- 3 Performance is correct, efficient, skillful, and without hesitation. Requires minimum supervision.
4. Performance reflects an unusually high degree of ability.

4. Master Training Schedule. See page 5.

5. Order of Training:

<u>Mission</u>	<u>Description</u>	<u>Hours</u>	<u>IP/Student Ratio</u>
II-1	Transition and Instrument Review	4.0	1:2
II-2	Assaults and Formation	4.0	1:2
II-3	Same as II-2	4.0	1:2
II-4	Formation & RT Seat Performance	4.0	1:2
II-5	Right Seat Performance	2.0	1:2
II-6	Same as II-5	2.0	1:2
II-7	Left Seat Performance	2.0	1:2
II-8	Same as II-7	2.0	1:2
II-9	Same as II-8	2.0	1:2
II-10	Formation Spray Maneuvers	2.0	1:2
II-11	Same as II-10	2.0	1:2
II-12	Same as II-10	2.0	1:2
II-13	Combat Profile	2.0	1:2
II-14	Combat Profile	2.0	1:2
II-15	Evaluation (Combat Profile)	3.0	1:2
		<u>39.0</u>	

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## SECTION B

## FLYING TRAINING

1. Special Instructions:

a. Schedule deviations. Minor deviations in the order of training are authorized to meet special weather and local conditions providing they are consistent with good safety practices and individual student needs.

b. Authorized Underfly. Each student would normally be expected to complete all missions and to accomplish the approximate number of flying hours as specified in this syllabus. To permit the necessary degree of scheduling flexibility, a 10 percent underfly of syllabus hours is authorized. Only flying time logged in the accomplishment of required training missions will be counted toward this requirement and entered on the TAC Form 89.

c. Authorized Overfly. If necessary to attain the required proficiency level, each student may be permitted to fly a maximum of three additional missions.

d. Instructor/Student Integrity. Whenever possible, instructor/student integrity will be maintained throughout the course. The instructor will occupy one pilot seat at all times during flight.

## e. Briefings:

(1) A thorough course briefing for all students will be conducted prior to the first flying sortie. These briefings are conducted to familiarize the students with the general content of the course of instruction, training materials available, standard of training, applicable regulations, and other information specific and pertinent to each phase.

(2) Immediately preceding each mission, the instructor will brief the student on the objectives of the mission and the procedures and techniques involved in the accomplishment of these objectives. The time allocated for briefing sessions will be determined by the type mission and the conditions under which it is to be flown.

(3) A debriefing/critique will be conducted by the instructor after each mission. Instructors will point out areas where improvement is desired, explain how student performance can be improved, and provide each student with future mission study assignments. The time allocated for each critique will be determined by the type mission and the extent of individual accomplishment and understanding.

## f. Flying Safety:

(1) Flying safety will be stressed at all times. Accident prevention will be based on thorough instruction, capable supervision, and strict air and ground discipline. Regulations and policy letters on flying safety will be continually emphasized in the briefing and training of crews.

(2) Emergency procedures will be practiced on each UC-123 sortie with appropriate notation entered on the student grade sheet.

(3) Egress training for bailout, crash landing, and fire on the ground will be periodically reviewed throughout the flying training program. This training should simulate egress in a hostile environment.

g. Evaluations. If possible, evaluation flights will be administered by supervisory personnel. An instructor will not give his assigned student an evaluation flight.

2. Spray Pilot Missions:

a. Critical elements are those elements which directly relate to the objectives of the training flight and must be successfully accomplished to complete the lesson. Critical elements are designated by an asterisk.

## b. Mission Outline:

<u>Mission</u>	<u>Description</u>	<u>Hours</u>
II-1	Transition and Instrument Review	4.0
	*(1) Local Area Orientation *(2) Preflight Planning (3) Runup (4) Takeoff (5) Departure (6) Climb (7) Level Off (8) Cruise *(9) Nonprecision Approach *(10) Precision Approach *(11) Non-Spray Emergency Procedures *(12) Descent and Landings (13) Post Flight Critique	
II-2	Assaults and Formation (Emphasis on correct position in formation and proper formation procedures)	4.0

<u>Mission</u>	<u>Description</u>	<u>Hours</u>
	<ul style="list-style-type: none"> <li>*(1) Wing Formation</li> <li>*(2) Pitch-Outs</li> <li>*(3) Rejoins</li> <li>*(4) Crossunders</li> <li>*(5) Assault Landings IAW 1C-123K-1</li> <li>*(6) Non-Spray Emergency Procedures</li> </ul>	
II-3	Same as Lesson 2. Crossunder procedures emphasized.	4.0
II-4	Formation and Right Seat Performance	4.0
	<ul style="list-style-type: none"> <li>(1) Wing Formation</li> <li>*(2) Piggy Back Formation Emphasizing reference in level Flight and turns.</li> <li>*(3) Power control from right seat at 150' AGL</li> <li>*(4) Non-Spray Emergency Procedures</li> </ul>	
II-5,6	Right Seat Performance Wing Formation to and from the Target	4.0
	<ul style="list-style-type: none"> <li>*(1) Descents</li> <li>*(2) Leveloffs</li> <li>*(3) Maintaining airspeed on target</li> <li>*(4) Spray Emergency Procedures</li> <li>*(5) Right Seat Landings</li> </ul>	
II-7,8,9	Spray Maneuvers (Left Seat) Emphasis on smooth precise aircraft control. Formation to and from target.	6.0
	<ul style="list-style-type: none"> <li>*(1) Descents</li> <li>*(2) Leveloffs</li> <li>*(3) Maintaining Proper Altitude on Target</li> <li>*(4) 270 degree turns with bank angle gradually increasing to 45 degrees to 55 degrees.</li> <li>*(5) Low Level Navigation</li> <li>*(6) Exiting Target</li> <li>*(7) Spray Emergency Procedures</li> </ul>	
II-10,11,12, 13,14	Formation Spray Maneuvers (Left Seat)	10.0
	<ul style="list-style-type: none"> <li>*(1) Spray Formation</li> <li>(2) All Maneuvers Flown in Lessons 7-9 but in formation</li> <li>(3) Power Control from Center Console</li> </ul>	

<u>Mission</u>	<u>Description</u>	<u>Hours</u>
	*(4) Spray and Non-Spray Emergency Procedures	
	*(5) Flight Planning to include on Target Procedures	

NOTE: Missions II-13 & 14 will be a combat profile.

II-15	Evaluation	3.0
	*(1) Student will plan combat mission	
	*(2) Brief and fly as briefed	
	*(3) Formation to target and tactical entry	
	*(4) Demonstrate proficiency in all spray maneuvers	
	*(5) Successfully complete spray mission to include debriefing.	
	*(6) All emergency procedures.	

## SECTION C

## ACADEMIC AND GROUND TRAINING

1. Special Instructions. Pilots undergoing training under this course number will complete Phase I C-123K ground training requirements prior to beginning this course.

2. Course Outline:

a. Phase Briefings

	<u>Description</u>	<u>Hours</u>
PB-1P	(Prior to flying training) Local briefings cover ground and flying training, squadron SOP's local area procedures, publications, regulations, forms and general course review to include egress training.	2.0
PB-2P	(Prior to flying training) Assault Operations. Complete briefing on assault procedures, crew coordination, and associated emergency procedures.	2.0
PB-3P	(Prior to flying training) Spray Course Briefing covers the spray procedures, flight plans, tactics, techniques, associated emergency procedures to be flown during local flying training, and spray systems.	2.0
PB-4 thru 9P	(During flying training) Special theater orientation, SEA operations, tactics, emergency procedures, films, and slides on SEA Spray Procedures, and missions, including wake turbulence and other associated problem areas.	6.0
b.	Southeast Asia Orientation Course (SEAOC)	7.0

Orients aircrews as to the military, political, economic and psycho-social aspects of Southeast Asia countries with emphasis on the background of U.S. involvement in SEA.