



INSTRUCTOR PILOT / FLIGHT EXAMINER SYLLABUS

STANDARD FOR AUXILIARY AVIATION

UNITED STATES COAST GUARD AUXILIARY

AVIATION STANDARDIZATION TEAM

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1. SCOPE

A. Purpose

The overarching purpose of this document is to provide guidance for nationwide standardized training of Auxiliary aviators in an effort to improve overall safety of operations for the entire Auxiliary aviation program. The role of training is especially important in “training the trainers”; the Instructor Pilots and Flight Examiners who are intended to be leaders in the Auxiliary aviation training and certification program.

Auxiliary aviation is organized under Commandant Instruction 16798.1 (ref (c)). Section (5e) of this Instruction provides for qualification of Auxiliary Instructor Pilots and Flight Examiners, and requirements for these positions are delineated.

Prerequisites for both these positions require completion of an “Auxiliary and Commandant (G-OCX-2) approved flight and ground syllabus”. This syllabus (Section 3, below) is the basis for completion of this qualification.

B. Application

This Standard applies to all Auxiliary candidates for the position of Instructor Pilot and Flight Examiner. To qualify for these positions, candidates for Instructor Pilot and Flight Examiner must complete both the flight and ground sections of the syllabus.

C. References

- a. United States Coast Guard Auxiliary Manual, M16790.1 (series)
- b. United States Coast Guard Auxiliary Operations Policy Manual, M16798.3 (series)
- c. Commandant Instruction M16798.1, The Auxiliary Aviation Program

2. DEFINITIONS

Instructor Pilots – Specially qualified Auxiliary Aircraft Commanders who are certified to perform special duties as instructors in Auxiliary flight procedures, including SAR.

Flight Examiners – Specially qualified Auxiliary Aircraft Commanders who are certified to perform special duties as examiners of candidates for Auxiliary pilot qualifications, including SAR check rides.

3. SPECIFICATION



DEPARTMENT OF HOMELAND SECURITY
United States Coast Guard Auxiliary
National Aviation Operations

Instructor Pilot / Flight Examiner Syllabus

- Ref: (a) Auxiliary Aviation Program, COMDTINST 16798.1 (January, 1997)
(b) Auxiliary Manual, COMDTINST M 16790.1 (series)
(c) Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series)
(d) Air Operations Training Text, COMDTINST M16798.5 (series)
(e) Federal Aviation Regulations, Part 91

1. Purpose.

Auxiliary Aviation is organized under Commandant Instruction 16798.1 (ref. (a)). Section (5e) of this Instruction provides for qualification of Auxiliary Instructor Pilots and Flight Examiners, and requirements for these positions are delineated.

Prerequisites for both these positions require completion of an “Auxiliary and Commandant (G-OCX-2) approved flight and ground syllabus”. This syllabus (section 3, below) is the basis for completion of this qualification.

2. Implementation

This syllabus is divided into Instructor Pilot / Flight Examiner flight and ground segments. To complete this element of their qualifications, prospective Instructor Pilots and Flight Examiners must complete both the flight and ground sections.

Instructor Pilot: Training and sign-offs for syllabus elements for Instructor Pilot candidates shall be made by a member of the Flight Examining Board in the district or region for which qualification is sought.

Flight Examiner: For qualification as a Flight Examiner, sign-offs for the syllabus shall be made by the Senior Member of the Flight Examining Board in the district or region for which qualification is sought.

The candidate's responses to the syllabus elements shall be evaluated by the examiner as either satisfactory or unsatisfactory. Sign-offs of the elements shall not be made until the examiner determines satisfactory completion of the task. Determinations shall be made using the following criteria:

- a. Critical Error: An error that could jeopardize the flight or the successful completion of the task. This shall be cause for withholding a satisfactory completion of the task(s).
- b. Non-Critical Error: An error that causes no danger to the flight but which detracts measurably from the successful performance of the task. If a number of these occur they shall be cause for withholding a satisfactory completion of the task(s).
- c. Minor Error: An error that detracts from perfection but which in no way jeopardizes the flight or successful performance of the task. This shall be graded as satisfactory.

3. Procedures:

For the purposes of the sign-off process, the applicant will act as the Instructor or "check pilot" and the examiner will assume the role of the "student". The applicant will be prepared to coach the examiner on the completion of any of the tasks listed below. All sections of this syllabus must be completed; however, the examiner may select sections listed below in any combination for evaluation.

Whenever practicable, examiners should hold FAA ratings commensurate with the aircraft being used for the evaluation, e.g.: multi-engine rating in a multi-engine environment, rotorcraft in a rotorcraft environment.

4. Syllabus

The Ground and Flight Syllabus is found on pages 6-15, below:

A. Instructor Pilot / Flight Examiner Syllabus – Ground

		TASK		Satisfactory Completion	
Item	Description	Ref	Date	FEB (sign)	
A	Organization				
1	Describe the organization of the Auxiliary Aviation Program, including: <ul style="list-style-type: none"> 1. District Aviation Board 2. Flight Examining Board 3. Role of the IP and FE 	a			
2	Describe the requirements to enter the Auxiliary aviation program	b			
3	Describe the requirements for Observer qualification	c			
4	Describe the three levels of Pilot qualification. Detail the flight hours required, the FAA currency and qualifications for each level <ul style="list-style-type: none"> 1. Co-Pilot 2. First Pilot 3. Aircraft Commander 	c, d			
5	Discuss the annual currency requirements for the five levels of aviation qualification. Include flight hours, workshops, swim tests, egress and other training <ul style="list-style-type: none"> 1. Observer 2. Aircrew 3. Co-Pilot 	c, d			

	4. First Pilot			
	5. Aircraft Commander			
6	Discuss the minimum set of training materials (documents, references, manuals, COMDTINSTs etc.) needed for air crew training and qualification	a, b c		
B	Administration – Discuss and demonstrate knowledge of the following:			
1	Proper completion of the following forms:	d		
	1. Mission Activity Report			
	2. Auxiliary Patrol Order			
	3. SAR Incident Report			
	4. Flight/Radio Log			
	5. District Specific Forms (if applicable)			
2	The relationship between FAA regulations and flight under Coast Guard orders	c, e		
3	The crew fatigue standards	c		
4	The three facility operational states	c		
5	The prerequisites to accepting mission orders, including	b, c		
	1. facility qualification			
	2. pilot qualifications			
	3. facility operational readiness			
	4. crew readiness			
6	Discuss when mission orders may be refused, and why	b, c		

C	Operations			
1	Describe minimum weather conditions for various missions	c, e		
2	Discuss the procedures for unexpected IMC conditions, both prior to flight and during a mission; discuss when a safety pilot is required	c		
3	Communications: Simulate an aviation mission and demonstrate:	c, d		
	1. An underway call			
	2. An “operations normal” call			
	3. A securing mission call			
	4. A changing “guard” stations sequence			
5. Calling Auxiliary vessels and Coast Guard vessels				
4	Describe the standard mission profiles and requirements, including:	c, d		
	1. Multi-Mission Patrol			
	2. ELT			
	3. Logistics			
	4. Passenger Transport			
	5. MDA			
6. SAR				
5	Search Patterns: Describe when to use the following, and their characteristics: 1. Trackline Pattern	d		

	2. Parallel Track Pattern			
	3. Creeping Line Pattern			
	4. Sector Pattern			
	5. Expanding Square Pattern			
D	Mission			
1	Conduct a full mission briefing for a crew, including the following:	c, d		
	1. Air Station contacts			
	2. CG Group/Activities contacts			
	3. Information as to nature of mission			
	4. Information as to crew and passengers			
	5. Estimated times of mission			
	6. Station(s) holding guard			
	7. Reporting requirements			
	8. Weather briefing			
	9. Charts and flight path details, including terminal areas, restricted areas and classes of airspace			
	10. Fuel on board and reserves			
	11. Risk Assessment and Management			
2	Discuss the duties and responsibilities of the crew members, including the PIC and observers and their relationships			

B. Instructor Pilot / Flight Examiner Syllabus - Flight

A	Preflight Set-up, brief and discuss how to evaluate a pilot’s ability to perform the following tasks:			
1	Proper preflight preparation of the aircraft	e		
2	A crew briefing, including: 1. Safety equipment	c, d		
	2. Crew position and duties			
	3. Crew resource management			
	4. Emergency procedures, including use of PFDs, ditching, deployment of life raft(s), and emergency signaling.			
3	Flight planning, including: 1. Go / No Go decision criteria involved	d, e		
	2. Runway length factors			
	3. Density altitude			
	4. Weight and Balance			
	5. Liftoff and climb speeds			
	6. Risk assessment and management			
	7. Fuel management			
4	IFR flight planning, including: 1. Use of enroute charts	e		
	2. Selection and use of approach charts			
	3. Complete weather briefing and analysis of its impact on flight			

5	Flight regimes: 1. Slow flight	c, d, e		
	2. Stall recognition and recovery			
	3. Landing at civilian and military fields			
	4. Establishment and maintenance of operational communications on both FAA/ATC and Coast Guard frequencies			
	5. Maneuvers around a point on the surface			
	6. Maximum rate and angle of climb			
	7. Maintenance of situational awareness			
	8. Spatial orientation/disorientation			
	9. Low level procedures			
6	Discuss the systems found on a typical Auxiliary aircraft: 1. Pitot-static system and instruments			
	2. Electrical and hydraulic, including landing gear extension and retraction			
	3. Communications			
	4. Fuel			
	5. Navigation			
7	With use of the hand book for the individual aircraft, review the following: 1. Take Off - short, soft field			
	2. Climb Out – Best rate of climb and angle of climb			

	3. Turns			
	4. Slow flight			
	5. Descent to landing, including normal approach speeds			
8	With use of the hand book for the individual aircraft, review V Speeds: 1) Va (maneuvering speed)			
	2) Vso (stall, landing conf. power off)			
	3) Vsi (stall, cruise conf. power off)			
	4) Vy (best rate of climb, sea level)			
	5) Vx (best angle of climb, sea level)			
	6) Vmc (minimum control speed - multi-engine only)			
	7) Best glide speed			
	8) Glide distance ratio			
B	<p><u>Flight</u></p> <p>For flight portions of this syllabus, the successful conclusion of each procedure or maneuver must never be in doubt.</p> <p>Each procedure or maneuver must be completed <u>without compromising safety.</u></p> <p>Any simulated emergencies must be conducted at an altitude that permits normal recovery and normal continuation of flight.</p>			

	When maneuvering at minimum control airspeed, a safety margin of +10KIAS must be added to avoid inadvertently slowing below minimum speed.			
1	Set-up, brief and evaluate a pilot's ability to perform the following tasks:	e		
	1. Proper procedures for engine start and run-up			
	2. Setting and monitoring of gauges and instruments			
	3. Proper taxi procedures			
	4. Proper communications procedures for all phases of flight, both with ATC and Coast Guard resources			
	5. Use of check list			
	6. Take-offs			
	7. Proper traffic pattern procedure			
	8. Climb-out			
	9. Air speed control, including flight at minimum controllable airspeed			
	10. Altitude control, including in circling patterns			
	11. Response to simulated emergency situations, including in-flight fire, electrical failure and engine failure.			
	12. Approach to landing			
	13. Entry to traffic patterns			
	14. Landings			

	15. Securing of aircraft and post-mission brief			
2	Set-up, brief and evaluate a pilot’s ability to conduct the following standard search patterns:	d		
	1. Sector pattern			
	2. Expanding square			
	3. Trackline			
	4. Parallel track			
3	Set-up and evaluate a pilot’s IFR procedures:	e		
	1. Enroute instrument flight			
	2. Holding patterns			
	3. Approaches, including at least one precision and one non-precision approach.			

4. Approvals

This is to certify that _____

Applicant

Member # _____ Dist _____ Div _____ Flot _____

Is recommended for certification as:

Instructor Pilot _____

Flight Examiner _____

_____/_____

Examiner Signature

Member #

Date

____ Flight Examiner

Dist _____ Div _____ Flot _____

____ Senior Member of the FEB (required for designation as Flight Examiner)

Flight Examiner Board

Date

Comments:

____ Approved

____ Disapproved

Director of Auxiliary, District _____

Date