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From: Commandant of the Marine Corps  
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Subj: UH-1Y TRAINING AND READINESS MANUAL

Ref: (a) NAVMC 3500.14C

Encl: (1) UH-1Y T&R Manual

1. Purpose. In accordance with reference (a), the Training and Readiness (T&R) Manual, contained in enclosure (1), contains revised standards and regulations regarding the training of UH-1Y aircrew.

2. Cancellation. NAVMC 3500.20A

3. Scope. Highlights of major T&R planning considerations included in this UH-1Y T&R Manual are as follows:

a. Core Skill events have been added to Mission Skill Maintain Tables in order to more accurately reflect whether a pilot has the requisite skills to perform the assigned mission in a tactical environment.

b. To the greatest extent possible, events in the UH-1Y T&R Manual have been aligned with the AH-1Z T&R Manual. Crew Chief and Aerial Observer events have also been aligned.

c. The Core Skill and Mission Skill Assault Support Stages have been restructured to build and focus on tactical landing and assault support fundamentals.

d. The 4000 Phase now includes an Assault Support event in an integrated, high threat environment.

e. Emerging weapon systems and sensors have been incorporated into syllabus events.

4. Information. Recommended changes to this manual should be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General (CG), Training and Education Command (TECOM), Marine Air Ground Task Force Training and Education Standards Division (MTESD), Aviation Standards Branch, Quantico, Virginia 22134 using standard Naval correspondence or the Automated Message Handling System plain language address: CG TECOM MTESD.

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5. Command. This manual is applicable to the Marine Corps Total Force.
6. Certification. Reviewed and approved this date.



T. M. MURRAY  
By direction

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CHAPTER 1

UH-1Y TRAINING AND READINESS UNIT REQUIREMENTS

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CHAPTER 1

UH-1Y TRAINING AND READINESS UNIT REQUIREMENTS

1.0 TRAINING AND READINESS REQUIREMENTS. The Marine Aviation Training and Readiness (T&R) Program provides the Marine Air-Ground Task Force (MAGTF) commander with an Aviation Combat Element (ACE) capable of executing the six functions of Marine Aviation. The T&R Program is the fundamental tool used by commanders to construct, attain, and maintain effective training programs. The standards established in this program are validated by subject matter experts to maximize combat capabilities for assigned METs while conserving resources. These standards describe and define unit capabilities and requirements necessary to maintain proficiency in mission skills and combat leadership. Training events are based on specific requirements and performance standards to ensure a common base of training and depth of combat capability.

1.1 MISSION. Support the MAGTF Commander by providing offensive air support, utility support, armed escort and airborne supporting arms coordination, day or night under all weather conditions during expeditionary, joint or combined operations.

1.2 UH-1Y TABLE OF ORGANIZATION (T/O). Refer to Table of Organization (T/O) 8970 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for UH-1Y units. As of this publication date, UH-1Y units are authorized:

HMLA UH-1Y Tactical Squadrons								
TABLE OF ORGANIZATION T/O								
Category	Squadron		Squadron(-)		Detachment		Reserves (3 Detachments)	
	UH-1Y	UH-1Y	UH-1Y	UH-1Y	UH-1Y	UH-1Y	UH-1Y	UH-1Y
Aircraft	9	12	6	8	3	4	3	4
Pilots	23	30	15	20	7	10	7	10
Crew Chiefs	19	41	9	17	5	8	5	8
Aerial Observer /Gunner	*	*	*	*	*	*	*	*
Fleet Replacement Squadron HMLAT-303 UH-1Y								
TABLE OF ORGANIZATION T/O								
UH-1Y	Pilots		Crew Chiefs	CMT	Aerial Observer/Gunner			
14	17		30	11	*			

\* Reference MCO 1326.2 for aerial observer/ gunner allocation.

1.3 SIX FUNCTIONS OF MARINE AVIATION

SIX FUNCTIONS OF MARINE AVIATION		
FUNCTION	ABBREVIATION	DESCRIPTION
Offensive Air Support	OAS	OAS involves air operations that are conducted against enemy installations, facilities, and personnel in order to directly assist in the attainment of MAGTF objectives by destroying enemy resources or isolating enemy military forces. Its primary support of the warfighting functions is to provide fires and force protection through CAS and DAS.
Assault Support	ASPT	ASPT contributes to the warfighting functions of maneuver and logistics. Maneuver warfare demands rapid, flexible maneuverability to achieve a decision. Assault support uses aircraft to provide tactical mobility and logistic support to the MAGTF for the movement of high priority personnel and cargo within the immediate area of operations (or the evacuation of personnel and cargo).
Anti-Air Warfare	AAW	AAW is the actions used to destroy or reduce the enemy air and missile threat to an acceptable level. The primary purpose of AAW is to gain and maintain whatever degree of air superiority is required; this permits the conduct of operations without prohibitive interference by opposing air and missile forces. AAW's other purpose is force protection.
Electronic Warfare	EW	EW is any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. EW supports the warfighting functions of fires, command and control, and intelligence through the three major subdivisions: electronic attack, electronic protection, and electronic warfare support.
Control of Aircraft & Missiles	CoA&M	The control of aircraft and missiles supports the warfighting function of Command and Control. The ACE commander maintains centralized command, while control is decentralized and executed through the Marine Air Command and Control System (MACCS). CoA&M integrates the other five functions of Marine Aviation by providing the commander with the ability to exercise Command and Control authority over Marine Aviation assets.
Air Reconnaissance	AerRec	AerRec employs visual observation and/or sensors in aerial vehicles to acquire intelligence information. It supports the intelligence warfighting function and is employed tactically, operationally, and strategically. The three types of air reconnaissance are visual, multi-sensor imagery, and electronic.

1.4 ABBREVIATIONS

Skill/Stage Abbreviations	
AD	Aerial Delivery
ESC	Aerial Escort
EVAC	Air Evacuation
AAD	Active Air Defense
AMC	Air Mission Commander
ANSQ	Advanced Night Systems Qualification
AR	Armed Reconnaissance
ASPT	Assault Support/Combat Assault Transport
BIP	Basic Instructor Pilot
CQ	Carrier Qualification
CBRN	Chemical Biological Radiological Nuclear
CAS	Close Air Support
CC	Command and Control
CSIX	Core Skill Introduction Check
CSI	Contract Simulator Instructor



DACM	Defensive Air Combat Maneuvering
DACMI	Defensive Air Combat Maneuvering Instructor
DESG	Designation
DFORM	Division Formation
DL	Division Leader
EXP	Expeditionary Shore-Based Sites
FAC(A)	Forward Air Controller (Airborne)
FAC(A)I	Forward Air Controller (Airborne) Instructor
FAM	Familiarization
FCF	Functional Check Flight
FCLP	Field Carrier Landing Practice
FRSI	Fleet Replacement Squadron Instructor
FL	Flight Leader
FLSE	Flight Leadership Standardization Evaluator
FORM	Formation
FWDACM	Fixed Wing Defensive Air Combat Maneuvering
INST	Instruments
NATOPS	Naval Aviation Training and Operating Procedures Standardization
NAV	Navigation
NSFI	Night System Familiarization Instructor
NSI	Night Systems Instructor
NSQ(HLL)	Night Systems Qualification (High Light Level)
NSQ(LLL)	Night Systems Qualification (Low Light Level)
NI/ANI	NATOPS Instructor / Assistant NATOPS Instructor
NFAM	Night Vision Devices Familiarization
NFORM	Night Vision Devices Formation
NNAV	Night Vision Devices Navigation
NTERF	Night vision Devices Terrain Flight
OAS	Offensive Air Support
OAAW	Offensive Anti-Air Warfare
PQM	Pilot Qualified in Model
PFLT	Preflight
QUAL	Qualification
REC/RECCE	Reconnaissance
RIE	Rapid Insertion Extraction
RQD	Requirements Qualifications Designation
RWDACM	Rotary Wing Defensive Air Combat Maneuvering
SIM	Simulator
SCAR	Strike Coordination and Reconnaissance
SL	Section Leader
SI/ASI	Standardization Instructor / Assistant Standardization Instructor
SOTC	Specific Operations Tracking Codes
SWD	Specific Weapons Delivery
TSI	Tactical Simulator Instructor
TAC(A)	Tactical Air Coordinator Airborne
TAC(A)I	Tactical Air Coordinator Airborne
TAC	Tactics
TCT	Threat Counter-Tactics
TEN	Tactical Environment Network
TEN+	Enhanced Tactical Environment Network

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TERF	Terrain Flight
TERFI	Terrain Flight Instructor
TRAP	Tactical Recovery of Aircraft and Personnel
UHC	Utility Helicopter Commander
URB	Urban Offensive Air Support
WTI	Weapons and Tactics Instructor
WTO	Weapons Training Officer
WTTP	Weapons and Tactics Training Program

1.5 DEFINITIONS

TERM	DEFINITION
Core Model	The Core Model is the basic foundation or standardized format by which all T&Rs are constructed. The Core model provides the capability of quantifying both unit and individual training requirements and measuring readiness. This is accomplished by linking community Mission Statements, Mission Essential Task Lists, Output Standards, Core Skill Proficiency Requirements and Combat Leadership Matrices
Core Skill Introduction	Entry level training required to receive or be eligible for assignment of a primary MOS. Includes such training as systems / equipment, operations familiarization, initial crew procedures, and initial exposure to core skills.
Core Skill	Fundamental, environmental, or conditional capabilities required to perform basic functions. These basic functions serve as tactical enablers that allow crews to progress to the more complex Mission Skills. Primarily 2000 Phase events but may be introduced in the 1000 Phase.
Mission Skill	Mission Skills enable a unit to execute a specific MET. They are comprised of advanced event(s) that are focused on MET performance and draw upon the knowledge, aeronautical abilities, and situational awareness developed during Core Skill training. 3000 Phase events.
Core Plus Skill	Training events that can be theater specific or that have a low likelihood of occurrence. They may be Fundamental, environmental, or conditional capabilities required to perform basic functions. 4000 Phase events.
Core Plus Mission	Training events that can be theater specific or that have a low likelihood of occurrence. They are comprised of advanced event(s) that are focused on Core Plus MET performance and draw upon the knowledge, aeronautical abilities, and situational awareness. 4000 Phase events.
Core Skill Proficiency (CSP)	CSP is a measure of training completion for 2000 Phase events. CSP is attained by executing all events listed in the Attain Table for each Core Skill. The individual must be simultaneously proficient in all events within that Core Skill to attain CSP.
Mission Skill Proficiency (MSP)	MSP is a measure of training completion for 3000 Phase events. MSP is attained by executing all events listed in the Attain Table for each Mission Skill. The individual must be simultaneously proficient in all events within that Mission Skill to attain MSP. MSP is directly related to Training Readiness.
Core Plus Skill Proficiency (CPSP)	CPSP is a measure of training completion for 4000 Phase "Skill" events. CPSP is attained by executing all events listed in the Attain Table for each Core Plus Skill. The individual must be simultaneously proficient in all events within that Core Plus Skill to attain CPSP
Core Plus Mission Proficiency (CPMP)	CPMP is a measure of training completion for 4000 Phase "Mission" events. CPMP is attained by executing all events listed in the Attain Table for each Core Plus Mission. The individual must be simultaneously proficient in all events within that Core Plus Mission to attain CPMP
Core Model Training Standard (CMTS)	CMTS is an objective optimum training standard used by squadrons that reflects the number of individuals trained to CSP/MSP, per crew position. The CMTS is for internal squadron planning only and is not utilized for readiness reporting. The numbers are determined by individual communities.
Core Model Minimum Requirement (CMMR RR)	CMMR represents the minimum crew definition qualifications and designations, the number of crews required per MET, and minimum Combat Leadership requirements for readiness reporting purposes.

1.6 MISSION ESSENTIAL TASK LIST (METL). The METL is comprised of specified capabilities-based Mission Essential Tasks (METs) which a unit is designed to execute. METs are drawn from the Marine Corps Task List (MCTL), are standardized by type unit, and defined as Core or Core Plus METs. Core METs are those tasks that a unit is expected to execute at all times, and are the only METs used in reporting the Training Level (T-Level) for the Core Mission (C-Level) in the Defense Readiness Reporting System - Marine Corps (DRRS-MC). Core Plus METs identify additional capabilities to support missions or plans which are limited in scope, theater specific, or have a lower probability of execution. Core Plus METs may be included in readiness reporting when contained within an Assigned Mission METL. An Assigned Mission METL consists of only selected METs (drawn from Core and Core Plus METs) necessary to conduct the assigned mission. MCO 3000.13 Readiness Reporting and Chapter 7 of the Aviation T&R Program Manual provide additional information on Aviation Training readiness reporting.

HMLA UH-1Y		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	ABBREVIATION	MCT DESCRIPTION
MCT 1.3.3.3.2	EXP	Conduct Aviation Operations From Expeditionary Shore-Based Sites
MCT 1.3.4.1	ASPT	Conduct Combat Assault Transport
MCT 3.2.3.1.1	CAS	Conduct Close Air Support
MCT 3.2.3.1.2.2	AR	Conduct Armed Reconnaissance
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance
MCT 3.2.5.4	FAC (A)	Conduct Forward Air Control (Airborne)
MCT 4.3.4	AD	Conduct Air Delivery
MCT 5.3.2.7.4	CC	Provide an Airborne Command and Control platform for Command Elements
MCT 6.2.1.1	TRAP	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)
MCT 6.1.1.11	ESC	Conduct Aerial Escort
MCT 6.2.2	EVAC	Conduct Air Evacuation
CORE PLUS		
MET	ABBREVIATION	MCT DESCRIPTION
MCT 1.3.3.3.1	CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 1.3.4.1.1	RIE	Conduct Airborne Rapid Insertion/Extraction
MCT 5.3.2.7.3	TAC (A)	Conduct tactical Air Coordination (Airborne)
MCT 6.1.1.8	AAD	Conduct Active Air Defense

1.7 MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION

HMLA UH-1Y							
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION							
CORE							
MET	ABBREVIATION	SIX FUNCTIONS OF MARINE AVIATION					
		OAS	ASPT	AAW	EW	CoA&M	AerRec
MCT 1.3.3.3.2	EXP	X	X	X		X	X
MCT 1.3.4.1	ASPT		X				
MCT 3.2.3.1.1	CAS	X					
MCT 3.2.3.1.2.2	AR	X					X
MCT 3.2.3.1.2.3	SCAR	X					X
MCT 3.2.5.4	FAC (A)	X	X				
MCT 4.3.4	AD		X				
MCT 5.3.2.7.4	CC		X			X	
MCT 6.2.1.1	TRAP	X	X				
MCT 6.1.1.11	ESC	X	X				
MCT 6.2.2	EVAC		X				
CORE PLUS							
MCT 1.3.3.3.1	CQ	X	X	X		X	X
MCT 1.3.4.1.1	RIE	X	X				
MCT 5.3.2.7.3	TAC (A)	X				X	
MCT 6.1.1.8	AAD	X		X			

1.8 MET TO CORE/MISSION/CORE PLUS SKILL MATRIX. Depicts the relationship between a MET and each Core/Mission/Core Plus/Mission Plus skill associated with the MET for readiness reporting and resource allocation purposes. There shall be a one-to-one relationship between the MET and a corresponding Mission Skill. For example: the MET for EXP shows a one-to-one relationship with the EXP Mission Skill; the TRAP MET shows a one-to-one relationship with the TRAP Mission Skill, and so on. Shading indicates Core Plus.

HMLA UH-1Y																											
MISSION ESSENTIAL TASK (MET) to CORE/MISSION/CORE PLUS SKILL MATRIX																											
	CORE																				CORE PLUS (4000 PHASE)						
	SKILLS (2000 PHASE)										MISSIONS (3000 PHASE)										SKILLS			MISSIONS			
	TERF	TCT	REC	ASPT	FCLP	SWD	ANSQ	FAM	EXP	ASPT	CAS	AR	SCAR	FAC (A)	AD	CC	TRAP	ESC	EVAC	ESC	CAS	SCAR	CBRN	CQ	RIE	TAC (A)	AAD
MCT 1.3.3.3.2 EXP				X	X		X	X	X																		
MCT 1.3.4.1 ASPT		X		X		X	X	X		X													X				
MCT 3.2.3.1.1 CAS	X	X	X			X	X	X			X										X		X				
MCT 3.2.3.1.2.2 AR	X	X	X			X	X	X				X										X	X				
MCT 3.2.3.1.2.3 SCAR	X	X	X			X	X	X					X									X	X				
MCT 3.2.5.4 FAC (A)	X	X	X			X	X	X						X							X		X				
MCT 4.3.4 AD		X	X	X		X	X	X							X								X				
MCT 5.3.2.7.4 CC		X	X	X		X	X	X								X							X				
MCT 6.2.1.1 TRAP	X	X	X	X		X	X	X									X			X	X		X				
MCT 6.1.1.11 ESC	X	X	X			X	X	X										X		X			X				
MCT 6.2.2 EVAC		X	X	X		X	X	X											X				X				
CORE PLUS																											
MCT 1.3.3.3.1 CQ					X		X	X															X	X			
MCT 1.3.4.1.1 RIE		X	X	X		X	X	X		X													X		X		
MCT 5.3.2.7.3 TAC (A)		X	X				X	X						X		X					X		X			X	
MCT 6.1.1.8 AAD	X	X	X			X	X	X															X				X

1.9 MISSION ESSENTIAL TASKS (MET) OUTPUT STANDARDS. The following MET output standards are the required level of performance a squadron must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable squadron is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 1.5 hour average sortie duration. It assumes >70% FMC aircraft and >90% T/O aircrew on hand. If unit FMC aircraft is <70% or T/O aircrew <90%, core capability will be degraded by a like percentage.

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HMLA UH-1Y			
MET Output Standards			
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft			
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.2 EXP	Conduct Aviation Operations From Expeditionary Shore-Based Sites	12/8/4 16/12/8	12/8/4
MCT 1.3.4.1 ASPT	Conduct Combat Assault Transport		16/12/8
MCT 3.2.3.1.1 CAS	Conduct Close Air Support		12/8/4
MCT 3.2.3.1.2.2 AR	Conduct Armed Reconnaissance		16/12/8
MCT 3.2.3.1.2.3 SCAR	Conduct Strike Coordination and Reconnaissance		12/8/4
MCT 3.2.5.4 FAC (A)	Conduct Forward Air Control (Airborne)		16/12/8
MCT 4.3.4 AD	Conduct Air Delivery		8/4/2
MCT 5.3.2.7.4 CC	Provide an Airborne Command and Control Platform for Command Elements		10/6/4
MCT 6.2.1.1 TRAP	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel		12/8/4
MCT 6.1.1.11 ESC	Conduct Aerial Escort		16/12/8
MCT 6.2.2 EVAC	Conduct Air Evacuation		12/8/4
			16/12/8
Core Plus MET Output Standards			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.1 CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites	12/8/4 16/12/8	12/8/4
MCT 1.3.4.1.1 RIE	Conduct Airborne Rapid Insertion/Extraction		16/12/8
MCT 5.3.2.7.3 TAC (A)	Conduct Tactical Air Coordination (Airborne)		8/4/4
MCT 6.1.1.8 AAD	Conduct Active Air Defense		10/6/4
			1/1/1
		1/1/1	
		4/2/2	
		4/2/2	

\* A 9/6/3 or 12/8/4 plane Mission Capable HMLA (UH-1Y) Squadron/Squadron(-) /Detachment is able to execute 12/8/4 or 16/12/8 total overall sorties on a daily (24 hour period) basis during contingency/combat operations.

1.10 CORE MODEL MINIMUM REQUIREMENTS (CMMR) FOR READINESS REPORTING (DRRS-MC). The paragraphs and tables below delineate the minimum aircrew qualifications and designations required to execute the MET output standards of para 1.9. Chapter 7 of the Aviation T&R Program Manual provides additional guidance and a detailed description of readiness reporting using the Defense Readiness Reporting System - Marine Corps (DRRS-MC).

1.10.1 The CMMR Readiness Reporting Matrix delineates the minimum crew definition qualifications and designations, the number of crews required per MET, and minimum Combat Leadership requirements for readiness reporting purposes. The number of crews formed using the below minimum standards per crew capture the readiness capability of a squadron to perform the MET sortie under all light levels.

HMLA UH-1Y							
UH-1Y MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY							
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft							
CORE METS	CREW POSITION				CREWS REQUIRED PER MET (CREW CMMR)		
	PILOT	COPILOT	CC	CC/AO	SQD	SQD(-)	DET
1.3.3.3.2 (EXP)	MSP, UHC	ANSQ	ANSQ	ANSQ	6	4	2
1.3.4.1 (ASPT)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	6	4	2
3.2.3.1.1 (CAS)	MSP, UHC	ANSQ	MSP, ANSQ, AG*	ANSQ, AG*	6	4	2
3.2.3.1.2.2 (AR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	6	4	2
3.2.3.1.2.3 (SCAR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	6	4	2
3.2.5.4 (FAC(A))**	MSP, UHC, FAC(A)	ANSQ	ANSQ, AG*	ANSQ, AG*	4	2	1
4.3.4 (AD)	MSP, UHC	ANSQ	ANSQ	ANSQ	6	4	2
5.3.2.7.4 (CC)	MSP, UHC	ANSQ	ANSQ	ANSQ	6	4	2
6.2.1.1 (TRAP)	MSP, UHC	ANSQ	ANSQ	ANSQ	6	4	2
6.1.1.11 (ESC)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	6	4	2
6.2.2 (EVAC)	MSP, UHC	ANSQ	ANSQ	ANSQ	6	4	2
CORE PLUS METS					SQD	SQD(-)	DET
1.3.3.3.1 (CQ)	MSP, UHC, CQ	ANSQ, CQ	MSP, CQ	ANSQ, CQ	9	6	3
1.3.4.1.1 (RIE)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	4	2	2
5.3.2.7.3 (TAC(A))**	MSP, UHC	ANSQ	ANSQ	ANSQ	1	1	1
6.1.1.8 (AAD)	MSP, UHC, DACM	DACM	DACM	DACM	2	1	1
COMBAT/FLIGHT LEADERSHIP							
DESIGNATION			Squadron	Squadron(-)	Detachment		
Utility Helicopter Commander (UHC)			9	6	3		
Section Leader (SL)			5	3	2		
Division Leader (DL)			3	2	1		
Flight Leader*** (FL)			4	3	1		
Air Mission Commander*** (AMC)			4	3	1		
* AG = Qualified in one or more weapons systems, or under training (UT). ** A FAC(A)/TAC(A) capable crew requires 1 FAC(A)/TAC(A) per aircraft. *** Flight Lead and AMC Combat Leader requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH pilot). Note: Crew definitions for training are identified within each T&R event.							

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HMLA UH-1Y								
UH-1Y MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY								
UH-1Y Squadron/Squadron(-)/Detachment (12/8/4) Aircraft								
CORE METS	CREW POSITION				CREWS REQUIRED PER MET (CREW CMMR)			
	MCT	PILOT	COPILOT	CC	CC/AO	SQD	SQD(-)	DET
1.3.3.3.2 (EXP)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
1.3.4.1 (ASPT)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	9	6	3
3.2.3.1.1 (CAS)	MSP, UHC	ANSQ	MSP, ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.2 (AR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.3 (SCAR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.5.4 (FAC(A))**	MSP, UHC, FAC(A)	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	5	3	2
4.3.4 (AD)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
5.3.2.7.4 (CC)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
6.2.1.1 (TRAP)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
6.1.1.11 (ESC)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	9	6	3
6.2.2 (EVAC)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
CORE PLUS METS						SQD	SQD(-)	DET
1.3.3.3.1 (CQ)	MSP, UHC, CQ	ANSQ, CQ	MSP, CQ	ANSQ, CQ	ANSQ, CQ	12	8	4
1.3.4.1.1 (RIE)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	5	3	2
5.3.2.7.3 (TAC(A))**	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	1	1	1
6.1.1.8 (AAD)	MSP, UHC, DACM	DACM	DACM	DACM	DACM	2	1	1
COMBAT/FLIGHT LEADERSHIP								
DESIGNATION		Squadron		Squadron(-)		Detachment		
Utility Helicopter Commander (UHC)		12		8		4		
Section Leader (SL)		6		4		2		
Division Leader (DL)		4		3		1		
Flight Leader*** (FL)		4		3		1		
Air Mission Commander*** (AMC)		4		3		1		
* AG = Qualified in one or more weapons systems, or under training (UT). ** A FAC(A)/TAC(A) capable crew requires 1 FAC(A) / TAC(A) per aircraft. *** Flight Lead and AMC Combat Leader requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH pilot). Note: Crew definitions for training are identified within each T&R event.								



1.11 CORE MODEL TRAINING STANDARD (CMTS). The CMTS is the optimum training standard reflecting the number of aircrews trained to CSP/MSP, per crew position to execute each stage of flight as detailed below. The CMTS Matrix depicts the training goal and optimum depth of training desired for each squadron as they develop their squadron training plan. It is not utilized for readiness reporting (DRRS-MC) purposes. At a minimum, the CMTS shall enable a squadron to form Core Model Minimum Requirement (CMMR) crews for Mission Skills (and Mission Plus Skills when required).

HMLA UH-1Y									
CORE MODEL TRAINING STANDARD (CMTS)									
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft									
CORE SKILLS (2000 PHASE)									
HMLA UH-1Y	SQUADRON			SQUADRON (-)			DETACHMENT		
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
TERF	18	9	9	12	6	6	6	3	3
TCT	18	-	-	12	-	-	8	-	-
REC	18	9	9	12	6	6	6	3	3
ASPT	18	9	9	12	6	6	6	3	3
FCLP	18	9	9	12	6	6	6	3	3
SWD	18	9	9	12	6	6	6	3	3
ANSQ	18	9	9	12	6	6	6	3	3
FAM	18	-	-	12	-	-	6	-	-
CORE MISSIONS (3000 PHASE)									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
EXP	16	-	-	10	-	-	6	-	-
ASPT	16	8	-	10	5	-	6	3	-
CAS	16	8	8	10	5	5	6	3	3
AR	16	-	-	10	-	-	6	-	-
SCAR	16	-	-	10	-	-	6	-	-
FAC(A)	4	-	-	2	-	-	1	-	-
AD	16	8	-	10	5	-	6	3	-
CC	16	-	-	10	-	-	6	-	-
TRAP	16	-	-	10	-	-	6	-	-
ESC	16	8	8	10	5	5	6	3	3
EVAC	16	-	-	10	-	-	6	-	-
CORE PLUS SKILLS (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
ESC	3/8	-	-	2/5	-	-	1/3	-	-
URE	3/8	-	-	2/5	-	-	1/3	-	-
SCAR	3/8	-	-	2/5	-	-	1/3	-	-
CBRN	2/23	1/19	1/17	2/15	1/9	1/8	2/7	1/5	1/5
CORE PLUS MISSION (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
CQ	4/16	2/8	2/8	2/10	1/5	1/5	2/6	1/3	1/3
RIE	3/8	3/4	-	2/5	2/3	-	1/3	1/2	-
TAC(A)	1/2	-	-	1/1	-	-	1/1	-	-
AAD	4/8	2/4	2/4	2/4	1/2	1/2	2/4	1/2	1/2
Note <sup>1</sup> : In the Core Plus METS the first number represents the number of individuals the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET capable individuals the squadron is recommended to train if that MET becomes required within an Assigned Mission/Directed Mission Set.									
Note <sup>2</sup> : A qualified crew chief may substitute the AO crew position.									

HMLA UH-1Y									
CORE MODEL TRAINING STANDARD (CMTS)									
UH-1Y Squadron/Squadron(-)/Detachment (12/8/4) Aircraft									
CORE SKILLS (2000 PHASE)									
HMLA UH-1Y	SQUADRON			SQUADRON (-)			DETACHMENT		
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
TERF	24	12	12	16	8	8	8	4	4
TCT	24	-	-	16	-	-	8	-	-
REC	24	12	12	16	8	8	8	4	4
ASPT	24	12	12	16	8	8	8	4	4
FCLP	24	12	12	16	8	8	8	4	4
SWD	24	12	12	16	8	8	8	4	4
ANSQ	24	12	12	16	8	8	8	4	4
FAM	24	-	-	16	-	-	8	-	-
CORE MISSIONS (3000 PHASE)									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
EXP	22	-	-	14	-	-	8	-	-
ASPT	22	11	-	14	7	-	8	4	-
CAS	22	11	11	14	7	7	8	4	4
AR	22	-	-	14	-	-	8	-	-
SCAR	22	-	-	14	-	-	8	-	-
FAC (A)	5	-	-	3	-	-	1	-	-
AD	22	11	-	14	7	-	8	4	-
CC	22	-	-	14	-	-	8	-	-
TRAP	22	-	-	14	-	-	8	-	-
ESC	22	11	11	14	7	7	8	4	4
EVAC	22	-	-	14	-	-	8	-	-
CORE PLUS SKILLS (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
ESC	3/11	-	-	2/7	-	-	1/4	-	-
URB	3/11	-	-	2/7	-	-	1/4	-	-
SCAR	3/11	-	-	2/7	-	-	1/4	-	-
CBRN	2/30	2/25	2/22	1/20	1/17	1/15	1/10	1/8	1/7
CORE PLUS MISSION (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
CQ	4/22	2/11	2/11	1/14	1/7	1/7	1/8	1/4	1/4
RIE	3/11	3/11	-	2/7	2/7	-	1/4	1/4	-
TAC (A)	1/2	-	-	1/1	-	-	1/1	-	-
AAD	4/8	2/4	2/4	2/4	1/2	1/2	2/4	1/2	1/2

Note<sup>1</sup>: In the Core Plus METS the first number represents the number of individuals the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET capable individuals the squadron is recommended to train if that MET becomes required within an Assigned Mission/Directed Mission Set.

Note<sup>2</sup>: A qualified crew chief may substitute the AO crew position

1.12 INSTRUCTOR DESIGNATIONS (5000 Phase). An HMLA and HMLAT (UH-1Y) squadron should possess the following number of personnel with the instructor designations listed in the matrix and IAW MCO 3500.12 (WTFP).

HMLA UH-1Y									
INSTRUCTOR TRAINING (5000 PHASE)									
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft									
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft									
Designation	Squadron			Squadron (-)			Detachment		
SKILL	PILOT	CC	AO	PILOT	CC	AO	PILOT	CC	AO
BIP	5/6	-	-	3/4	-	-	2/2	-	-
TERF(I)	5/6	4/5	-	3/4	3/3	-	2/2	1/2	-
WTO	5/6	-	-	3/4	-	-	2/2	-	-
TSI	4/5	-	-	4/5	-	-	-	-	-
NSI	4/5	3/4	-	2/3	2/2	-	2/2	1/2	-
WTI	3/3	3/3	-	2/2	2/2	-	1/1	1/1	-
FAC(A)I	2/2	-	-	1/1	-	-	1/1	-	-
TAC(A)I**	2/2	-	-	-	-	-	-	-	-
DACM(I)	2/2	2/2	-	1/1	1/1	-	1/1	1/1	-
FLSE*	3/3	-	-	2/2	-	-	1/1	-	-
AGI	-	4/5	-	-	3/3	-	-	1/2	-

\*FLSEs are Designated by the Group CO  
 \*\*Per MAG

HMLAT UH-1Y			
INSTRUCTOR TRAINING (5000 PHASE)			
UH-1Y Squadron (14) Aircraft			
Designation	HMLAT-303		
SKILL	PILOT	CC	AO
BIP	17	-	-
TERF(I)	17	12	-
WTO	17	12	-
IP/FRSI	17	-	-
NS FRSI*	9	6	-
NSFI	14	9	-
NSI*	9	6	-
SI/ASI	9	-	-
NI/ANI	5	4	-
AGI	-	12	-

\*HMLAT-303 NS Instructor requirements may include NSIs as well as NSFIs.

1.13 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) (6000 Phase)

1.13.1 Tactical Squadron

HMLA UH-1Y			
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft			
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft			
DESIGNATIONS (6000 PHASE)			
DESIGNATIONS	Squadron	Squadron (-)	Detachment
Functional Check Pilot (FCP)	5/6	3/4	2/2

1.13.2 Fleet Replacement Squadron HMLAT-303

HMLAT-303 UH-1Y	
14 Aircraft	
FLIGHT LEADERSHIP (6000 PHASE)	
DESIGNATIONS	PILOTS
Utility Helicopter Commander (UHC)	17
Section Leader (SL)	17
Division Leader (DL)	4
Flight Leader* (FL)	3
Functional Check Pilot (FCP)	5

\* Flight Leader Requirements apply to HMLAT squadron, not individual aircraft models (may be filled by UH or AH pilot).

1.14 HMLA ORDNANCE REQUIREMENTS

1.14.1 General

1.14.1.1 Pilots shall annotate ordnance expended in M-SHARP. This information shall be tracked by operations to ensure that all pilots meet ordnance proficiency requirements spelled out in the event descriptions to the maximum extent practical. There is a high likelihood that pilots may not expend the entire ordnance amount allotted on a particular sortie due to a variety of reasons (equipment malfunction, switchology, range constraints, training priorities, etc). This ordnance "deficit" adversely impacts pilot proficiency. Ordnance expenditure tracking will allow operations to identify and correct pilot deficits by increasing ordnance loads on subsequent hops, selective scheduling, or other methods.

1.14.1.2 Additional ordnance requirements such as illumination, flechette, APKWS, expendables and WP for FAC(A) target marking are specified for certain events.

1.14.2 Expendable Ordnance

BASIC/TRANSITION/CONVERSION (per pilot)

UH-1Y ORDNANCE BY POI (2000, 3000, and selected 4000 Phase events)				
Ordnance	Basic(1)	Series Conv(2)	Refresh(3)	Maintain(4)
2.75" Inert	143	42	120	81
2.75" WP/RP	15	0	16	8
2.75" Illum	13	0	7	7
2.75" Flechette	2	0	0	0
.50 Cal Ball	10342	2624	7783	6490
7.62mm (GAU-17)	31665	13125	21700	17025
7.62mm (M240)	5298	1124	4100	3120
Chaff	1	0	0	0
Flares	699	185	521	355
Number of Crew/Category	6	3	3	8
Notes:				
1. Per pilot requirement to complete 2000, 3000, and 4000 Phase.				
2. Per pilot requirement to complete 2000 Phase Series Conversion.				
3. Per pilot requirement to complete 2000 and 3000 Phase Refresher.				
4. Per pilot requirement to complete 2000 and 3000 Phase Maintain.				

UH-1Y SQUADRON ANNUAL ORDNANCE REQUIREMENT (2000, 3000, and selected 4000 Phase events)					
Ordnance	Basic(1) X 6	SC(2) X 3	Refresh(3) X 3	Maintain(4) X 8	Annual SQD Total(5,6)
2.75" Inert	855	127	361	650	1992
2.75" WP/RP	92	0	49	63	204
2.75" Illum	76	0	21	56	153
2.75" Flechette	10	0	0	0	10
.50 Cal Ball	62052	7872	23350	51920	145194
7.62mm (GAU-17)	189990	39375	65100	136200	430665
7.62mm (M240)	31788	3372	12300	24960	72420
Chaff	5	0	0	0	5
Flares	4192	556	1563	2841	9152

Notes:

- Requirement for all Basic pilots to complete 2000, 3000, and 4000 Phase.
- Requirement for all Series Conversion pilots to complete 2000 Phase.
- Requirement to complete 2000 and 3000 Phase Refresher.
- Requirement to complete 2000 and 3000 Phase Maintain.
- Total squadron requirements in this table is for Basic, Refresher, and Maintain training and does not include requirements for Instructor, SL, DL, and AMC training.
- Total squadron requirements listed within this table are for "pilot" training and does not include crew served ammo requirements for "Crew Chief/Aerial Gunner" training.

UH-1Y ORDNANCE REQUIREMENT BY PHASES						
Ordnance	1000 (1)	2000	3000	4000	5000	6000
2.75" Rockets(6)	490	1366	950	77	245	167
.50 Cal	35000	82046	66075	4128	6800	6720
7.62mm	52500	255406	258748	12384	29900	12110
Tacts Pod	0	0	0	5	4	0
Chaff	0	4200	4989	240	750	672
Flares	0	121	3427	660	780	328

Notes:

- 1000 Phase is based upon throughput of the FRS and is not part of a Fleet squadron requirements.
- Basic requirements are drawn from 2000,3000, and 4000 Phases.
- Series Conversion is drawn from 2000 Phase.
- Refresh requirements are drawn from 2000, 3000, 5000, and 6000 Phases.
- Maintain requirements are drawn from 2000 and 3000 Phases.
- Rocket Warhead breakdown is specified within the individual event.

Ordnance Requirements to support Fleet Squadron						
Ordnance	2000	3000	4000	5000	6000	Sdq Total
2.75" Rockets	1366	950	77	245	167	2805
.50 Cal	82046	66075	4128	6800	6720	165769
7.62mm	255406	258748	12384	29900	12110	568548
Tacts Pod	0	0	5	4	0	9
Chaff	4200	4989	240	750	672	10851
Flares	121	3427	660	780	328	5316

1.14.3 Ground Ordnance

BASIC/TRANSITION/CONVERSION (per pilot)

UH-1Y GROUND ORDNANCE REQUIREMENTS								
ORDNANCE	1000	2000	3000	4000	6000	REFRESH <sup>1</sup>	IUT <sup>2</sup>	ANNUAL <sup>3,4</sup>
HE Artillery	0	0	10	10	0	0	6	10
WP Artillery	0	0	6	6	0	0	4	6
CAS Bombs	0	0	8	4	0	8	8	8

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**HMLA (UH-1)**Core METL

MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)

MCT 1.3.4.1 Conduct Combat Assault Transport (AT)

MCT 3.2.3.1.1 Conduct Close Air Support (CAS)

MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)

MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)

MCT 3.2.5.4 Conduct Forward Air Control (Airborne) [FAC(A)]

MCT 4.3.4 Conduct Air Delivery (AD)

MCT 5.3.2.11 Provide an Airborne Command and Control Platform for Command Elements (CC)

MCT 6.2.1.1 Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)

MCT 6.1.1.11 Conduct Aerial Escort (ESC)

MCT 6.2.2 Conduct Air Evacuation (EVAC)

Core Plus

MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites (SEA)

MCT 1.3.4.1.1 Conduct Airborne Rapid Insertion/Extraction (RIE)

MCT 5.3.2.7.3 Conduct Tactical Air Coordination (Airborne) [TAC(A)]

MCT 6.1.1.8 Conduct Active Air Defense (AAD)

MCT 1.3.3.3.2      Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)

Conditions:

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.

Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 1.3.1.3.1 Air Temperature**

Atmospheric temperature at ground level (degrees Fahrenheit).

Descriptors: Hot (> 85 F); Temperate (40 to 85 F); Cold (10 to 39 F); Very cold (< 10 F).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

Personnel:

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment:

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

Training:

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

Output Standards:

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat



MCT 1.3.4.1      Conduct Combat Assault Transport (AT)

Conditions:

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.  
Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

Personnel:

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment:

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
    - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron
- OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

Training:

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

Output Standards:

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

MCT 3.2.3.1.1      Conduct Close Air Support (CAS)

Conditions:

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

Personnel:

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment:

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

Training:

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

Output Standards:

- 12/8/4 sorties daily sustained during contingency/combat

- 16/12/8 sorties daily sustained during contingency/combat

**MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 3.2.5.4            Conduct Forward Air Control (Airborne) [FAC(A)]**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.  
Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.  
Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
    - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron
- OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 4/2/1 UH-1 aircrews MET capable IAW T&R requirements
- 5/3/2 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 8/4/2 sorties daily sustained during contingency/combat
- 10/6/4 sorties daily sustained during contingency/combat

**MCT 4.3.4 Conduct Air Delivery (AD)**

**Conditions:**

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.  
Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 5.3.2.11            Provide an Airborne Command and Control Platform for  
Command Elements (CC)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA

- o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
- o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 6.2.1.1            Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Very low (< 1/8 NM); Low (1/8 to 1 NM); Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill



**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
    - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron
- OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 6.1.1.11            Conduct Aerial Escort Operations (ESC)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron

- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 6.2.2 Conduct Air Evacuation (EVAC)**

**Conditions:**

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.

Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-) (6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-) (8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable

- o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

Core Plus

MCT 1.3.3.3.1      Conduct Aviation Operations From Expeditionary Sea-Based Sites (SEA)

Conditions:

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 1.3.1.3.1 Air Temperature**

Atmospheric temperature at ground level (degrees Fahrenheit).

Descriptors: Hot (> 85 F); Temperate (40 to 85 F); Cold (10 to 39 F); Very cold (< 10 F).

**C 2.1.4.5 Intratheater Distance**

Mileage between two locations (e.g., airfield to the FEBA).

Descriptors: Very short (< 10 NM); Short (10 to 50 NM); Moderate (50 to 150 NM); Long (150 to 500 NM); Very long (> 500 NM).

Standards:

UH-1N/Y Squadron (9)/Squadron(-) (6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-) (8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA

- o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
- o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 1.3.4.1.1      Conduct Airborne Rapid Insertion/Extraction (RIE)**

**Conditions:**

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.

Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 4/2/2 UH-1 aircrews MET capable IAW T&R requirements
- 5/3/2 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 8/4/4 sorties daily sustained during contingency/combat
- 10/6/4 sorties daily sustained during contingency/combat

**MCT 5.3.2.7.3      Conduct Tactical Air Coordination (Airborne) {(TAC(A)}**

**Conditions:**

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 1/1/1 UH-1 aircrews MET capable IAW T&R requirements
- 1/1/1 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 1/1/1 sorties daily sustained during contingency/combat
- 1/1/1 sorties daily sustained during contingency/combat

**MCT 6.1.1.8**            **Conduct Active Air Defense (AAD)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 2/1/1 UH-1 aircrews MET capable IAW T&R requirements
- 2/1/1 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 4/2/2 sorties daily sustained during contingency/combat
- 4/2/2 sorties daily sustained during contingency/combat

CHAPTER 1

UH-1Y TRAINING AND READINESS UNIT REQUIREMENTS

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NAVMC 3500.20B  
20 Sep 13



CHAPTER 1

UH-1Y TRAINING AND READINESS UNIT REQUIREMENTS

1.0 TRAINING AND READINESS REQUIREMENTS. The Marine Aviation Training and Readiness (T&R) Program provides the Marine Air-Ground Task Force (MAGTF) commander with an Aviation Combat Element (ACE) capable of executing the six functions of Marine Aviation. The T&R Program is the fundamental tool used by commanders to construct, attain, and maintain effective training programs. The standards established in this program are validated by subject matter experts to maximize combat capabilities for assigned METs while conserving resources. These standards describe and define unit capabilities and requirements necessary to maintain proficiency in mission skills and combat leadership. Training events are based on specific requirements and performance standards to ensure a common base of training and depth of combat capability.

1.1 MISSION. Support the MAGTF Commander by providing offensive air support, utility support, armed escort and airborne supporting arms coordination, day or night under all weather conditions during expeditionary, joint or combined operations.

1.2 UH-1Y TABLE OF ORGANIZATION (T/O). Refer to Table of Organization (T/O) 8970 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for UH-1Y units. As of this publication date, UH-1Y units are authorized:

HMLA UH-1Y Tactical Squadrons								
TABLE OF ORGANIZATION T/O								
Category	Squadron		Squadron(-)		Detachment		Reserves (3 Detachments)	
	UH-1Y		UH-1Y		UH-1Y		UH-1Y	
Aircraft	9	12	6	8	3	4	3	4
Pilots	23	30	15	20	7	10	7	10
Crew Chiefs	19	41	9	17	5	8	5	8
Aerial Observer /Gunner	*	*	*	*	*	*	*	*
Fleet Replacement Squadron HMLAT-303 UH-1Y								
TABLE OF ORGANIZATION T/O								
UH-1Y	Pilots		Crew Chiefs	CMT	Aerial Observer/Gunner			
14	17		30	11	*			

\* Reference MCO 1326.2 for aerial observer/ gunner allocation.

1.3 SIX FUNCTIONS OF MARINE AVIATION

SIX FUNCTIONS OF MARINE AVIATION		
FUNCTION	ABBREVIATION	DESCRIPTION
Offensive Air Support	OAS	OAS involves air operations that are conducted against enemy installations, facilities, and personnel in order to directly assist in the attainment of MAGTF objectives by destroying enemy resources or isolating enemy military forces. Its primary support of the warfighting functions is to provide fires and force protection through CAS and DAS.
Assault Support	ASPT	ASPT contributes to the warfighting functions of maneuver and logistics. Maneuver warfare demands rapid, flexible maneuverability to achieve a decision. Assault support uses aircraft to provide tactical mobility and logistic support to the MAGTF for the movement of high priority personnel and cargo within the immediate area of operations (or the evacuation of personnel and cargo).
Anti-Air Warfare	AAW	AAW is the actions used to destroy or reduce the enemy air and missile threat to an acceptable level. The primary purpose of AAW is to gain and maintain whatever degree of air superiority is required; this permits the conduct of operations without prohibitive interference by opposing air and missile forces. AAW's other purpose is force protection.
Electronic Warfare	EW	EW is any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. EW supports the warfighting functions of fires, command and control, and intelligence through the three major subdivisions: electronic attack, electronic protection, and electronic warfare support.
Control of Aircraft & Missiles	CoA&M	The control of aircraft and missiles supports the warfighting function of Command and Control. The ACE commander maintains centralized command, while control is decentralized and executed through the Marine Air Command and Control System (MACCS). CoA&M integrates the other five functions of Marine Aviation by providing the commander with the ability to exercise Command and Control authority over Marine Aviation assets.
Air Reconnaissance	AerRec	AerRec employs visual observation and/or sensors in aerial vehicles to acquire intelligence information. It supports the intelligence warfighting function and is employed tactically, operationally, and strategically. The three types of air reconnaissance are visual, multi-sensor imagery, and electronic.

1.4 ABBREVIATIONS

Skill/Stage Abbreviations	
AD	Aerial Delivery
ESC	Aerial Escort
EVAC	Air Evacuation
AAD	Active Air Defense
AMC	Air Mission Commander
ANSQ	Advanced Night Systems Qualification
AR	Armed Reconnaissance
ASPT	Assault Support/Combat Assault Transport
BIP	Basic Instructor Pilot
CQ	Carrier Qualification
CBRN	Chemical Biological Radiological Nuclear
CAS	Close Air Support
CC	Command and Control
CSIX	Core Skill Introduction Check
CSI	Contract Simulator Instructor

DACM	Defensive Air Combat Maneuvering
DACMI	Defensive Air Combat Maneuvering Instructor
DESG	Designation
DFORM	Division Formation
DL	Division Leader
EXP	Expeditionary Shore-Based Sites
FAC(A)	Forward Air Controller (Airborne)
FAC(A)I	Forward Air Controller (Airborne) Instructor
FAM	Familiarization
FCF	Functional Check Flight
FCLP	Field Carrier Landing Practice
FRSI	Fleet Replacement Squadron Instructor
FL	Flight Leader
FLSE	Flight Leadership Standardization Evaluator
FORM	Formation
FWDACM	Fixed Wing Defensive Air Combat Maneuvering
INST	Instruments
NATOPS	Naval Aviation Training and Operating Procedures Standardization
NAV	Navigation
NSFI	Night System Familiarization Instructor
NSI	Night Systems Instructor
NSQ(HLL)	Night Systems Qualification (High Light Level)
NSQ(LLL)	Night Systems Qualification (Low Light Level)
NI/ANI	NATOPS Instructor / Assistant NATOPS Instructor
NFAM	Night Vision Devices Familiarization
NFORM	Night Vision Devices Formation
NNAV	Night Vision Devices Navigation
NTERF	Night vision Devices Terrain Flight
OAS	Offensive Air Support
OAAW	Offensive Anti-Air Warfare
PQM	Pilot Qualified in Model
PFLT	Preflight
QUAL	Qualification
REC/RECCE	Reconnaissance
RIE	Rapid Insertion Extraction
RQD	Requirements Qualifications Designation
RWDACM	Rotary Wing Defensive Air Combat Maneuvering
SIM	Simulator
SCAR	Strike Coordination and Reconnaissance
SL	Section Leader
SI/ASI	Standardization Instructor / Assistant Standardization Instructor
SOTC	Specific Operations Tracking Codes
SWD	Specific Weapons Delivery
TSI	Tactical Simulator Instructor
TAC(A)	Tactical Air Coordinator Airborne
TAC(A)I	Tactical Air Coordinator Airborne Instructor
TAC	Tactics
TCT	Threat Counter-Tactics
TEN	Tactical Environment Network
TEN+	Enhanced Tactical Environment Network

TERF	Terrain Flight
TERFI	Terrain Flight Instructor
TRAP	Tactical Recovery of Aircraft and Personnel
UHC	Utility Helicopter Commander
URB	Urban Offensive Air Support
WTI	Weapons and Tactics Instructor
WTO	Weapons Training Officer
WTP	Weapons and Tactics Training Program

1.5 DEFINITIONS

TERM	DEFINITION
Core Model	The Core Model is the basic foundation or standardized format by which all T&Rs are constructed. The Core model provides the capability of quantifying both unit and individual training requirements and measuring readiness. This is accomplished by linking community Mission Statements, Mission Essential Task Lists, Output Standards, Core Skill Proficiency Requirements and Combat Leadership Matrices
Core Skill Introduction	Entry level training required to receive or be eligible for assignment of a primary MOS. Includes such training as systems / equipment, operations familiarization, initial crew procedures, and initial exposure to core skills.
Core Skill	Fundamental, environmental, or conditional capabilities required to perform basic functions. These basic functions serve as tactical enablers that allow crews to progress to the more complex Mission Skills. Primarily 2000 Phase events but may be introduced in the 1000 Phase.
Mission Skill	Mission Skills enable a unit to execute a specific MET. They are comprised of advanced event(s) that are focused on MET performance and draw upon the knowledge, aeronautical abilities, and situational awareness developed during Core Skill training. 3000 Phase events.
Core Plus Skill	Training events that can be theater specific or that have a low likelihood of occurrence. They may be Fundamental, environmental, or conditional capabilities required to perform basic functions. 4000 Phase events.
Core Plus Mission	Training events that can be theater specific or that have a low likelihood of occurrence. They are comprised of advanced event(s) that are focused on Core Plus MET performance and draw upon the knowledge, aeronautical abilities, and situational awareness. 4000 Phase events.
Core Skill Proficiency (CSP)	CSP is a measure of training completion for 2000 Phase events. CSP is attained by executing all events listed in the Attain Table for each Core Skill. The individual must be simultaneously proficient in all events within that Core Skill to attain CSP.
Mission Skill Proficiency (MSP)	MSP is a measure of training completion for 3000 Phase events. MSP is attained by executing all events listed in the Attain Table for each Mission Skill. The individual must be simultaneously proficient in all events within that Mission Skill to attain MSP. MSP is directly related to Training Readiness.
Core Plus Skill Proficiency (CPSP)	CPSP is a measure of training completion for 4000 Phase "Skill" events. CPSP is attained by executing all events listed in the Attain Table for each Core Plus Skill. The individual must be simultaneously proficient in all events within that Core Plus Skill to attain CPSP
Core Plus Mission Proficiency (CPMP)	CPMP is a measure of training completion for 4000 Phase "Mission" events. CPMP is attained by executing all events listed in the Attain Table for each Core Plus Mission. The individual must be simultaneously proficient in all events within that Core Plus Mission to attain CPMP
Core Model Training Standard (CMTS)	CMTS is an objective optimum training standard used by squadrons that reflects the number of individuals trained to CSP/MSP, per crew position. The CMTS is for internal squadron planning only and is not utilized for readiness reporting. The numbers are determined by individual communities.
Core Model Minimum Requirement (CMMR RR)	CMMR represents the minimum crew definition qualifications and designations, the number of crews required per MET, and minimum Combat Leadership requirements for readiness reporting purposes.

1.6 MISSION ESSENTIAL TASK LIST (METL). The METL is comprised of specified capabilities-based Mission Essential Tasks (METs) which a unit is designed to execute. METs are drawn from the Marine Corps Task List (MCTL), are standardized by type unit, and defined as Core or Core Plus METs. Core METs are those tasks that a unit is expected to execute at all times, and are the only METs used in reporting the Training Level (T-Level) for the Core Mission (C-Level) in the Defense Readiness Reporting System - Marine Corps (DRRS-MC). Core Plus METs identify additional capabilities to support missions or plans which are limited in scope, theater specific, or have a lower probability of execution. Core Plus METs may be included in readiness reporting when contained within an Assigned Mission METL. An Assigned Mission METL consists of only selected METs (drawn from Core and Core Plus METs) necessary to conduct the assigned mission. MCO 3000.13 Readiness Reporting and Chapter 7 of the Aviation T&R Program Manual provide additional information on Aviation Training readiness reporting.

HMLA UH-1Y		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	ABBREVIATION	MCT DESCRIPTION
MCT 1.3.3.3.2	EXP	Conduct Aviation Operations From Expeditionary Shore-Based Sites
MCT 1.3.4.1	ASPT	Conduct Combat Assault Transport
MCT 3.2.3.1.1	CAS	Conduct Close Air Support
MCT 3.2.3.1.2.2	AR	Conduct Armed Reconnaissance
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance
MCT 3.2.5.4	FAC (A)	Conduct Forward Air Control (Airborne)
MCT 4.3.4	AD	Conduct Air Delivery
MCT 5.3.2.7.4	CC	Provide an Airborne Command and Control platform for Command Elements
MCT 6.2.1.1	TRAP	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)
MCT 6.1.1.11	ESC	Conduct Aerial Escort
MCT 6.2.2	EVAC	Conduct Air Evacuation
CORE PLUS		
MET	ABBREVIATION	MCT DESCRIPTION
MCT 1.3.3.3.1	CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 1.3.4.1.1	RIE	Conduct Airborne Rapid Insertion/Extraction
MCT 5.3.2.7.3	TAC (A)	Conduct tactical Air Coordination (Airborne)
MCT 6.1.1.8	AAD	Conduct Active Air Defense

1.7 MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION

HMLA UH-1Y							
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION							
CORE							
MET	ABBREVIATION	SIX FUNCTIONS OF MARINE AVIATION					
		OAS	ASPT	AAW	EW	CoA&M	AerRec
MCT 1.3.3.3.2	EXP	X	X	X		X	X
MCT 1.3.4.1	ASPT		X				
MCT 3.2.3.1.1	CAS	X					
MCT 3.2.3.1.2.2	AR	X					X
MCT 3.2.3.1.2.3	SCAR	X					X
MCT 3.2.5.4	FAC (A)	X	X				
MCT 4.3.4	AD		X				
MCT 5.3.2.7.4	CC		X			X	
MCT 6.2.1.1	TRAP	X	X				
MCT 6.1.1.11	ESC	X	X				
MCT 6.2.2	EVAC		X				
CORE PLUS							
MCT 1.3.3.3.1	CQ	X	X	X		X	X
MCT 1.3.4.1.1	RIE	X	X				
MCT 5.3.2.7.3	TAC (A)	X				X	
MCT 6.1.1.8	AAD	X		X			

1.8 MET TO CORE/MISSION/CORE PLUS SKILL MATRIX. Depicts the relationship between a MET and each Core/Mission/Core Plus/Mission Plus skill associated with the MET for readiness reporting and resource allocation purposes. There shall be a one-to-one relationship between the MET and a corresponding Mission Skill. For example: the MET for EXP shows a one-to-one relationship with the EXP Mission Skill; the TRAP MET shows a one-to-one relationship with the TRAP Mission Skill, and so on. Shading indicates Core Plus.

HMLA UH-1Y																											
MISSION ESSENTIAL TASK (MET) to CORE/MISSION/CORE PLUS SKILL MATRIX																											
	CORE																	CORE PLUS (4000 PHASE)									
	SKILLS (2000 PHASE)								MISSIONS (3000 PHASE)									SKILLS					MISSIONS				
	ITERF	TCT	REC	ASPT	FCLP	SWD	ANSQ	FAM	EXP	ASPT	CAS	AR	SCAR	FAC (A)	AD	CC	TRAP	ESC	EVAC	ESC	CAS	SCAR	CBRN	CO	RIE	TAC (A)	AAD
MCT 1.3.3.3.2 EXP				X	X		X	X	X																		
MCT 1.3.4.1 ASPT		X		X		X	X	X		X													X				
MCT 3.2.3.1.1 CAS	X	X	X			X	X	X			X										X		X				
MCT 3.2.3.1.2.2 AR	X	X	X			X	X	X			X											X	X				
MCT 3.2.3.1.2.3 SCAR	X	X	X			X	X	X				X										X	X				
MCT 3.2.5.4 FAC (A)	X	X	X			X	X	X					X								X		X				
MCT 4.3.4 AD		X	X	X		X	X	X						X									X				
MCT 5.3.2.7.4 CC		X	X	X		X	X	X							X								X				
MCT 6.2.1.1 TRAP	X	X	X	X		X	X	X									X			X	X		X				
MCT 6.1.1.11 ESC	X	X	X			X	X	X										X		X			X				
MCT 6.2.2 EVAC		X	X	X		X	X	X											X				X				
CORE PLUS																											
MCT 1.3.3.3.1 CO					X		X	X															X	X			
MCT 1.3.4.1.1 RIE		X	X	X		X	X	X		X													X		X		
MCT 5.3.2.7.3 TAC (A)		X	X				X	X					X		X						X		X			X	
MCT 6.1.1.8 AAD	X	X	X			X	X	X															X				X

1.9 MISSION ESSENTIAL TASKS (MET) OUTPUT STANDARDS. The following MET output standards are the required level of performance a squadron must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable squadron is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 1.5 hour average sortie duration. It assumes >70% FMC aircraft and >90% T/O aircrew on hand. If unit FMC aircraft is <70% or T/O aircrew <90%, core capability will be degraded by a like percentage.

HMLA UH-1Y				
MET Output Standards				
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft				
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft				
MCT	MET	OUTPUT STANDARD		
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES	
MCT 1.3.3.3.2 EXP	Conduct Aviation Operations From Expeditionary Shore-Based Sites	12/8/4 16/12/8	12/8/4	
MCT 1.3.4.1 ASPT	Conduct Combat Assault Transport		16/12/8	
MCT 3.2.3.1.1 CAS	Conduct Close Air Support		12/8/4	
MCT 3.2.3.1.2.2 AR	Conduct Armed Reconnaissance		16/12/8	
MCT 3.2.3.1.2.3 SCAR	Conduct Strike Coordination and Reconnaissance		12/8/4	
MCT 3.2.5.4 FAC (A)	Conduct Forward Air Control (Airborne)		16/12/8	
MCT 4.3.4 AD	Conduct Air Delivery		8/4/2	
MCT 5.3.2.7.4 CC	Provide an Airborne Command and Control Platform for Command Elements		10/6/4	
MCT 6.2.1.1 TRAP	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel		12/8/4	
MCT 6.1.1.11 ESC	Conduct Aerial Escort		16/12/8	
MCT 6.2.2 EVAC	Conduct Air Evacuation		12/8/4	
			16/12/8	
Core Plus MET Output Standards				
MCT	MET		OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES	
MCT 1.3.3.3.1 CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites	12/8/4 16/12/8	12/8/4	
MCT 1.3.4.1.1 RIE	Conduct Airborne Rapid Insertion/Extraction		16/12/8	
MCT 5.3.2.7.3 TAC (A)	Conduct Tactical Air Coordination (Airborne)		8/4/4	
MCT 6.1.1.8 AAD	Conduct Active Air Defense		10/6/4	
			1/1/1	
		1/1/1		
		4/2/2		
		4/2/2		

\* A 9/6/3 or 12/8/4 plane Mission Capable HMLA (UH-1Y) Squadron/Squadron(-) /Detachment is able to execute 12/8/4 or 16/12/8 total overall sorties on a daily (24 hour period) basis during contingency/combat operations.

1.10 CORE MODEL MINIMUM REQUIREMENTS (CMMR) FOR READINESS REPORTING (DRRS-MC). The paragraphs and tables below delineate the minimum aircrew qualifications and designations required to execute the MET output standards of para 1.9. Chapter 7 of the Aviation T&R Program Manual provides additional guidance and a detailed description of readiness reporting using the Defense Readiness Reporting System - Marine Corps (DRRS-MC).

1.10.1 The CMMR Readiness Reporting Matrix delineates the minimum crew definition qualifications and designations, the number of crews required per MET, and minimum Combat Leadership requirements for readiness reporting purposes. The number of crews formed using the below minimum standards per crew capture the readiness capability of a squadron to perform the MET sortie under all light levels.



HMLA UH-1Y								
UH-1Y MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY UH-1Y Squadron/Squadron(-)/Detachment (9/6/3) Aircraft								
CORE METS	CREW POSITION				CREWS REQUIRED PER MET (CREW CMMR)			
	MCT	PILOT	COPILOT	CC	CC/AO	SQD	SQD (-)	DET
1.3.3.3.2 (EXP)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	6	4	2
1.3.4.1 (ASPT)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	6	4	2
3.2.3.1.1 (CAS)	MSP, UHC	ANSQ	MSP, ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	6	4	2
3.2.3.1.2.2 (AR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	6	4	2
3.2.3.1.2.3 (SCAR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	6	4	2
3.2.5.4 (FAC (A) ) **	MSP, UHC, FAC (A)	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	4	2	1
4.3.4 (AD)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	6	4	2
5.3.2.7.4 (CC)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	6	4	2
6.2.1.1 (TRAP)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	6	4	2
6.1.1.11 (ESC)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	6	4	2
6.2.2 (EVAC)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	6	4	2
CORE PLUS METS						SQD	SQD (-)	DET
1.3.3.3.1 (CQ)	MSP, UHC, CQ	ANSQ, CQ	MSP, CQ	ANSQ, CQ	ANSQ, CQ	9	6	3
1.3.4.1.1 (RIE)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	4	2	2
5.3.2.7.3 (TAC (A) ) **	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	1	1	1
6.1.1.8 (AAD)	MSP, UHC, DACM	DACM	DACM	DACM	DACM	2	1	1
COMBAT/FLIGHT LEADERSHIP								
DESIGNATION		Squadron		Squadron (-)		Detachment		
Utility Helicopter Commander (UHC)		9		6		3		
Section Leader (SL)		5		3		2		
Division Leader (DL)		3		2		1		
Flight Leader*** (FL)		4		3		1		
Air Mission Commander*** (AMC)		4		3		1		
<p>* AG = Qualified in one or more weapons systems, or under training (UT).</p> <p>** A FAC(A)/TAC(A) capable crew requires 1 FAC(A)/TAC(A) per aircraft.</p> <p>*** Flight Lead and AMC Combat Leader requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH pilot).</p> <p>Note: Crew definitions for training are identified within each T&amp;R event.</p>								

HMLA UH-1Y								
UH-1Y MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY								
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft								
CORE METS	CREW POSITION				CREWS REQUIRED PER MET (CREW CMMR)			
	MCT	PILOT	COPILOT	CC	CC/AO	SQD	SQD (-)	DET
1.3.3.3.2 (EXP)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
1.3.4.1 (ASPT)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	9	6	3
3.2.3.1.1 (CAS)	MSP, UHC	ANSQ	MSP, ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.2 (AR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.3 (SCAR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.5.4 (FAC (A) )**	MSP, UHC, FAC (A)	ANSQ	ANSQ, AG*	ANSQ, AG*	ANSQ, AG*	5	3	2
4.3.4 (AD)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
5.3.2.7.4 (CC)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
6.2.1.1 (TRAP)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
6.1.1.11 (ESC)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	9	6	3
6.2.2 (EVAC)	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	9	6	3
CORE PLUS METS						SQD	SQD (-)	DET
1.3.3.3.1 (CQ)	MSP, UHC, CQ	ANSQ, CQ	MSP, CQ	ANSQ, CQ	ANSQ, CQ	12	8	4
1.3.4.1.1 (RIE)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	ANSQ	5	3	2
5.3.2.7.3 (TAC (A) )**	MSP, UHC	ANSQ	ANSQ	ANSQ	ANSQ	1	1	1
6.1.1.8 (AAD)	MSP, UHC, DACM	DACM	DACM	DACM	DACM	2	1	1
COMBAT/FLIGHT LEADERSHIP								
DESIGNATION			Squadron	Squadron (-)	Detachment			
Utility Helicopter Commander (UHC)			12	8	4			
Section Leader (SL)			6	4	2			
Division Leader (DL)			4	3	1			
Flight Leader*** (FL)			4	3	1			
Air Mission Commander*** (AMC)			4	3	1			
<p>* AG = Qualified in one or more weapons systems, or under training (UT).</p> <p>** A FAC(A)/TAC(A) capable crew requires 1 FAC(A) / TAC(A) per aircraft.</p> <p>*** Flight Lead and AMC Combat Leader requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH pilot).</p> <p>Note: Crew definitions for training are identified within each T&amp;R event.</p>								

1.11 CORE MODEL TRAINING STANDARD (CMTS). The CMTS is the optimum training standard reflecting the number of aircrews trained to CSP/MSP, per crew position to execute each stage of flight as detailed below. The CMTS Matrix depicts the training goal and optimum depth of training desired for each squadron as they develop their squadron training plan. It is not utilized for readiness reporting (DRRS-MC) purposes. At a minimum, the CMTS shall enable a squadron to form Core Model Minimum Requirement (CMMR) crews for Mission Skills (and Mission Plus Skills when required).

HMLA UH-1Y									
CORE MODEL TRAINING STANDARD (CMTS)									
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft									
CORE SKILLS (2000 PHASE)									
HMLA UH-1Y	SQUADRON			SQUADRON (-)			DETACHMENT		
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
TERF	18	9	9	12	6	6	6	3	3
FCT	18	-	-	12	-	-	8	-	-
REC	18	9	9	12	6	6	6	3	3
ASPT	18	9	9	12	6	6	6	3	3
FCLP	18	9	9	12	6	6	6	3	3
SWD	18	9	9	12	6	6	6	3	3
ANSQ	18	9	9	12	6	6	6	3	3
FAM	18	-	-	12	-	-	6	-	-
CORE MISSIONS (3000 PHASE)									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
EXP	16	-	-	10	-	-	6	-	-
ASPT	16	8	-	10	5	-	6	3	-
CAS	16	8	8	10	5	5	6	3	3
AR	16	-	-	10	-	-	6	-	-
SCAR	16	-	-	10	-	-	6	-	-
FAC(A)	4	-	-	2	-	-	1	-	-
AD	16	8	-	10	5	-	6	3	-
CC	16	-	-	10	-	-	6	-	-
TRAP	16	-	-	10	-	-	6	-	-
ESC	16	8	8	10	5	5	6	3	3
EVAC	16	-	-	10	-	-	6	-	-
CORE PLUS SKILLS (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
ESC	3/8	-	-	2/5	-	-	1/3	-	-
URB	3/8	-	-	2/5	-	-	1/3	-	-
SCAR	3/8	-	-	2/5	-	-	1/3	-	-
CBRN	2/23	1/19	1/17	2/15	1/9	1/8	2/7	1/5	1/5
CORE PLUS MISSION (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
CQ	4/16	2/8	2/8	2/10	1/5	1/5	2/6	1/3	1/3
RIE	3/8	3/4	-	2/5	2/3	-	1/3	1/2	-
TAC(A)	1/2	-	-	1/1	-	-	1/1	-	-
AAD	4/8	2/4	2/4	2/4	1/2	1/2	2/4	1/2	1/2

Note<sup>1</sup>: In the Core Plus METS the first number represents the number of individuals the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET capable individuals the squadron is recommended to train if that MET becomes required within an Assigned Mission/Directed Mission Set.

Note<sup>2</sup>: A qualified crew chief may substitute the AO crew position.

HMLA UH-1Y									
CORE MODEL TRAINING STANDARD (CMTS)									
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft									
CORE SKILLS (2000 PHASE)									
HMLA UH-1Y	SQUADRON			SQUADRON(-)			DETACHMENT		
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
TERF	24	12	12	16	8	8	8	4	4
TCT	24	-	-	16	-	-	8	-	-
REC	24	12	12	16	8	8	8	4	4
ASPT	24	12	12	16	8	8	8	4	4
FCLP	24	12	12	16	8	8	8	4	4
SWD	24	12	12	16	8	8	8	4	4
ANSQ	24	12	12	16	8	8	8	4	4
FAM	24	-	-	16	-	-	8	-	-
CORE MISSIONS (3000 PHASE)									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
EXP	22	-	-	14	-	-	8	-	-
ASPT	22	11	-	14	7	-	8	4	-
CAS	22	11	11	14	7	7	8	4	4
AR	22	-	-	14	-	-	8	-	-
SCAR	22	-	-	14	-	-	8	-	-
FAC (A)	5	-	-	3	-	-	1	-	-
AD	22	11	-	14	7	-	8	4	-
CC	22	-	-	14	-	-	8	-	-
TRAP	22	-	-	14	-	-	8	-	-
ESC	22	11	11	14	7	7	8	4	4
EVAC	22	-	-	14	-	-	8	-	-
CORE PLUS SKILLS (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
ESC	3/11	-	-	2/7	-	-	1/4	-	-
URB	3/11	-	-	2/7	-	-	1/4	-	-
SCAR	3/11	-	-	2/7	-	-	1/4	-	-
CBRN	2/30	2/25	2/22	1/20	1/17	1/15	1/10	1/8	1/7
CORE PLUS MISSION (4000 PHASE) <sup>1</sup>									
SKILL	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>	PILOTS	CC	AO <sup>2</sup>
CQ	4/22	2/11	2/11	1/14	1/7	1/7	1/8	1/4	1/4
RIE	3/11	3/11	-	2/7	2/7	-	1/4	1/4	-
TAC (A)	1/2	-	-	1/1	-	-	1/1	-	-
AAD	4/8	2/4	2/4	2/4	1/2	1/2	2/4	1/2	1/2
Note <sup>1</sup> : In the Core Plus METS the first number represents the number of individuals the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET capable individuals the squadron is recommended to train if that MET becomes required within an Assigned Mission/Directed Mission Set.									
Note <sup>2</sup> : A qualified crew chief may substitute the AO crew position									

1.12 INSTRUCTOR DESIGNATIONS (5000 Phase). An HMLA and HMLAT (UH-1Y) squadron should possess the following number of personnel with the instructor designations listed in the matrix and IAW MCO 3500.12 (WTPP).

HMLA UH-1Y									
INSTRUCTOR TRAINING (5000 PHASE)									
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft									
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft									
Designation	Squadron			Squadron (-)			Detachment		
	PILOT	CC	AO	PILOT	CC	AO	PILOT	CC	AO
BIP	5/6	-	-	3/4	-	-	2/2	-	-
TERF(I)	5/6	4/5	-	3/4	3/3	-	2/2	1/2	-
WTO	5/6	-	-	3/4	-	-	2/2	-	-
TSI	4/5	-	-	4/5	-	-	-	-	-
NSI	4/5	3/4	-	2/3	2/2	-	2/2	1/2	-
WTI	3/3	3/3	-	2/2	2/2	-	1/1	1/1	-
FAC(A) I	2/2	-	-	1/1	-	-	1/1	-	-
TAC(A) I**	2/2	-	-	-	-	-	-	-	-
DACM(I)	2/2	2/2	-	1/1	1/1	-	1/1	1/1	-
FLSE*	3/3	-	-	2/2	-	-	1/1	-	-
AGI	-	4/5	-	-	3/3	-	-	1/2	-

\*FLSEs are Designated by the Group CO  
\*\*Per MAG

HMLAT UH-1Y			
INSTRUCTOR TRAINING (5000 PHASE)			
UH-1Y Squadron (14) Aircraft			
Designation	HMLAT-303		
	PILOT	CC	AO
BIP	17	-	-
TERF(I)	17	12	-
WTO	17	12	-
IP/FRSI	17	-	-
NS FRSI*	9	6	-
NSFI	14	9	-
NSI*	9	6	-
SI/ASI	9	-	-
NI/ANI	5	4	-
AGI	-	12	-

\*HMLAT-303 NS Instructor requirements may include NSIs as well as NSFIs.

1.13 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) (6000 Phase)

1.13.1 Tactical Squadron

HMLA UH-1Y			
UH-1Y Squadron/Squadron(-)/Detachment {9/6/3} Aircraft			
UH-1Y Squadron/Squadron(-)/Detachment {12/8/4} Aircraft			
DESIGNATIONS (6000 PHASE)			
DESIGNATIONS	Squadron	Squadron (-)	Detachment
Functional Check Pilot (FCP)	5/6	3/4	2/2

1.13.2 Fleet Replacement Squadron HMLAT-303

HMLAT-303 UH-1Y	
14 Aircraft	
FLIGHT LEADERSHIP (6000 PHASE)	
DESIGNATIONS	PILOTS
Utility Helicopter Commander (UHC)	17
Section Leader (SL)	17
Division Leader (DL)	4
Flight Leader* (FL)	3
Functional Check Pilot (FCP)	5

\* Flight Leader Requirements apply to HMLAT squadron, not individual aircraft models (may be filled by UH or AH pilot).

1.14 HMLA ORDNANCE REQUIREMENTS

1.14.1 General

1.14.1.1 Pilots shall annotate ordnance expended in M-SHARP. This information shall be tracked by operations to ensure that all pilots meet ordnance proficiency requirements spelled out in the event descriptions to the maximum extent practical. There is a high likelihood that pilots may not expend the entire ordnance amount allotted on a particular sortie due to a variety of reasons (equipment malfunction, switchology, range constraints, training priorities, etc). This ordnance "deficit" adversely impacts pilot proficiency. Ordnance expenditure tracking will allow operations to identify and correct pilot deficits by increasing ordnance loads on subsequent hops, selective scheduling, or other methods.

1.14.1.2 Additional ordnance requirements such as illumination, flechette, APKWS, expendables and WP for FAC(A) target marking are specified for certain events.

1.14.2 Expendable Ordnance

BASIC/TRANSITION/CONVERSION (per pilot)

UH-1Y ORDNANCE BY POI (2000, 3000, and selected 4000 Phase events)				
Ordnance	Basic(1)	Series Conv(2)	Refresh(3)	Maintain(4)
2.75" Inert	143	42	120	81
2.75" WP/RP	15	0	16	8
2.75" Illum	13	0	7	7
2.75" Flechette	2	0	0	0
.50 Cal Ball	10342	2624	7783	6490
7.62mm (GAU-17)	31665	13125	21700	17025
7.62mm (M240)	5298	1124	4100	3120
Chaff	1	0	0	0
Flares	699	185	521	355
Number of Crew/Category	6	3	3	8
Notes:				
1. Per pilot requirement to complete 2000, 3000, and 4000 Phase.				
2. Per pilot requirement to complete 2000 Phase Series Conversion.				
3. Per pilot requirement to complete 2000 and 3000 Phase Refresher.				
4. Per pilot requirement to complete 2000 and 3000 Phase Maintain.				

UH-1Y SQUADRON ANNUAL ORDNANCE REQUIREMENT (2000, 3000, and selected 4000 Phase events)					
Ordnance	Basic(1) X 6	SC(2) X 3	Refresh(3) X 3	Maintain(4) X 8	Annual SQD Total(5,6)
2.75" Inert	855	127	361	650	1992
2.75" WP/RP	92	0	49	63	204
2.75" Illum	76	0	21	56	153
2.75" Flechette	10	0	0	0	10
.50 Cal Ball	62052	7872	23350	51920	145194
7.62mm (GAU-17)	189990	39375	65100	136200	430665
7.62mm (M240)	31788	3372	12300	24960	72420
Chaff	5	0	0	0	5
Flares	4192	556	1563	2841	9152

Notes:

- Requirement for all Basic pilots to complete 2000, 3000, and 4000 Phase.
- Requirement for all Series Conversion pilots to complete 2000 Phase.
- Requirement to complete 2000 and 3000 Phase Refresher.
- Requirement to complete 2000 and 3000 Phase Maintain.
- Total squadron requirements in this table is for Basic, Refresher, and Maintain training and does not include requirements for Instructor, SL, DL, and AMC training.
- Total squadron requirements listed within this table are for "pilot" training and does not include crew served ammo requirements for "Crew Chief/Aerial Gunner" training.

UH-1Y ORDNANCE REQUIREMENT BY PHASES						
Ordnance	1000 (1)	2000	3000	4000	5000	6000
2.75" Rockets(6)	490	1366	950	77	245	167
.50 Cal	35000	82046	66075	4128	6800	6720
7.62mm	52500	255406	258748	12384	29900	12110
Tacts Pod	0	0	0	5	4	0
Chaff	0	4200	4989	240	750	672
Flares	0	121	3427	660	780	328

Notes:

- 1000 Phase is based upon throughput of the FRS and is not part of a Fleet squadron requirements.
- Basic requirements are drawn from 2000,3000, and 4000 Phases.
- Series Conversion is drawn from 2000 Phase.
- Refresh requirements are drawn from 2000, 3000, 5000, and 6000 Phases.
- Maintain requirements are drawn from 2000 and 3000 Phases.
- Rocket Warhead breakdown is specified within the individual event.

Ordnance Requirements to support Fleet Squadron						
Ordnance	2000	3000	4000	5000	6000	Sdq Total
2.75" Rockets	1366	950	77	245	167	2805
.50 Cal	82046	66075	4128	6800	6720	165769
7.62mm	255406	258748	12384	29900	12110	568548
Tacts Pod	0	0	5	4	0	9
Chaff	4200	4989	240	750	672	10851
Flares	121	3427	660	780	328	5316

1.14.3 Ground Ordnance

BASIC/TRANSITION/CONVERSION (per pilot)

UH-1Y GROUND ORDNANCE REQUIREMENTS								
ORDNANCE	1000	2000	3000	4000	6000	REFRESH <sup>1</sup>	IUT <sup>2</sup>	ANNUAL <sup>3,4</sup>
HE Artillery	0	0	10	10	0	0	6	10
WP Artillery	0	0	6	6	0	0	4	6
CAS Bombs	0	0	8	4	0	8	8	8

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## HMLA (UH-1)

### Core METL

- MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)
- MCT 1.3.4.1 Conduct Combat Assault Transport (AT)
- MCT 3.2.3.1.1 Conduct Close Air Support (CAS)
- MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)
- MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)
- MCT 3.2.5.4 Conduct Forward Air Control (Airborne) [FAC(A)]
- MCT 4.3.4 Conduct Air Delivery (AD)
- MCT 5.3.2.11 Provide an Airborne Command and Control Platform for Command Elements (CC)
- MCT 6.2.1.1 Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)
- MCT 6.1.1.11 Conduct Aerial Escort (ESC)
- MCT 6.2.2 Conduct Air Evacuation (EVAC)

### Core Plus

- MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites (SEA)
- MCT 1.3.4.1.1 Conduct Airborne Rapid Insertion/Extraction (RIE)
- MCT 5.3.2.7.3 Conduct Tactical Air Coordination (Airborne) [TAC(A)]
- MCT 6.1.1.8 Conduct Active Air Defense (AAD)

MCT 1.3.3.3.2      Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)

Conditions:

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.

Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 1.3.1.3.1 Air Temperature**

Atmospheric temperature at ground level (degrees Fahrenheit).

Descriptors: Hot (> 85 F); Temperate (40 to 85 F); Cold (10 to 39 F); Very cold (< 10 F).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

Personnel:

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment:

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

Training:

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

Output Standards:

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

MCT 1.3.4.1            Conduct Combat Assault Transport (AT)

Conditions:

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.  
Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

Personnel:

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment:

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

Training:

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

Output Standards:

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

MCT 3.2.3.1.1      Conduct Close Air Support (CAS)

Conditions:

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.  
Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.  
Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

Personnel:

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment:

- 70% Full Mission Capable (FMC) aircraft of PAA
    - o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
    - o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training:

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

Output Standards:

- 12/8/4 sorties daily sustained during contingency/combat

- 16/12/8 sorties daily sustained during contingency/combat

MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)

Conditions:

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 3.2.5.4            Conduct Forward Air Control (Airborne) [FAC(A)]**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-) (6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-) (8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 4/2/1 UH-1 aircrews MET capable IAW T&R requirements
- 5/3/2 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 8/4/2 sorties daily sustained during contingency/combat
- 10/6/4 sorties daily sustained during contingency/combat

**MCT 4.3.4 Conduct Air Delivery (AD)**

**Conditions:**

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.  
Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.



- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 5.3.2.11      Provide an Airborne Command and Control Platform for Command Elements (CC)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-) (6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-) (8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA

- o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
- o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 6.2.1.1            Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Very low (< 1/8 NM); Low (1/8 to 1 NM); Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 6.1.1.11      Conduct Aerial Escort Operations (ESC)**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C.1.3.1.3.11 Ceiling**

Height of lowest cloud cover above sea level.

Descriptors: Low (100 to 3,000 feet); Medium (3,000 to 10,000 feet); High (>10,000 feet)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.

Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron

- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 6.2.2 Conduct Air Evacuation (EVAC)**

**Conditions:**

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.

Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable

- o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

Core Plus

MCT 1.3.3.3.1      Conduct Aviation Operations From Expeditionary Sea-Based Sites (SEA)

Conditions:

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C 1.3.1.3.1 Air Temperature**

Atmospheric temperature at ground level (degrees Fahrenheit).  
Descriptors: Hot (> 85 F); Temperate (40 to 85 F); Cold (10 to 39 F); Very cold (< 10 F).

**C 2.1.4.5 Intratheater Distance**

Mileage between two locations (e.g., airfield to the FEBA).  
Descriptors: Very short (< 10 NM); Short (10 to 50 NM); Moderate (50 to 150 NM); Long (150 to 500 NM); Very long (> 500 NM).

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA

- o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
- o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 UH-1 aircrews MET capable IAW T&R requirements
- 9/6/3 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 12/8/4 sorties daily sustained during contingency/combat
- 16/12/8 sorties daily sustained during contingency/combat

**MCT 1.3.4.1.1      Conduct Airborne Rapid Insertion/Extraction (RIE)**

**Conditions:**

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit); Negligible (overcast night)

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.

Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.

Descriptors: Very high (> 10,000 ft); High (6,000 to 10,000 ft); Moderately high (3,000 to 6,000 ft); Moderately low (1,000 to 3,000 ft); Low (500 to 1,000 ft); Very low (< 500 ft).

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-) (6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-) (8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - o 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - o 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 4/2/2 UH-1 aircrews MET capable IAW T&R requirements
- 5/3/2 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 8/4/4 sorties daily sustained during contingency/combat
- 10/6/4 sorties daily sustained during contingency/combat

**MCT 5.3.2.7.3      Conduct Tactical Air Coordination (Airborne) {(TAC(A)}**

**Conditions:**

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

**Standards:**

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft

UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 1/1/1 UH-1 aircrews MET capable IAW T&R requirements
- 1/1/1 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 1/1/1 sorties daily sustained during contingency/combat
- 1/1/1 sorties daily sustained during contingency/combat

MCT 6.1.1.8            Conduct Active Air Defense (AAD)

Conditions:

**C.1.3.2.3 Aviation Meteorological Conditions**

Current weather/flight conditions affecting flight rules next 24 hours.  
Descriptors: VMC (Conditions that permit flight using external cues and a distinguishable horizon.)

**C 1.3.2 Visibility**

Maximum distance to see an object given the moisture and particulate matter (dust, salt, ash) suspended in the atmosphere.  
Descriptors: Moderate (1 to 3 NM); Good (3 to 10 NM); High (10 to 20 NM); Unlimited (>20 NM)

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.  
Descriptors: Bright (sunny day); Day (overcast day); low (dusk, dawn, moonlit, streetlight lit)

**C 2.7.2 Air Superiority**

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local.

Standards:

UH-1N/Y Squadron (9)/Squadron(-)(6)/Detachment (3) {9/6/3} Aircraft  
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) {12/8/4} Aircraft

**Personnel:**

- 10/7/3 UH-1 aircrews formed for a 9 Aircraft Squadron
- 13/9/4 UH-1 aircrews formed for a 12 Aircraft Squadron
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 6/4/2 UH-1 aircraft for a 9 Aircraft Squadron
  - 8/5/3 UH-1 aircraft for a 12 Aircraft Squadron

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.

- Operational support equipment fully supports MCT

**Training:**

- 2/1/1 UH-1 aircrews MET capable IAW T&R requirements
- 2/1/1 UH-1 aircrews MET capable IAW T&R requirements

**Output Standards:**

- 4/2/2 sorties daily sustained during contingency/combat
- 4/2/2 sorties daily sustained during contingency/combat



CHAPTER 2

UH-1Y PILOT (MOS 7563)

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CHAPTER 2

UH-1Y PILOT (MOS 7563)

2.0 UH-1Y PILOT 7563 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS.

This T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

2.1 UH-1Y PILOT TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the minimum to maximum time per phase for the UH-1Y Pilot. Units should use the model as a guide to generate individual training plans.

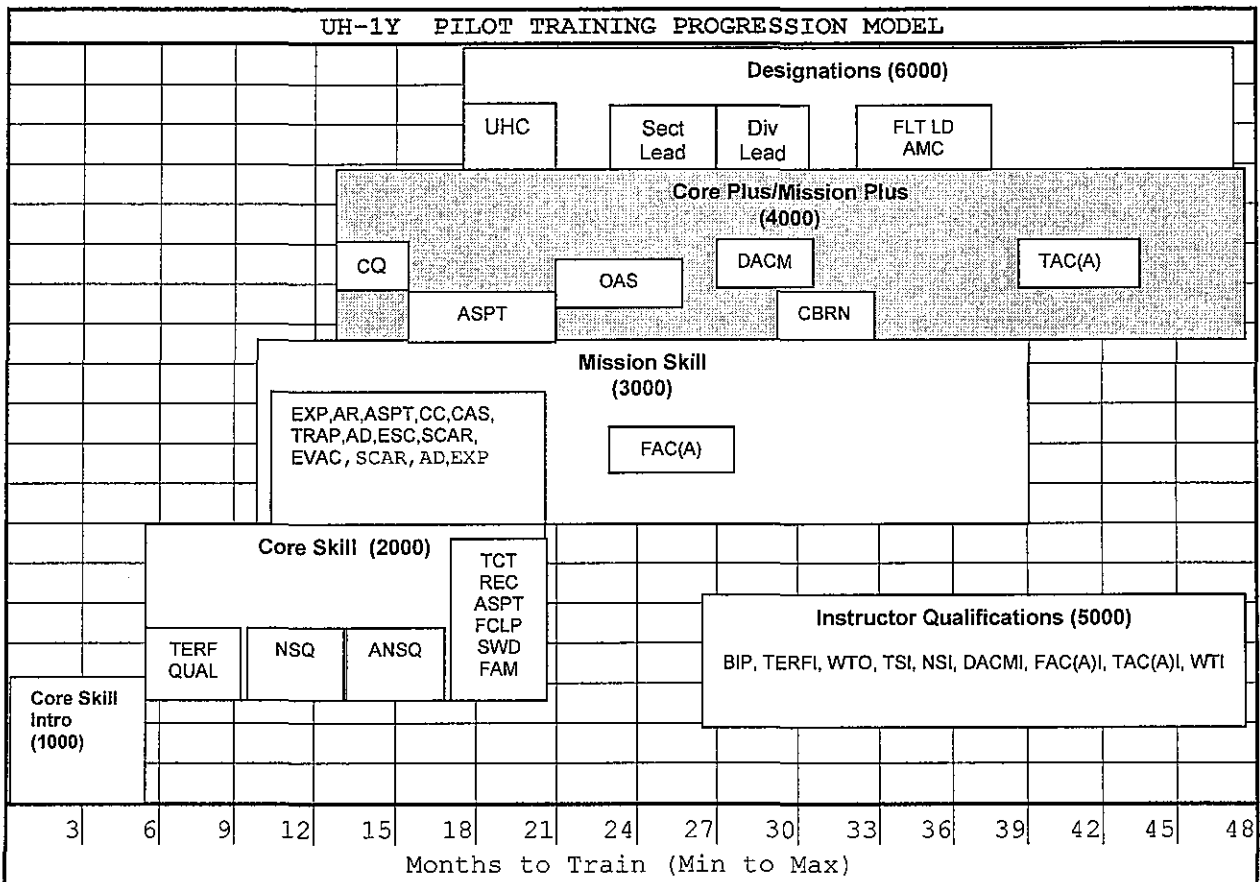


Figure 2-1. UH-1Y Recommended Training Progression Model (months)

2.2 PROFICIENCY & CURRENCY

2.2.1 Proficiency. Proficiency is a measure of achievement of a specific skill. Refly factors establish the maximum time between demonstration of those particular skills. To regain proficiency, an individual shall complete the delinquent events with a proficient crewman/flight lead. If an entire unit loses proficiency, unit instructors shall regain proficiency by completing an event with an instructor from a like unit. If not feasible, the instructor shall regain proficiency by completing the event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, the instructor shall regain proficiency with another aircraft commander or as designated by the commanding officer.

2.2.2 Currency. Currency is a control measure used to provide an additional margin of safety based on exposure frequency to a particular skill. It is a measure of time since the last event demanding that specific skill. For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for individual type mission profiles can be found in Chapter 3 of the Aviation T&R Program Manual.

2.3 INDIVIDUAL CORE SKILL PROFICIENCY REQUIREMENTS

2.3.1 Management of individual CSP serves as the foundation for developing proficiency requirements in DRRS-MC.

2.3.2 Individual CSP is a "Yes/No" status assigned to an individual by Core Skill. When an individual attains and maintains CSP in a Core Skill, the individual counts towards CMMR Unit CSP requirements for that Core Skill.

2.3.3 Proficiency is attained by individual Core Skill where the training events for each skill are determined by POI assignment.

2.3.4 Once proficiency has been attained by Core Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the Maintain Table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Core Skill.

**\*Note\***

Individuals may be attaining proficiency  
in some Core Skills while maintaining  
proficiency in other Core Skills.

2.3.5 Once proficiency has been attained, should one lose proficiency in an event in the "Maintain POI" column, proficiency can be re-attained by demonstrating proficiency in the delinquent event. Should an individual lose proficiency in all events in the "Maintain POI" column by Core Skill, the individual will be assigned to the Refresher POI for that Skill. To regain proficiency for that Core Skill the individual must demonstrate proficiency in all R-coded events for that Skill.

CORE SKILLS (2000 PHASE) ATTAIN AND MAINTAIN PROFICIENCY TABLE						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN PROFICIENCY
			BASIC	REFRESHER	SERIES CONV	
TERF	TERF	Rev TERF	2100	2100R		
	TERF	Rev NVD TERF HLL	2101R	2101R	2101R	2101R
TCT	STCT	(S) Intro ASE RADAR	S2200			
	STCT	(S) TAC Employ ASE	S2201R	S2201R	S2201R	S2201R
REC	SREC	(S) DAY Recce	S2300			
	REC	NVD HLL Recce	2301R	2301R		2301R
ASPT	ASPT	Sec TAC Landing	2400			
	ASPT	HLL Sec TAC Landing	2401			
	ASPT	Sec TAC Approaches	2402R	2402R		
	ASPT	HLL Sec TAC Approaches	2403R	2403R	2403R	2403R
	ASPT	Externals	2404R	2404R		2404R
FCLP	SFCLP	(S) Intro FCLP	S2500			
	FCLP	Day FCLP	2501R	2501R		
	FCLP	Night FCLP	2502R	2502R		2502R
SWD	SSWD	(S) Rkt/Fixed Fwd Gu	S2600			
	SWD	Rkt/Gun Delivery	2603			
	SWD	Rkt/Gun Delivery	2604R	2604R		
	SWD	Scored Tgt Delivery	2605R	2605R	2605R	2605R
	SSWD	(S) NVD HLL Rkt/Gun	S2606			
	SWD	NVD HLL Rkt/Gun	2607R	2607R	2607R	
	SSWD	(S) NVD LLL Ord Del	S2608		S2608	
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
ANSQ	SWD	Intro Moving Tgt	2610R	2610R		2610R
	SANSQ	(S) NVD LLL A/C Eps	S2700			
	ANSQ	NVD LLL FAM/NAV	2701		2701	
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
FAM	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R
	FAM	FAM/INST Prof	2800R	2800R	2800R	2800R
	SFAM	(S) EP Sim	S2801R	S2801R	S2801R	S2801R

**\*NOTE\***

Specific Maintain events are selected by community SMEs to update corresponding skills in the Attain table. Maintaining proficiency in these select events will ensure the individual will never go delinquent in that corresponding skill in the Attain table.

2.4 INDIVIDUAL MISSION SKILL PROFICIENCY REQUIREMENTS

2.4.1 Management of individual MSP serves as the foundation for developing proficiency requirements in DRRS-MC.

2.4.2 Individual MSP is a "Yes/No" status assigned to an individual by Mission Skill. When an individual attains and maintains MSP in a Mission Skill, the individual counts towards CMMR Unit MSP requirements for that Mission Skill.

2.4.3 Proficiency is attained by individual Mission Skill where the training events for each skill are determined by POI assignment.

2.4.4 Once proficiency has been attained by Mission Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the Maintain Table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Mission Skill.

**\*Note\***

Individuals may be attaining proficiency in some Mission Skills while maintaining proficiency in other Mission Skills.

2.4.5 Once proficiency has been attained, should one lose proficiency in an event in the "Maintain POI" column, proficiency can be re-attained by demonstrating proficiency in the delinquent event. Should an individual lose proficiency in all events in the "Maintain POI" column by Mission Skill, the individual will be assigned to the Refresher POI for that Skill. To regain proficiency for that Mission Skill the individual must demonstrate proficiency in all R-coded events for that Skill.

MISSION SKILLS (3000 PHASE) ATTAIN AND MAINTAIN PROFICIENCY TABLE						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN PROFICIENCY
			BASIC	REFRESHER	SERIES CONV	
ESC	ESC	ASPT ESC	3100			
	ESC	NVD ASPR ESC	3101R	3101R		
	SESC	(S) ASPR ESC	S3102R	3102R		3102R
	ESC	SFC ESC	3103R	3103R		
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
ASPT	ASPT	Fastrope/Rappel	3200R	3200R		
	ASPT	NVD Fastrope/Rappel	3201R	3201R		3201R
	ASPT	Long Range Insert/Extract	3202			
	ASPT	NVD Insert Extract	3203R	3203R	3203R	3203R
	ASPT	Degraded Nav ASPT	3204R	3204R		3204R
	SASPT	URBAN ASPT	S3205R	S3205R		S3205R
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R
AD	AD	Tac Load	3206		3206	
	SAD	Aerial Delivery	3207R	3207R		3207R
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R
EVAC	EVAC	CASEVAC Trk Code	3208R	3208R		3208R
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R
CC	CC	C&C	3209R	3209R		3209R
CAS	SCAS	(S) Intro CAS	S3300			
	CAS	Intro CAS	3301R	3301R	3301R	3301R
	CAS	Intro NVD CAS	3302		3302	
	CAS	LLL CAS	3303R	3303R		3303R
	CAS	URB CAS	3304R	3304R		3304R
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
AR	AR	AR	3305R	3305R		3305R
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
SCAR	SSCAR	(S) SCAR	S3307R	S3307R		S3307R
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
TRAP	TRAP	TRAP	3308R	3308R		3308R
	SESC	(S) ASPR ESC	S3102R	S3102R		S3102R
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R
FAC(A)	FAC(A)	IDF Ctrl	3400R	3400R		3400R
	FAC(A)	RW Ctrl Intro	3401R	3401R		3401R
	FAC(A)	FW Ctrl Intro	3402R	3402R		3401R
	FAC(A)	NVD FW Ctrl Intro	3403R	3403R		3403R
	FAC(A)	SPT Arms Consolidate	3404R	3404R		3404R
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
EXP	EXP	Day FARP Trk Code	3600			
	EXP	NVD FARP Trk Code	3601R	3601R		3601R
	EXP	Day RVLs	3602			
	EXP	Night RVLs	3603R	3603R	3603R	3603R
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R

**\*NOTE\***

Specific Maintain events are selected by community SMEs to update corresponding skills in the Attain table. Maintaining proficiency in these select events will ensure the individual will never go delinquent in that corresponding skill in the Attain table.

**2.5 INDIVIDUAL CORE PLUS SKILL PROFICIENCY REQUIREMENTS**

2.5.1 Management of individual CPSP serves as the foundation for developing proficiency requirements in DRRS-MC.

2.5.2 Individual CPSP is a "Yes/No" status assigned to an individual by Core Plus Skill. When an individual attains and maintains CPSP in a Core

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Plus Skill, the individual counts towards CMMR Unit CPSP requirements for that Core Plus Skill.

2.5.3 Proficiency is attained by individual Core Plus Skill where the training events for each skill are determined by POI assignment.

2.5.4 Once proficiency has been attained by Core Plus Skill (by any POI assignment) then the individual maintains proficiency by executing those events noted in the Maintain Table and in the Maintain POI column of the Attain and Maintain Table. An individual maintains proficiency by individual Core Plus Skill.

**\*Note\***

Individuals may be attaining proficiency in some Core Plus Skills while maintaining proficiency in other Core Plus Skills.

2.5.5 Once proficiency has been attained, should one lose proficiency in an event in the "Maintain POI" column, proficiency can be re-attained by demonstrating proficiency in the delinquent event. Should an individual lose proficiency in all events in the "Maintain POI" column by Core Plus Skill, the individual will be assigned to the Refresher POI for that Skill. To regain proficiency for that Core Plus Skill the individual must demonstrate proficiency in all R-coded events for that Skill.

CORE PLUS (4000 PHASE) ATTAIN AND MAINTAIN PROFICIENCY TABLE						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN PROFICIENCY
			BASIC POI	REFRESHER POI	SERIES CONVERSION POI	
RIE	ASPT	Intro Para Ops	4100			
	ASPT	Intro Water Insertion	4101			
	ASPT	Intro SPIE	4102	4102R		4102R
	SASPT	(S) MAT Intro	S4103			
	ASPT	MAT Rev	4104R	4104R		4104R
	SASPT	(S) Intro Hoist/SAR	S4105R	S4105R	S4105R	S4105R
	ASPT	Intro Sniper Ops	4107			
	ASPT	(S) High Threat Insert	S4108R	S4108R		S4108R
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R
ESC	ESC	Refine Armed ESC	4200R	4200R		4200R
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
CAS	CAS	Med to High CAS	4201R	4201R		4201R
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
SCAR	SSCAR	Med Hi Threat SCAR	S4207R	S4207R		S4207R
	SWD	NVD LLL Ord Rev	2609R	2609R	2609R	2609R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
AAD	DACM	1v1 RW	4301		4301	
	DACM	2v1 RW	4302			
	DACM	Rev 1v1/2v1 RW	4303R	4303R		4303R
	DACM	1v1 FW	4304			
	DACM	2v1 FW	4305R	4305R		4305R
CBRN	SCBRN	(S) Protective Mask	S4400R	S4400R		S4400R
TAC (A)	TAC (A)	Conduct TAC(A) Proc	4500R	4500R		4500R
CQ	CQ	Day CQ	4600	4600R		
	CQ	NVD CQ	4601R	4601R		4601R
	CQ	Unaided CQ	4602	4602R		
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R



**\*NOTE\***

Specific Maintain events are selected by community SMEs to update corresponding skills in the Attain table. Maintaining proficiency in these select events will ensure the individual will never go delinquent in that corresponding skill in the Attain table.

2.6 REQUIREMENTS, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters shall be signed by the commanding officer and placed in the individual's NATOPS jacket. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

UH-1Y PILOT INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Initial Event Qualification Requirements
INST	6100, IAW OPNAV 3710.7 and an annual qualification letter signed by the commanding officer.
NATOPS	6101, IAW OPNAV 3710.7 and an annual qualification letter signed by the commanding officer.
TERFQ	2100, 2101
NSQ	2101, 2400, 2401, 2402, 2403
ANSQ	NSQ, 2700, 2701, 2702, 2703
FAC(A)	3400, 3401, 3402, 3403, 3404, 6906
CQ Day	4600
CQ NVD	4601
CQ Night Unaided	4602
RW DACM	TERFQ, 4301, 4302, 4303
FW DACM	TERFQ, 4304, 4305
TAC(A)	FAC(A), 4500

UH-1Y PILOT INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Individual Event Designation Requirements
FCP	DESG-6300, FCP-6200, 6201, 6202, 6203, 6204, 6205 and IAW UH-1Y NATOPS.
PQM	Successful completion of NATOPS and Instrument checks and CSIX-1901.
UHC	ANSQ, DESG-6300, 6398
SECTION LEAD	DESG-6398, SL-6400, 6401, 6498
DIVISION LEAD	SL-6498, DL-6500, 6501, 6598
FLIGHT LEAD	FL- 6698, DL-6598
AMC	AMC-6798
BIP	5100, 5101, 5102, 5103, 5104

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TERFI	5110, 5111
WTO	5200, 5201
TSI	5210, 5211
CSI	5300, 5301, 5302, 5303
FRSI	5310, 5311, 5312, 5313, 5314, 5315, 5316, 5317, 5318, 5319
FRS-SI	5320, 5321
FLSE	IAW Flight Leadership Program Model Manager requirements.
FAC(A)I TAC(A)I DACMI NSI WTI	IAW the MAWTS-1 Course Catalog. Certifications for FAC(A)I, TAC(A)I, DACMI, NSI, and WTI are signed by the MAWTS-1 Commanding Officer and forwarded to squadron commanding officers. Squadron commanding officers should designate pilots who satisfactorily complete the evaluation flight(s) and have a complete ATF from the MAWTS-1 IP who evaluates the pilot
NSFI NSSI	IAW the MAWTS-1 UH-1 Course Catalog. FRS and SAR commanding officers should designate NSFIs and NSSIs as appropriate per the MAWTS-1 Course Catalog.
NI / ANI	Per NATOPS, FRS, and Squadron Guidance
INSTURMENT FLIGHT BOARD	Per Squadron Guidance and Governing Documents

Tracking Code Requirements	
Tracking Codes	Event Requirements
SOTC-6900	2.75 inch Illumination Rocket Delivery
SOTC-6901	2.75 inch Guided Rocket Delivery (APKWS)
SOTC-6902	2.75 inch Flechette Rocket Delivery
SOTC-6906	FAC(A) Standardization Tracking Code

2.7 PROGRAMS OF INSTRUCTION (POI). In accordance with POI updating rules, in order for all events in a stage to be updated once the R coded events for the stage have been flown, there has to be a previously flown date present, either proficient or delinquent, otherwise the event will be recognized as incomplete and must be flown. *Therefore, all refresher and series conversion pilots shall ensure previously flown events are logged, based on the last date flown.* If the flight was flown under a previous T&R (UH-1Y or UH-1N), reference the UH-1Y Pilot Syllabus Matrix (paragraph 2.23) to ensure events are converted correctly. *Pilot Training Officers shall ensure pilots are placed in the appropriate syllabus (B, R, SC, MR) in MSHARP, in order to ensure MSHARP functions properly.*

2.7.1 Basic/Transition (B/T) POI. The Transition POI mirrors the Basic POI. Basic and Transition pilots are required to fly the entire syllabus.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	Interactive Courseware	USMC UH-1Y FRS
3-26	Core Skill Introduction Training	USMC UH-1Y FRS
27-165	Core Skill/Mission Skill Training	Tactical Squadron
54-190	Core Plus Skill Training	Tactical Squadron

2.7.2 Series Conversion (SC) POI. The Series Conversion syllabus

is provided for personnel proficient in the UH-1N converting directly to the UH-1Y. After performing event conversion in accordance with paragraph 2.23 of the T&R syllabus matrix, a previously designated UH-1N pilot in the series conversion syllabus shall fly all "SC" coded events if the pilot is proficient in the UH-1N. The Series Conversion syllabus is predicated on the experience of the Series Conversion pilot and is primarily designed for the UH-1N pilot who has not been out of the UH-1N cockpit for longer than 485 days and is beginning the Series Conversion within days of the last UH-1N flight. The commanding officer of the FRS may tailor the Series Conversion syllabus to fit the experience and proficiency of the Series Conversion pilot per the T&R Program Manual. A pilot in the Series Conversion syllabus should fly all "SC" coded events in the 1000 level. Five additional events are recommended for pilots requiring additional flights due to time out of the cockpit (e.g. UH-1N pilot out of cockpit >485 and doing series conversion): FAM 1105,1107,1108; SSWD 1603; STCT 1700.

2.7.2.1 In order to regain UHC, flight leadership designations and FAC(A) (as applicable), the SC events listed in the 2000 through 5000 level shall be completed in any order, and in no fewer than 18 flight hours in the aircraft. Event conversion is not allowed for these events. ANSQ-2701 and ANSQ-2703 shall be flown under LLL conditions. All other flights may be flown under any light level condition. TERF qualification may be granted after the completion of TERF-2101. NSQ may be granted after the completion of ASPT-2403 and SWD-2607. ANSQ may be granted after the completion of NSQ, ANSQ-2701, ANSQ-2703 and SSWD-2608.

2.7.2.2 In order to regain instructor designations (BIP, TERFI, WTO, NSI and WTI), a total of 30 aircraft flight hours must be flown, inclusive of the flight time from the above paragraph, but not including flight time from the 1000 level syllabus. Additionally, a BIP-5104, SWTO-5200, and WTO-5201 shall be flown if regaining BIP and/or WTO designations. Events that can count toward the 30 flight hour total are any 4000 level event and:

REC-2301	ESC-3101	ASPT-3205	FACA-3401
ASPT-2401	ESC-3102	AD-3207	FACA-3402
SWD-2610	ESC-3103	CAS-3303	FACA-3403
SWD-2609	ASPT-3200	AR-3305	FACA-3404
ANSQ-2702	ASPT-3202	SCAR-3307	
ANSQ-2703	ASPT-3204	TRAP-3308	

2.7.3.3 These events shall be flown under the light level conditions prescribed in the event description. For pilots regaining the NSI designation, at least 15 of the 30 total flight hours shall be flown at night. BIP-5104 and WTO-5201 may count toward the 30 flight hour requirement. All flight time gained while accomplishing a T&R event shall count towards the required flight time.

2.7.3.4 For conversion from the UH-1Y to the UH-1N see the UH-1N T&R.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	Interactive Courseware	USMC UH-1Y FRS
3-8	Core Skill Introduction Training	USMC UH-1Y FRS
9-17	Core Skill/Mission Skill Training	Tactical Squadron
9-17	Core Plus Skill Training	Tactical Squadron

2.7.4 Modified Refresher/Refresher (MR/R) POI.

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2.7.4.1 Refresher Syllabus. A Refresher syllabus is provided for personnel returning to an operational squadron who have previously completed the UH-1Y Basic or Series Conversion POI. Experienced pilots (completed at least one fleet tour in an operational unit) returning to a squadron, shall be assigned to the Refresher or Modified Refresher POIs as follows:

2.7.4.1.1 Regardless of the type of billet returning from, pilots having not flown the UH-1Y for < 485 days will conduct Refresher training at the tactical unit.

2.7.4.1.2 Pilots returning from a DIFOP billet, where a helicopter was flown, having not flown the UH-1Y for > 485 days will conduct Modified Refresher training at the FRS.

2.7.4.1.3 Pilots returning from a DIFDEN billet, or a DIFOP billet where a helicopter was not flown, having not flown a UH-1Y for > 485 days but ≤ 730 days shall conduct Modified Refresher training at the FRS.

2.7.4.1.4 Regardless of the type of billet returning from, pilots having not flown the UH-1Y for > 730 days will conduct full Refresher training beginning at the FRS.

2.7.4.2 The Refresher syllabus is predicated on the experience of the Refresher pilot. A pilot in the Refresher syllabus should fly all "R" coded events; however, a pilot need not fly every event within a stage of training to be re-qualified in that stage. The commanding officer may tailor the Refresher syllabus to fit the experience of the Refresher pilot per the T&R Program Manual. This assumes that the Refresher has had previous proficiency in that stage of training. If the pilot has no previous proficiency in a stage or particular event, then the pilot should fly the entire stage or all events not previously flown. The Refresher syllabus applies only up to the stage achieved during the prior tour. After completion of appropriate Refresher syllabus, the pilot will complete the entire remaining syllabus. Prerequisites apply only to replacement aircrew and not to Refresher pilots.

2.7.4.3 Previously designated UH-1N pilots will be assigned to the Refresher POI upon completion of FRS Series Conversion training. After performing event conversion in accordance with UH-1Y Pilot Syllabus Matrix (paragraph 2.23), previously designated UH-1N pilots shall complete all R coded events that are delinquent or incomplete and any other (non R coded) events that are also incomplete. Incomplete events will either be new events, like SCAR-3307, with no direct comparison to a UH-1N event (in the 24 Mar 08 T&R), or an event with no proficiency date because the pilot never performed it in the UH-1N or because there is no event conversion defined. The current UH-1N T&R has an equivalent SCAR-3307 event and can be used for conversion if not delinquent. *M-SHARP will not automatically convert UH-1N T&R syllabus codes for proficiency in the UH-1Y. The Pilot Training Officer will have to manually enter these dates for each pilot before commencing Core Skill training in the Refresher POI at the tactical unit.* At the discretion of the commanding officer pilots under the Refresher POI who were previously ANSQ qualified may conduct NS or (NS) Refresher syllabus events under HLL or LLL conditions.

2.7.4.4 Modified Refresher Syllabus. A Modified Refresher syllabus, for pilots not requiring a full Refresher POI, is provided to expedite training at the FRS. It can be individually tailored as specified by the commanding officer of the FRS. However, in no case will this syllabus be less than the minimum Modified Refresher syllabus shown here. Following the FRS, the Refresher should follow the Refresher syllabus described above; however, the commanding officer may tailor the Refresher syllabus to fit the experience of the Refresher pilot per the T&R Program Manual.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	Interactive Courseware	USMC UH-1Y FRS
3-8	Core Skill Introduction Training	USMC UH-1Y FRS
9-30	Core Skill/Mission Skill Training	Tactical Squadron
9-30	Core Plus Skill Training	Tactical Squadron

2.7.5 Fleet Replacement Squadron and NATOPS/Assistant NATOPS POI

WEEKS	COURSE	PERFORMING ACTIVITY
1-4	Fleet Replacement Squadron Instructor	USMC UH-1Y FRS
1	Fleet Replacement Squadron Standardization Instructor	USMC UH-1Y FRS
1	NATOPS/Assistant NATOPS Instructor	Tactical Squadron

2.7.6 Basic Instructor Pilot and Stage Instructor POI

WEEKS	COURSE	PERFORMING ACTIVITY
2	Basic Instructor Pilot	Tactical Squadron
1	Terrain Flight Instructor	Tactical Squadron
2	Weapons Training Officer Instructor	Tactical Squadron
1	Tactical Simulator Instructor	Tactical Squadron

2.7.7 MAWTS-1 Level Instructor POI

WEEKS	COURSE	PERFORMING ACTIVITY
24	Night Systems Instructor	MAWTS-1
24	Defensive Aerial Combat Maneuvering Instructor	MAWTS-1
24	Forward Air Controller (Airborne) Instructor	MAWTS-1
8	Tactical Air Coordinator (Airborne) Instructor	MAWTS-1

2.7.8 Flight Leadership POI

WEEKS	COURSE	PERFORMING ACTIVITY
1-4	Section Leader	Tactical Squadron
1-4	Division Leader	Tactical Squadron
1-2	Flight Leader	Tactical Squadron
1-2	Air Mission Commander	Tactical Squadron
1	Flight Leadership Standardization Evaluator	Group Designated

2.8 ACADEMIC TRAINING

2.8.1 Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.

2.8.2 Academic training requirements are listed separately for each phase of flight training. Training may be completed earlier in stage but should be completed by the appropriate sortie(s). Course descriptions are as follows:

2.8.2.1 Interactive Courseware (ICW). This is a Computer Based Training (CBT) syllabus for Core Skill Introduction training. It consists of both self-paced lessons and instructor-presented phase lectures.

2.8.2.2 Academic Support Package (ASP). These are MAWTS-1 prepared classes available on CD-ROM or the MAWTS-1 websites. All material is contained on CDs or the websites, both classified and unclassified. These can be either self-paced lessons or instructor-presented lectures. The classes listed are only the Generics, Common or Specific UH-1 classes.

2.8.2.3 Computer Based Training. These are software and/or hardware computer training aids designed to augment training for specific systems. Examples include the Naval Air Warfare Center programs for avionics systems, as well as other programs developed by various sources such as the TISP, FTS, Mission Planning Software/JMPS/AWE, EOTDA, and ASE trainers/programs.

2.8.2.4 Squadron Developed Training. Squadron-developed curriculum is used to enhance the above programs. Recognition training should be continuous.

2.8.2.5 Websites. The MAWTS-1 websites have classes, publications and other pertinent material and are included below.

NIPR:

<https://vcepub.tecom.usmc.mil/sites/mssc/magtftc/mawts1/departments1/ASD/UH-1%20Division.aspx>

SIPR: <http://www.mawts1.usmc.smil.mil/> Click on Departments, UH-1 for general information, then select Departments, Academics, Generics, Common or Specific for WTI classified and unclassified courseware. Click on ASP for Academic Support Package courseware.

2.8.2.6 Graduate Level Courses. There are 6 graduate level courses (FAC(A)I, NSFI, TAC(A)I, DACMI, NSI, WTI) that qualify instructors for specific portions of the T&R syllabus. The requirements for these instructor certifications are contained in the MAWTS-1 Course Catalog.

2.8.2.7 External academic courses of instruction available to complete the syllabus are listed below:

COURSE	ACTIVITY
Survival, Evasion, Resistance, and Escape (SERE) Course	NAS Brunswick ME NAS North Island CA
NITE lab	Any Approved Course
Forward Air Controller (Airborne) Course	Local MATSS
Weapons and Tactics Instructor (WTI) Course	MAWTS-1
Aviation Career Progression Model	MAWTS-1

## 2.9 EVENT REQUIREMENTS

2.9.1 General. The MAWTS-1 Course Catalog contains a summary matrix of all Ground, Academic, Simulator, and Flight requirements for each stage of the T&R. This matrix shall be placed in the Aircrew Performance Record (APR) of all aircrew to thoroughly track training progression. As each training event is completed, the PTO will input the date of completion.

All events, to include simulators, shall begin with a comprehensive brief with emphasis on administrative procedures, CRM, tactical procedures, mission performance standards and aircrew expectations.

All flights shall terminate with a comprehensive debrief with emphasis on aircrew performance utilizing all evaluation techniques available (e.g. video, participating aircrews, external support personnel).

An ATF is required for any initial event completed by a Basic/Transition, Refresher, or Series Conversion pilot, or as recommended by the squadron Standardization Board. If the commanding officer has waived/deferred a syllabus sortie, the squadron training officer shall place a waiver/deferral letter in section 3 of the APR. Standardized ATFs can be obtained by the T&R sponsor, MAWTS-1.

All pilots will have an APR. The squadron training officer shall ensure each ATF is entered in section 3 of the APR.

When operational commanders assign HMLA squadrons to prolonged commitments where specific T&R training is not available (e.g., MEU deployments, sustained combat deployments), it is expected that degradation in some mission areas will occur. Commanding officers are authorized to defer training in specific missions that are not relevant to their current deployment situation. Once the squadron or detachment has returned from the deployment, every effort should be made to achieve the deferred training for the affected pilots.

Compliance with the written flight description is mandatory for syllabus event completion. In the absence of a flight simulator, completion of a syllabus event is not required to complete that stage. Completion of those events should be accomplished as soon as practical upon simulator availability. Should the command desire, simulator events can be flown in the aircraft for T&R credit.

Training should be accomplished by flying events within a stage in sequence and stages in sequence when practical. As an example, prerequisites allow a PUI to fly events in other stages while waiting for the next HLL or LLL period.

Specific rules of conduct requirements for individual type missions (NVG training, CQ, DACM, etc.) can be found in Chapter 3 of the Aviation T&R Program Manual.

## 2.9.2 Event Header

2.9.2.1 Sortie Duration. Times indicated for each event are recommendations. When scheduling sorties, training officers are allowed to schedule additional training codes based on anticipated mission sets if the performance standards are met for the sortie, and sufficient time is available during the flight to accomplish those sorties (e.g. 3 hour flight scheduled to conduct two sorties with flight time requirement of 1.5 hours each). If multiple syllabus events are to be accomplished during a single flight evolution, appropriate planning, briefing, and debriefing time shall be allotted to ensure that requisite training objectives can be met.

2.9.2.2 Refly Factor. Refly (proficiency interval) factors reflect the maximum time between syllabus events. Refly factors are delineated in days. If not applicable, an asterisk (\*) will be used to indicate the event has no refly interval - it is a one-time training requirement (unless R-coded).

2.9.2.3 Programs of Instruction. Delineates event requirements for specific syllabi.

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2.9.2.4 Event Conditions. Refer to the following table for required event conditions:

Code	Environmental Condition
D	Shall be flown or conducted during day
N	Shall be flown or conducted at night (using available night vision devices or flown unaided) at least 30 minutes after official sunset.
(N)	May be flown or conducted day or night; if at night, available night vision devices may be used or flown unaided
D/NS	Shall be flown both day and night conditions, unless flown in the aircraft, in which case the event may be flown during day or night conditions
NS	Shall be flown or conducted at night using available night vision devices at least 30 minutes after official sunset
(NS)	May be flown or conducted day or night; if at night, available night vision devices shall be used
N*	Event Shall be flown or conducted at night unaided
(N*)	Event may be flown or conducted at night; if at night, shall be flown unaided

2.9.2.5 "E"-Coded Events. Delineates a special event that requires an evaluation. The "E"-coded event also requires an ATF upon execution of every occurrence.

2.9.2.6 Device Codes. Refer to the following table for device codes:

Symbol	Device
A	Event performed in aircraft
S	Event performed in simulator or a simulated practical application
A/S	Event performed in aircraft preferred/simulator optional
A/S*	Initial event must be performed in the aircraft. Subsequent reflys may be performed in the simulator.
S/A	Event performed in simulator preferred/aircraft optional
TEN	Tactical Environment Network
TEN +	Tactical Environment Network and at least one networked, man-in-the-loop simulator

2.9.2.6.1 Tactical Environment Network (TEN) simulator requirements are identified for each simulator event. TEN has been used to identify that the simulator must have the ability to link to the network. TEN+ has been used to identify that at least one networked, man-in-the-loop simulator is required for that event. Linked simulator events require an approved Tactical Environment Network simulation and at least one additional, networked, man-in-the-loop simulator to meet the training objectives. A moving model controlled from the operator station does not satisfy the man-in-the-loop requirement.

### 2.9.3 Event Body

2.9.3.1 Requirement. The requirement lists specific tasks for the event and indicates what the individual should accomplish.

2.9.3.1.1 Discuss. The IP shall discuss a procedure or maneuver during the brief, in flight, or debrief. The PUI is responsible for knowledge of the applicable procedures prior to the brief.

2.9.3.1.2 Demonstrate. The IP performs the maneuver with accompanying description. The PUI observes the maneuver and is responsible for the knowledge of the procedures prior to the sortie.

2.9.3.1.3 Introduce. The IP may perform the maneuver with an accompanying description, or the IP may coach the PUI through the maneuver without demonstration. The PUI shall perform the maneuver with coaching, as necessary, and is responsible for knowledge of the procedures prior to the sortie.

2.9.3.1.4 Review. The IP observes and grades the maneuver without coaching the PUI. An airborne critique of PUI performance is at the option of the



instructor. The PUI is expected to perform the maneuver without coaching and devoid of procedural error at a level acceptable to warrant progress into the next stage of training.

**2.9.3.2 Performance Standards.** Performance standards are listed for each T&R event description. These are training standards for individual aircrew performance and shall be utilized by the evaluator as a guideline to determine the satisfactory completion of each event. If the aircrew did not successfully attain the performance standards, the training code shall not be logged as a completed flight. *Logging multiple training codes on an initial single sortie shall be avoided.*

**2.9.3.2.1 Grading Standards**

**2.9.3.2.1.1 Complete.** The PUI has demonstrated sufficient grasp of the concepts and skills to proceed to the next training evolution or be designated appropriately.

**2.9.3.2.1.2 Incomplete.** Describes a training event that is not declared 'Complete' due to circumstances beyond the control of the aircrew. Examples may include, but are not limited to: WX, time constraints, aircraft or simulator maintenance, external support inadequate. 'Incomplete' shall not be used to obscure reporting of a substandard performance.

**2.9.3.2.1.3 Requires Additional Training (RAT).** A RAT is used when the PUI has not yet demonstrated sufficient grasp of the required skills and concepts to progress in the syllabus. A RAT is not derogatory in nature. Instructor remediation recommendations should specifically identify the deficient area(s) for addressing shortcomings in terms of reading assignments, courseware, additional flight, simulator, or other appropriate training. The Instructor assigning a R.A.T. synopsis is responsible for ensuring the recommendation has been endorsed by Squadron leadership and adhered to by the student unless a higher authority intervenes with additional guidance. A PUI shall not RAT on an "E" coded event.

**2.9.3.2.1.4 Unsatisfactory.** Identifies a condition where the PUI has proven unable to meet performance standards due to a lack of preparation, lack of effort, consistent inability to demonstrate improvement or resistance to instruction. Significant safety of flight incidents that are of a direct result of the pilot under training actions should be considered unsatisfactory. The instructor assigning this event synopsis is responsible for ensuring recommendations for remediation, if applicable, are proposed through the DSS & Operations Department.

**2.9.3.3 Prerequisites.** Events (academic or flight/simulator) that must be completed prior to the initiation of the event. Events preceding a "~" indicate prerequisites dependent on optional conditions (e.g. environmental and ordnance). For example ANSQ-2702~LLL, indicates that *if* the event is flown under LLL conditions, ANSQ-2702 is a required prerequisite.

**2.9.3.4 Ordnance/Range/Target/External Syllabus Support.** Items required to successfully complete the required training.

**2.9.3.5 Crew Requirements.** The crew requirements listed at the end of each event are requirements for initial stage training flights. For operational flights the minimum crew requirements are defined by OPNAVINST, NATOPS, and NAVMC 3500.14. When not clearly defined by higher directives, the squadron commanding officer, DSS, or local SOPs may dictate the minimum crew requirements.

**2.10 CORE SKILL INTRODUCTION FRS ACADEMIC PHASE (1000)**

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2.10.1 Purpose. To develop a Core Skill Introduction complete copilot. These academics facilitate understanding of basic functions/operations in the UH-1Y and ensure individuals possess the requisite knowledge to be designated Pilot Qualified in Model (PQM), NATOPS qualified and rates the 7513/7563 MOS as specified in CCX-1901.

2.10.2 General

2.10.3 These academics are intended to be an integrated series of academic events contained within each phase of training. Accordingly, academic events serve as pre-requisites to selected flight events or stages.

2.10.4 Completion of these academics and flight phase meet the requirements for the PUI to be designated a PQM. Core Skill Introduction academic events, along with their identifying pre-requisite association with other training phases/stages/events are listed below.

CORE SKILL INTRODUCTION FRS PHASE	
TRAINING CODES	COURSEWARE
ACAD-1000	Light Attack University (LAU)
ACAD-1001	Computer Based Training/Interactive Courseware
ACAD-1002	Weight & Power Lecture
ACAD-1003	Optimized TOPOWL System/Setup
ACAD-1004	Crew Resource Management
ACAD-1005	Introduction to AWE Mission Planning
ACAD-1006	Familiarization Stage Lecture
ACAD-1007	Instrument Stage Lecture
ACAD-1008	Formation Flight Stage Lecture
ACAD-1009	TERF Stage Lecture
ACAD-1010	Navigation Stage Lecture
ACAD-1011	NVD NITE Lab
ACAD-1012	TCT/ASE Lecture
ACAD-1013	Specific Weapons Delivery Lecture
ACAD-1014	Tactical Stage Lecture, Assault Support

2.10.5 At the completion of each ACAD event, the appropriate training code shall be logged in M-SHARP by the individual pilot, contract instructor, or squadron operations personnel, as appropriate.

2.11 CORE SKILL INTRODUCTION PHASE (1000)

2.11.1 Purpose. To develop a Core Skill Introduction complete copilot with the airmanship, CRM, and systems and procedural knowledge to act as PIC of a single aircraft or as wingman, under IFR or VFR, and in familiar and unfamiliar airspace/airports. Additionally, to prepare the PUI for follow on Core Skill Phase training. At the completion of this phase the PUI will be designated Pilot Qualified in Model (PQM), NATOPS qualified, and rate the 7513/7563 MOS as specified in CSIX-1901.

2.11.2 General. Completion of this phase meets the requirements for the PUI to be designated a PQM. At the discretion of the commanding officer, a letter designating the PUI as PQM shall be placed in the NATOPS jacket. A tracking code of DESG-6398 shall be logged. The UH-1Y Model Manager shall be responsible for Core Skill Introduction Phase standardization.

2.11.2.1 Instructors shall be responsible for mission briefs. Students may conduct a mission brief only after observing the instructor brief a mission in that specific stage.

2.11.2.2 Stages. The following stages are included in the Core Skill Introduction Phase of training.

CORE SKILL INTRODUCTION PHASE	
PAR NO.	SKILL NAME
2.11.3	Familiarization (FAM)
2.11.4	Instrument (INST)
2.11.5	Formation (FORM)
2.11.6	Terrain Flight (TERF)
2.11.7	Navigation (NAV)
2.11.8	Specific Weapons Delivery (SWD)
2.11.9	Threat Counter-Tactics (TCT)
2.11.10	Assault Support (ASPT)
2.11.11	Core Skill Introduction Check (CSIX)

2.11.3 FAMILIARIZATION (FAM)

2.11.3.1 Purpose. To develop familiarity with aircraft flight characteristics, limitations, and emergency procedures during day and night operations. To develop proficiency in all maneuvers and to instill basic CRM procedures throughout the familiarization stage.

2.11.3.2 General. PUI must demonstrate proficiency with all shore based FAM procedures to include normal/emergency procedures and basic aircraft maneuvers. Additionally, the PUI must display a thorough knowledge of limitations and flight characteristics. During all stages, the PUI shall complete a weight and power form before each sortie and present it to the IP for verification.

2.11.3.3 Where seat position is optional, PUI should conduct half of the syllabus events from each seat to facilitate proficiency from both cockpit positions. IP should discuss CRM considerations for each cockpit position during each event.

2.11.3.4 Crew Requirements. As listed at the end of each event.

2.11.3.5 Ground/Academic Training. IAW HMLAT-303 curriculum requirements. Includes Interactive Courseware, preflight and postflight, flight procedures, maneuver descriptions, emergency procedures, course rules, familiarization stage lecture, Cockpit Resource Management training, NITE lab, open and closed-book NATOPS exams.

2.11.3.6 References. Maneuver Description Guide, NATOPS manual and NVD manual.

FAM-1100 0.0 \* D A STATIC 1 UH-1Y

Goal. Introduce preflight and postflight familiarization and responsibilities.

Requirements

Discuss

All demonstrate and introduce maneuvers

Demonstrate

OOMA/M-SHARP functionality  
ADB Review

Introduce

Weight and power computations  
Blindfold cockpit checks (both seats)  
All preflight inspections  
Postflight inspections  
Emergency egress procedures

Performance Standards

The PUI shall complete an accurate weight and power computation for given conditions.  
PUI shall demonstrate basic knowledge of ADB and maintenance functions.  
PUI shall demonstrate a basic knowledge of preflight and postflight inspection checklist IAW UH-1Y NATOPS.

Prerequisites. ACAD-1000 through 1003.

Crew. FRSI/PUI

FAM-1101 0.0 \* R,SC,MR D A STATIC 1 UH-1Y

Goal. Review preflight and postflight familiarization and responsibilities.

Requirements

Discuss

Use of performance charts  
Height/Velocity diagram

Review

Weight and power computations  
Blind cockpit checks (both seats)  
All preflight inspections  
Postflight inspections  
Emergency egress procedures  
OOMA/M-SHARP functionality

Performance Standards

PUI shall complete an accurate weight and power computation for given conditions.  
PUI shall screen and understand the function of the ADB.  
PUI shall conduct aircraft preflight and postflight inspections and identify key components IAW UH-1Y NATOPS.

Prerequisite. FAM-1100

Crew. FRSI/PUI

SFAM-1102 1.5 \* R,MR D FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Introduce NATOPS checklists and ground procedures.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Auxiliary Power Unit

Warning, caution and advisory system  
Associated NATOPS emergencies, limitations, servicing, checklist  
and FCF procedures  
PBA functionality  
HOCAS switchology and function  
NATOPS vs. PCL checklists

Demonstrate

Basic simulator operation

Introduce

Start checklist  
Cocking and quickstart  
Rotor brake start  
Cross start checklist  
Subsequent start checklist  
Pretakeoff checklist  
Prelanding checklist  
Shutdown checklist  
Emergency shutdown  
APU fire  
Engine hot start  
Engine fire on start (external)

Performance Standards

PUI shall demonstrate functional knowledge of NATOPS checklists and procedures.  
PUI shall conduct an aircraft start and shutdown.  
PUI shall complete a weight and power for conditions of the given day.  
PUI shall load a mission card with radio presets, mission list, editable and non-editable points and one route.

Prerequisites. FAM-1101, ACAD-1004 through 1006

Crew. CSI or FRSI/PUI

FAM-1103 2.0 \* D A 1 UH-1Y

Goal. RS - Introduce course rules and basic familiarization maneuvers.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Power plant systems  
HMSD  
Associated NATOPS emergencies, limitations, servicing, checklist  
and FCF procedures for briefed systems  
Prohibited Maneuvers  
Hand and Arm signals  
Lost plane procedures  
Pressure fueling checklist  
Lost comm procedures

Demonstrate

Mission brief  
Start checklist  
Cross start checklist

Pretakeoff checklist  
Prelanding checklist  
Shutdown checklist  
Course rules/area fam  
Autorotational characteristics at altitude

Introduce

Low work  
Normal takeoff  
Normal Approach  
No hover takeoff  
No hover landings  
Precision (steep) approach  
Sliding landings

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of appropriate local ranges or other restricted areas and one route.  
PUI shall modify the mission list in the aircraft.  
PUI shall complete a weight and power for conditions of the given day.

Prerequisites. FAM-1101, SFAM-1102

Crew. FRSI/PUI

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SFAM-1104	1.5	*	R,SC,MR	D	FFS/FTD S-TEN 1 UH-1Y
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Goal. RS - Introduce familiarization maneuvers.

Requirements

Discuss

All demonstrate and introduce maneuvers  
AFCS system  
Environmental control system  
Associated NATOPS emergencies, limitations, servicing, checklist  
and FCF procedures for briefed systems

Demonstrate

Mission brief

Introduce

Maximum power takeoff  
High speed approach and landing  
Waveoff procedures  
20 to 30 degree dives  
High angle of bank  
Tactical (RVL) approach profile  
Power limited takeoff

Review

Start checklist  
Shutdown checklist  
Normal takeoff  
Normal Approach  
No hover takeoff  
No hover landings

Precision (steep) approach  
Sliding landings

Performance Standards

- PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.
- PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of appropriate local ranges or other restricted areas and one route.
- PUI shall complete a weight and power for conditions of the given day.
- PUI will conduct a normal start from the right seat.

Prerequisites. NAV-1500, INST-1202

Crew. CSI OR FRSI/PUI

FAM-1105    2.0    \*        R, SC, MR        D                    A        1 UH-1Y

Goal. RS - Introduce basic familiarization maneuvers.

Requirements

Discuss

- All demonstrate and introduce maneuvers
- Fuel System
- Hydraulic Power Supply System
- Associated NATOPS emergencies, limitations, servicing, checklist and FCF procedures for briefed systems
- Ditching (power on/off)
- Airspeed limitations

Demonstrate

- Mission brief
- Pattern autorotations

Introduce

- Maximum power takeoff
- High speed approach and landing
- 20 to 30 degree dives
- Waveoff procedures
- High angle of bank
- Tactical approach profile
- Power limited takeoff

Review

- Start checklist
- Shutdown checklist
- Low work
- Normal takeoff
- Normal approach
- No hover takeoff
- No hover landings
- Precision (steep) approach
- Sliding landings

Performance Standards

- PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.
- PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of appropriate local ranges or other restricted areas and one route.

PUI shall complete a weight and power for conditions of the given day.

Prerequisites. SFAM-1104

Crew. FRSI/PUI

SFAM-1106 1.5 \* D FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Introduce emergency maneuvers.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Autorotational characteristics  
Emergency Equipment  
Wire Strike Protection  
Energy attenuating seats  
Associated NATOPS emergencies, limitations, servicing, checklist and FCF procedures for briefed systems

Demonstrate

Mission brief  
Single engine flight characteristics at altitude  
Autorotational characteristics at altitude

Introduce

DECU lockout  
Hovering Autorotations  
Taxiing Autorotations  
Full autorotations  
High altitude emergencies  
Straight-in autorotation  
90 degree autorotation  
180 degree autorotation  
High speed low level autorotation  
Autorotation to a spot  
Loss of tail rotor thrust/components in flight  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of appropriate local ranges or other restricted areas and one route.  
PUI shall perform a minimum of five full autorotations.

Prerequisites. FAM-1105

Crew. CSI OR FRSI/PUI

SFAM-1107 1.5 \* D FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Introduce emergency procedures and CRM.

Requirements

Discuss



All demonstrate and introduce maneuvers  
Landing Gear  
Associated NATOPS emergencies, limitations, servicing,  
checklist and FCF procedures for briefed systems  
Landing in trees

Introduce

Main drive shaft failure  
Compressor Stall  
Dual engine fire  
Single engine fire  
Engine electrical system failure  
Loss of tail rotor thrust/components in a hover  
Loss of tail rotor thrust/components in flight  
Np overspeed  
Np underspeed  
Dual engine failure during takeoff  
Single engine failure during takeoff  
Rotor brake pressurizes in flight  
Dual engine failure in a HIGE  
Dual engine failure in flight  
Dual engine failure at high power and airspeed  
Single engine failure in a HOGE  
Single engine failure in flight  
Engine driven suction pump failure  
Complete electrical failure

Performance Standards

PUI shall have a detailed understanding and functional knowledge of  
all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall perform a minimum of five full autorotations.

Prerequisites. FAM-1106

Crew. CSI/PUI

FAM-1108 2.0 \* D A 1 UH-1Y

Goal. RS - Introduce emergency maneuvers and review familiarization  
maneuvers.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Drive system  
Flight Controls  
Associated NATOPS emergencies, limitations, servicing, checklist  
and FCF procedures for briefed systems  
Single engine characteristics and considerations  
Static/Dynamic rollover  
Low, medium and high frequency vibrations

Introduce

Mission brief  
High altitude emergencies  
Pattern autorotations

Review

Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
No hover landings

Precision (steep) approach  
High speed approach and landing  
Sliding landings  
Waveoff procedures  
20 to 30 degree dives  
DECU lockout  
High speed low level autorotation  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure  
Tactical approach profile  
Power limited takeoff

Performance Standards

PUI shall perform a mission brief.  
PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of appropriate local ranges or other restricted areas and one route.  
PUI shall complete a weight and power for conditions of the given day.

Prerequisites. SFAM-1106

Crew. FRSI/PUI

FAM-1109    2.0    \*    SC                    D                    A                    1 UH-1Y

Goal. LS - Review familiarization maneuvers.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Rotor systems  
Electrical power supply system  
Fire detection, warning and extinguisher system  
Associated NATOPS emergencies, limitations, servicing, checklist and FCF procedures for briefed systems

Review

Mission brief  
Low work  
Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
No hover landings  
Precision (steep) approach  
High speed approach and landing  
Sliding landings  
Waveoff procedures  
20 to 30 degree dives  
Tactical approach profile  
Power limited takeoff

Performance Standards

PUI shall perform a mission brief.  
PUI shall have a detailed understanding and functional knowledge of

all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of appropriate local ranges or other restricted areas and one route.

PUI shall complete a weight and power for conditions of the given day.

Prerequisites. SFAM-1107, FAM-1108

Crew. ANI/PUI

SFAM-1110 1.5 \* R, SC, MR D FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Review emergency procedures and CRM.

Requirements

Discuss

15 minutes of discussion time is for an abbreviated NATOPS and detailed crew brief. Use remaining 15 minutes to cover EPs and critique PUI's crew brief pertaining to emergencies and CRM.

All demonstrate and introduce maneuvers  
CRM during emergency procedures

Introduce

Autorotations to a spot

Review

DECU lockout  
Main drive shaft failure  
Compressor Stall  
Dual engine fire  
Single engine fire  
Engine electrical system failure  
Loss of tail rotor thrust/components in a hover  
Np overspeed  
Np underspeed  
Dual engine failure during takeoff  
Single engine failure during takeoff  
Rotor brake pressurizes in flight  
Dual engine failure in a HIGE  
Dual engine failure in flight  
Dual engine failure at high power and airspeed  
Single engine failure in a HOGE  
Single engine failure in flight  
Engine driven suction pump failure

Performance Standards

First half of sortie is scenario based covering previously introduced emergencies and maneuvers. PUI shall receive scenario assignment with the published flight schedule and conduct NATOPS and crew briefs to copilot. PUI shall act as PIC, and an 1105 complete copilot is mandatory. Current scenarios in use shall be published in the FRS Course Catalog. Second half of sortie is not scenario based and shall be used to review EPs and CRM.

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.

PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of

appropriate local ranges or other restricted areas and one route.

PUI shall perform a minimum of five full autorotations.

Prerequisites. FAM-1109, CRM annual training complete

Crew. CSI/PUI (copilot mandatory and shall be 1105 complete)

FAM-1111 2.0 \* D A 1 UH-1Y

Goal. RS - Review emergency procedures and familiarization maneuvers.

Requirements

Discuss

Any previously introduced NATOPS/MDG, system, emergency limitation, procedure or checklist  
Engine wash procedures

Review

Mission brief  
Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
No hover landings  
Precision (steep) approach  
High speed approach and landing  
Sliding landings  
Waveoff procedures  
20 to 30 degree dives  
Tactical approach profile  
Power limited takeoff  
DECU lockout  
Single engine flight characteristics at altitude  
High altitude emergencies  
Pattern autorotations  
High speed low level autorotation  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

PUI shall conduct mission brief.  
PUI shall conduct all procedures and maneuvers IAW the UH- 1Y NATOPS  
PUI shall load a mission card with radio presets, mission list, editable and non-editable points, vector overlay of appropriate local ranges or other restricted areas and one route.  
PUI shall complete a weight and power for conditions of the given day.

Prerequisites. FAM-1109

Crew. FRSI/PUI

SFAM-1112 1.5 \* SC D E FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Emergency procedures and CRM evaluation.

Requirements

Discuss

15 minutes of discussion time is for an abbreviated NATOPS and

detailed crew brief. Use remaining 15 minutes to cover EPs and critique PUI's crew brief pertaining to emergencies and CRM. Any previously introduced NATOPS/MDG, system, emergency, limitation, procedure or checklist

Review

Mission brief  
Aircraft emergencies with emphasis on causes, indications and procedures to recover aircraft and CRM

Performance Standards

First half of sortie is scenario based covering previously introduced emergencies and maneuvers. PUI shall receive scenario assignment with the published flight schedule, and conduct NATOPS and crew briefs to co-pilot. PUI shall act as PIC, and an 1104 complete copilot is mandatory. Current scenarios in use shall be published in the FRS course catalog. Second half of sortie is not scenario based and shall be used to evaluate EPs and CRM.

PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.

PUI will demonstrate knowledge, safety and CRM considerations during the execution of emergency procedures.

PUI shall perform a minimum of five full autorotations.

Prerequisites. SFAM-1110, FAM-1111

Crew. ANI/PUI (copilot mandatory and shall be 1105 complete)

FAM-1113	2.0	*	R, SC, MR	D	A	1 UH-1Y
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Goal. RS - Review emergency and familiarization maneuvers.

Requirements

Discuss

Any previously introduced NATOPS/MDG system, emergency, limitation, procedure or checklist  
Engine wash procedures

Review

Mission brief  
Normal takeoff  
Normal Approach  
No hover takeoff  
Maximum power takeoff  
No hover landings  
Precision (steep) approach  
Confined area takeoff  
Confined area landings  
High speed approach and landing  
Sliding landings  
Slope landing and takeoff  
Waveoff procedures  
20 to 30 degree dives  
Tactical approach profile  
Power limited takeoff  
DECU lockout  
Single engine flight characteristics at altitude  
High altitude emergencies  
Pattern autorotations  
High speed low level autorotation  
Fixed pitch tail rotor malfunctions  
SCAS failure

Single Engine Failure

Performance Standards

- PUI shall perform a mission brief.
- PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.
- PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas.
- If SC event, PUI will be introduced to and perform TERF maneuvers not to exceed 30 minutes of flight time.

Prerequisites. SFAM-1112

Crew. FRSI/PUI

FAM-1114    2.0    \*    R,SC,MR    D    E    A    1 UH-1Y

Goal. RS - Evaluate familiarization maneuvers.

Requirements

Discuss

Any previously introduced NATOPS/MDG system, emergency, limitation, procedure or checklist

Review

- Mission brief
- OOMA/M-SHARP functionality
- Normal takeoff
- Normal approach
- No hover takeoff
- Maximum power takeoff
- No hover landings
- Precision (steep) approach
- High speed approach and landing
- Sliding landings
- Waveoff procedures
- 20 to 30 degree dives
- Tactical approach profile
- Power limited takeoff
- DECU lockout
- Single engine flight characteristics at altitude
- High altitude emergencies
- Pattern autorotations
- High speed low level autorotation
- Fixed pitch tail rotor malfunctions
- SCAS failure
- Single Engine Failure

Performance Standards

- PUI shall act as the PIC and demonstrate the CRM, systems and procedural knowledge and stage specific flight skills to safely execute all fam stage maneuvers and handle simulated emergencies IAW the UH-1Y NATOPS and MDG. IP shall act as peer-level co-pilot. PUI shall plan, brief, and lead the flight based on an assigned mission profile and IP planning guidance.
- As the local flying area allows, mission profile should include operations at the departure airfield, at local training facilities and OLFs and incorporating local course rules.
- PUI shall act as PIC and demonstrate the CRM, systems and procedural knowledge and stage specific flight skills to safely execute all FAM stage maneuvers and handle simulated emergencies IAW the UH-

1Y NATOPS and MDG.

Prerequisites. FAM-1113

Crew. ANI/PUI

SFAM-1115 1.5 \* SC NS FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Introduce NVD familiarization maneuvers during HLL.

Requirements

Discuss

All demonstrate and introduce maneuvers  
NDM setup/operation  
Aircraft lighting and switchology

Demonstrate

NVD portion of NATOPS brief

Introduce

Low work  
Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
No hover landings  
Precision (steep) approach  
Confined area takeoff  
Confined area landings  
High speed approach and landing  
Sliding landings  
Slope landing and takeoff  
Waveoff procedures  
20 to 30 degree dives  
Tactical approach profile  
Power limited takeoff

Performance Standards

PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS, MDG and NVD manual.  
PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas.

Prerequisites. ACAD-1011, SINST-1205

Crew. CSI OR NSF/PUI

SFAM-1116 1.5 \* NS FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Introduce NVD emergency maneuvers during HLL.

Requirements

Discuss

All demonstrate and introduce maneuvers  
NVD emergencies  
IIMC in NVD environment  
Electrical failure at night

Introduce

Hovering Autorotations

- Taxiing Autorotations
  - Full autorotations
  - High altitude emergencies
  - Straight-in autorotation
  - 90 degree autorotation
  - 180 degree autorotation
  - High speed low level autorotation
  - Autorotation to a spot
  - Fixed pitch tail rotor malfunctions
  - SCAS failure
  - Single Engine Failure

Performance Standards

PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS, MDG and NVD manual.  
PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas.  
PUI shall perform a minimum of five full autorotations.

Prerequisites. SFAM-1115

Crew. CSI OR NSFI/PUI

FAM-1117     2.0     \*    NS    A    1 UH-1Y

Goal. RS - Review NVD familiarization maneuvers during HLL.

Requirements

Discuss

- All demonstrate and introduce maneuvers
  - Solar Lunar Almanac Prediction (SLAP)
  - Sources of Illumination at night
  - Light levels
  - Crew day/crew rest requirements at night
  - CRM at night
  - Use of searchlights at night
  - Required equipment and cockpit setup for night flights
  - NDM setup/operation
  - NVD scan pattern

Demonstrate

- NVD portion of NATOPS brief

Introduce

- Mission brief
- Low work
- Normal takeoff
- Normal approach
- No hover takeoff
- Maximum power takeoff
- No hover landings
- Precision (steep) approach
- Confined area takeoff
- Confined area landings
- High speed approach and landing
- Sliding landings
- Slope landing and takeoff
- Waveoff procedures
- 20 to 30 degree dives
- Tactical approach profile
- Power limited takeoff



High altitude emergencies  
Pattern autorotations  
High speed low level autorotation  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

- PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS, MDG and NVD manual.
- PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas.
- PUI shall complete an accurate weight and power computation for given conditions.
- PUI shall bring appropriate SLAP data to the brief, to include Lunar Elevation/Azimuth Angles (LEAA) and Lunar Daily Illumination (LDI) charts.

Prerequisites. SFAM-1116

Crew. NSFI/PUI

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FAM-1118    2.0    \*    R, SC, MR    NS    A    1 UH-1Y

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Goal. RS - Review NVD familiarization maneuvers during HLL.

Requirements

Discuss

- NVD components
- NVD adjustments/boresight/brightness
- Automatic Brightness Control
- Bright Source Protection
- NVD Scene
- NVD comfort level
- NVD shadowing
- RADALT at night

Review

- Mission brief
- NVD portion of NATOPS brief
- Low work
- Normal takeoff
- Normal approach
- No hover takeoff
- Maximum power takeoff
- No hover landings
- Precision (steep) approach
- Confined area takeoff
- Confined area landings
- High speed approach and landing
- Sliding landings
- Slope landing and takeoff
- Waveoff procedures
- 20 to 30 degree dives
- Tactical approach profile
- Power limited takeoff
- High altitude emergencies
- Pattern autorotations
- High speed low level autorotation
- Fixed pitch tail rotor malfunctions

SCAS failure  
Single Engine Failure

Performance Standards

- PUI shall perform a mission brief.
- PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS, MDG and NVD manual.
- PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas.
- PUI shall complete an accurate weight and power computation for given conditions.
- PUI shall bring appropriate SLAP data to the brief, to include Lunar Elevation/Azimuth Angles (LEAA) and Lunar Daily Illumination (LDI) charts.

Prerequisites. FAM-1117

Crew. NSFI/PUI

2.11.4 Instruments (INST)

2.11.4.1 Purpose. To develop proficiency in actual/simulated IMC. To develop the PUI's stage specific flight skills, systems and procedural knowledge and CRM to safely act as PIC during enroute and terminal operations under IFR and in IMC.

2.11.4.2 General. Refresher pilots may complete their annual instrument check (INST-6100) in conjunction with SINST-1205. If this option is exercised, the PUI will have completed the semi-annual minimums and instrument ground school (IGS) prior to SINST-1205. Basic pilots whose instrument check will expire within three months of leaving the FRS will also meet the above requirements.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the HMLAT-303 Course Catalog, instrument stage lecture and CBT/ICW. Instrument Ground School (as applicable).

References. Maneuver Description Guide, NATOPS manual, Instrument Flight Manual, Instrument Flight Publications.

SINST-1200 1.5 \* \_\_\_\_\_ (N\*) FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Introduce basic instrument flight maneuvers.

Requirements

Discuss

- All demonstrate and introduce maneuvers
- Standard rate indications
- Spatial disorientation

Introduce

- Instrument flight checklist
- Instrument takeoff (ITO)
- Level speed change
- Standard rate turns
- Vertical S-1 pattern

Turn pattern  
Oscar pattern  
Timed turns using the DFD standby compass  
Recovery from unusual attitudes

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.

Prerequisites. ACAD-1007, FAM-1103

Crew. CSI OR FRSI/PUI

SINST-1201 1.5 \* (N\*) FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Introduce and review basic instrument flight maneuvers.

Requirements

Discuss

All demonstrate and introduce maneuvers  
CDI operation  
Station passage  
DME  
Holding and entry procedures

Introduce

TACAN intercepts  
TACAN point to point navigation  
TACAN holding  
TACAN arcing  
Precision approach (PAR)  
Airport Surveillance Radar (ASR)  
Use of AFCS in instrument flight

Review

Instrument flight checklist  
Instrument takeoff (ITO)  
Level speed change  
Standard rate turns  
Vertical S-1 pattern  
Turn pattern  
Oscar pattern  
Timed turns using the DFD standby compass  
Recovery from unusual attitudes

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with appropriate instrument fixes/ATC reporting points as waypoints, a vector overlay indicating final approach course and appropriate ATC frequencies.

Prerequisites. SINST-1200

Crew. CSI OR FRSI/PUI

INST-1202 2.0 \* (N) A 1 UH-1Y

Goal. RS - Introduce basic instrument flight maneuvers.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Integrated avionics system  
Communications system  
Rain removal system  
Anti-ice system  
Pitot Heat System  
Associated NATOPS emergencies, limitations, servicing, checklist  
and FCF procedures for briefed systems  
VMC to IMC & IMC to VMC transitions  
NAVAID failures  
Spatial disorientation

Review

Instrument flight checklist  
Instrument takeoff (ITO)  
Level speed change  
Standard rate turns  
Vertical S-1 pattern  
Turn pattern  
Oscar pattern  
Timed turns using the DFD standby compass  
TACAN intercepts  
TACAN point to point navigation  
TACAN holding  
TACAN arcing  
Precision approach (PAR)  
Airport Surveillance Radar (ASR)  
Use of AFCS in instrument flight

Performance Standards

PUI to conduct procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with appropriate instrument fixes/ATC reporting points as waypoints, a vector overlay indicating final approach course and appropriate ATC frequencies.

Prerequisites. SINST-1201

Crew. CSI OR FRSI/PUI

INST-1203 2.0 \* (N\*) A 1 UH-1Y

Goal. RS - Introduce instrument flight navigation procedures.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Initial Approach Fix (IAF)  
Final Approach Fix (FAF)  
Minimum Descent Altitude (MDA)  
Voice reports  
Lost communications procedures  
DD-175 filing criteria and procedures  
Weather briefing requirements  
Navigation system integration

Introduce

Instrument autorotation  
Standard Instrument Departures (SIDs)  
TACAN approaches  
No-Gyro approach  
Missed approach  
Airway navigation

Review

TACAN intercepts  
TACAN point to point navigation  
TACAN holding  
TACAN arcing  
Precision approach (PAR)  
Airport Surveillance Radar (ASR)  
Use of AFCS in instrument flight

Performance Standards

PUI to conduct procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with appropriate instrument fixes/ATC reporting points as waypoints, a vector overlay indicating final approach course and appropriate ATC frequencies.  
PUI shall file the DD-175 via on-line services.  
PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. ACAD-1007, FAM-1114

Crew. FRSI/PUI

INST-1204 2.0 \* R, SC, MR (N\*) A 1 UH-1Y

Goal. RS - Review instrument flight navigation procedures.

Requirements

Discuss

Instrument flight publications  
Airspace classification  
Cloud clearance and visibility requirements  
In flight filing procedures  
Navigation system integration

Review

Instrument autorotation  
Standard Instrument Departures (SIDs)  
TACAN intercepts  
TACAN point to point navigation  
TACAN holding  
TACAN arcing  
TACAN approaches  
Precision approach (PAR)  
Airport Surveillance Radar (ASR)  
No-Gyro Approach  
Missed Approach  
Airway navigation  
Use of AFCS in instrument flight

Performance Standards

PUI to conduct procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with appropriate instrument fixes/ATC reporting points as waypoints, a vector overlay indicating final approach course and appropriate ATC frequencies.  
PUI shall file the DD-175 via on-line services.  
PUI shall complete an accurate weight and power computation for given conditions.  
IP will conduct training jacket review.

Prerequisites. INST-1203

Crew. FRSI/PUI

SINST-1205 1.5 \* R,SC,MR (N) E FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Evaluate instrument flight and emergency procedures under IFR in IMC.

Requirements

Discuss

DD-175 filing criteria and procedures  
Annual and semi-annual instrument and approach minimums  
Weather briefing requirements  
Use discussion time for NATOPS and crew brief, giving special consideration to operating IFR in IMC

Review

Instrument autorotation  
Standard Instrument Departures (SIDs)  
TACAN procedures  
Precision approach (PAR)  
Airport Surveillance Radar (ASR)  
No-Gyro approach  
Missed approach  
Airway navigation  
Use of AFCS in instrument flight  
Emergencies as soon as possible  
Emergencies as soon as practical  
Instrument takeoff

Performance Standards

PUI shall load a mission card with appropriate instrument fixes/ATC reporting points as waypoints, a vector overlay indicating final approach course and appropriate ATC frequencies.  
PUI shall demonstrate a detailed understanding and functional knowledge of all instrument procedures, emergencies, aircraft systems and maneuvers IAW the NATOPS IFM, UH-1Y NATOPS, MDG and OPNAV 3710.  
Sortie is scenario based. PUI shall receive scenario assignment with the published flight schedule and conduct NATOPS and crew brief to copilot. PUI shall act as PIC and demonstrate the CRM, systems and procedural knowledge, stage specific flight skills to safely conduct the flight under IFR in IMC. 1105 complete copilot is mandatory.  
Current scenarios in use shall be published in HMLAT-303 Course Catalog.  
CSI or ASI will simulate all ATC communications.  
PUI shall conduct a minimum of two approaches.

Prerequisite. INST-1204

Crew. CSI or ANI (IFBM as required)/PUI (Copilot mandatory and shall be 1105 complete).

2.11.6 Formation (FORM)

2.11.6.1 Purpose. To introduce formation flight and develop proficiency in parade and tactical formation maneuvers. To develop the PUI's stage specific flight skills, systems and procedural knowledge and CRM to safely act as PIC as a designated wingman during nontactical flights.

2.11.6.2 General. At the completion of this stage, the PUI will be

proficient at formation takeoffs and landings, rendezvous, parade, cruise, combat cruise, combat spread, lead change, ASTACSOP formation procedures and all formation maneuvers listed in the UH-1Y NATOPS and MDG.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the HMLAT-303 Course Catalog, Formation stage lecture and CBT/ICW.

References. Maneuver Description Guide, NATOPS manual, NVD manual, ASTACSOP and NTP.

SFORM-1300 1.5 \* D FFS/FTD S-TEN+ 1 UH-1Y & 1 H-1

Goal. OS - Introduce formation flight.

Requirements

Discuss

All demonstrate and introduce maneuvers  
CRM during FORM flight  
FORM maneuver card  
ASTACSOP items  
Radius of turn

Introduce

Parade flight  
Cruise flight  
Parade turns  
Crossovers  
Breakup and rendezvous  
Cruise turns  
Tactical formation maneuvers  
Formation landing  
Formation takeoff  
Wingman awareness  
Formation communication  
Lead change  
ASTACSOP RIO  
ASTACSOP lost comm  
ASTACSOP IIMC  
ASTACSOP loss of visual contact

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with a vector overlay of a formation working area and a data frame of the formation sequence.

Prerequisites. ACAD-1008, SINST-1205

Crew. CSI OR FRSI/PUI

FORM-1301 2.0 \* R D A 2 UH-1Y

Goal. OS - Introduce formation flight and tactical formation flight maneuvering.

Requirements

Discuss

All demonstrate and introduce maneuvers  
CRM during form flight

Radius of turn  
Visual Signals  
Break (homefield, FARP, ship)  
ASTACSOP items  
SINGGARS/HAVEQUICK operation and switchology  
Section landings

Demonstrate

Send/Receive time (HAVEQUICK)  
Send/Receive ERF (SINGGARS)

Introduce

Section tactical landings

Review

Parade flight  
Cruise flight  
Parade turns  
Crossovers  
Breakup and rendezvous  
Cruise turns  
Tactical formation maneuvers  
Formation landing  
Formation takeoff  
Wingman awareness  
Formation communication  
Lead change  
ASTACSOP RIO  
ASTACSOP lost comm  
ASTACSOP IIMC  
ASTACSO loss of visual contact

Performance Standards

PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS, ASTACSOP and MDG.  
PUI shall load a mission card with a vector overlay of a formation working area and a data frame of the formation sequence.  
PUI shall complete an accurate weight and power computation for given conditions.  
PUI shall perform all MDG formation maneuvers as lead and wingman.

Prerequisites. SFORM-1300, ASPT-1801

Crew. FRSI/PUI

FORM-1302 2.0 \* \_\_\_\_\_ D \_\_\_\_\_ A/S 1 UH-1Y & 2+ H-1

Goal. OS - Introduce division formation flight and demonstrate tactical formation flight maneuvering.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Division positioning  
ASTACSOP Scatter plan  
ASTACSOP IIMC for a division

Demonstrate

Tactical formation maneuvers

Introduce

ASTACSOP RIO  
Parade flight



Cruise flight  
Parade turns  
Crossovers  
Cruise turns  
Formation takeoff  
Wingman awareness  
Formation communication  
Lead change  
Division break

Performance Standards

PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS, ASTACSOP and MDG.  
PUI shall load a mission card with a vector overlay of a formation working area and a data frame of the formation sequence.  
PUI shall perform all maneuvers in a position other than division lead.

Prerequisites. FORM-1301

Crew. CSI or FRSI/PUI

FORM-1303 1.5 \* R,MR NS A 2 UH-1Y

Goal. OS - Introduce NVD formation flight and demonstrate tactical formation flight maneuvering.

Requirements

Discuss

All demonstrate and introduce maneuvers  
ASTACSOP aircraft lighting  
ASTACSOP goggle/degoggle procedures  
NVD formation flight techniques  
ASTACSOP loss of visual contact  
CRM during NVG formation flight  
H-1 NVG formation related mishaps

Demonstrate

Tactical formation maneuvers  
Aircraft lighting configurations

Introduce

Parade flight  
Cruise flight  
Parade turns  
Crossovers  
Breakup and rendezvous  
Cruise turns  
Formation landing  
Formation takeoff  
Wingman awareness  
Lead change  
ASTACSOP RIO  
ASTACSOP lost comm  
Formation communication  
Section tactical landings

Performance Standards

PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS, MDG, ASTACSOP, NTPP and MAWTS-1 NVD manual.  
PUI shall load a mission card with a vector overlay of a formation working area and a data frame of the formation sequence.  
PUI shall complete an accurate weight and power computation for







Crew Requirements. As listed at the end of each event.

Ground/Academic Training. NAV stage lecture, ICW.

References. Maneuver Description Guide, NATOPS manual, ASTACSOP, NVD manual and NTPP.

NAV-1500 0.0 \* R,SC,MR (N) A/S STATIC 1 UH-1Y

Goal. OS - Introduce digital map system (DMS).

Requirements

Discuss

All demonstrate and introduce maneuvers  
Editable and non-editable points  
HMDS cueing integration  
Map page scales  
Data frames  
Map orientation on MAP page

Demonstrate

STATUS page operation

Introduce

Vector overlays  
Mission card loading  
Loading mission card into the aircraft  
MAP page orientation  
Storing waypoints or targets  
Direct-To function  
Overlay creation and selection  
Terrain banding  
AUTO and MAN route builds  
PTA, ETA and CGS

Performance Standards

PUI will have a detailed understanding and functional knowledge of the DMS IAW the UH-1Y NATOPS.  
PUI shall load a mission card with communications, including a mission list, a route, editable and non-editable waypoints, targets and a vector overlay.  
PUI will create a route using the MAN and AUTO build functions.

Prerequisites. FAM-1103

Crew. FRSI/PUI or CSI/PUI

NAV-1501 0.0 \* SC (N) A/S STATIC 1 UH-1Y

Goal. OS - Introduce the NTIS.

Requirements

Discuss

All demonstrate and introduce maneuvers  
NTIS components  
NTIS track modes  
NTIS LASER pointer modes  
NTIS environmental considerations  
Non-uniformity correction (NUC) procedures  
Built-In-Test (BIT) procedures

Introduce

NTIS page operation  
NTIS Hand Control Unit functionality  
VTR functionality  
Storing a waypoint/target using the NTIS

Performance Standards

PUI shall have a detailed understanding and functional knowledge of the NTIS IAW UH-1Y NATOPS and Brite Star Block II Ops Manual.

Prerequisites. FAM-1103

Crew. FRSI/PUI or CSI/PUI

NAV-1502 1.5 \* R,SC D FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Introduce flight navigation.

Requirements

Discuss

Checkpoint identification using the NTIS  
Planned time of arrival and command ground speed  
Low level, contour and NOE navigation

Review

Mission card loading  
MAP page orientation  
Storing waypoints or targets  
Direct-To function  
Overlay creation and selection  
Terrain banding  
AUTO and MAN route builds  
EGI needle utilization  
PTA, ETA and CGS

Performance Standards

PUI will have a detailed understanding and functional knowledge of the DMS and FLIR IAW the UH-1Y NATOPS and Brite Star Block II Ops Manual.  
PUI shall load a mission card consisting of both editable and non-editable waypoints, communication load, mission list and one route.  
PUI will adjust at minimum two route points in MAN build and two route points in AUTO build.  
PUI will use the mission card STORE function and conduct post flight debrief with new and adjusted routes.

Prerequisites. ACAD-1010, NAV-1500 and 1501

Crew. CSI/PUI or FRSI/PUI

NAV-1503 2.0 \* R D A 1 UH-1Y

Goal. OS - Introduce flight and TERF navigation.

Requirements

Discuss

Map preparation of both the 1:250,000 Joint Operation Graphic (JOG) and 1:50,000 paper maps  
Map datum  
Flight plans vs. routes  
Checkpoint selection  
NAV/Mission load addendum packet

CRM, lookout doctrine and obstacle/hazard avoidance  
Route briefing techniques  
NAV and NTIS integration  
ASTACSOP navigation procedures and Magellan standards

Introduce

Low level, contour and NOE navigation

Review

Mission card loading  
MAP page orientation  
Storing waypoints or targets  
Direct-To function  
Checkpoint identification using the NTIS  
Overlay creation and selection  
Terrain banding  
AUTO and MAN route builds  
EGI needle utilization  
PTA, ETA and CGS  
High speed approach and landing  
High altitude emergencies  
Pattern autorotations  
Additional FAM sustainment as required

Performance Standards

PUI will have a detailed understanding and functional knowledge of the DMS and FLIR IAW the UH-1Y NATOPS and Brite Star Block II Ops Manual.  
PUI shall load a mission card consisting of both editable and non-editable waypoints, communication load, mission list and one route.  
PUI will adjust, at minimum, two route points in MAN build and two route points in AUTO build.  
PUI will use the mission card STORE function and conduct post flight debrief with new and adjusted routes.  
Plan and navigate a route in low level and contour flight of at least 5 checkpoints (20 NM minimum) using JOG (Air) followed by a transition to NOE flight and navigation of 4 additional checkpoints utilizing the 1:50,000 scale map.  
PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. TERF-1400, NAV-1502

External Syllabus Support. Authorized TERF area

Crew. FRSI/PUI/CC

NAV-1504 2.0 \* NS A 1 UH-1Y

Goal. OS - Introduce NVD navigation.

Requirements

Discuss

Night navigation considerations  
Route briefing techniques

Review

Mission card loading  
MAP page orientation  
Storing waypoints or targets  
Direct-To function  
Checkpoint identification using the NTIS

Overlay creation and selection  
Terrain banding  
AUTO and MAN route builds  
EGI needle utilization  
PTA, ETA and CGS  
High speed approach and landing  
Pattern autorotations  
Fixed pitch tail rotor malfunctions  
Additional FAM sustainment as required

Performance Standards

- PUI will have a detailed understanding and functional knowledge of the DMS and TSS IAW the UH-1Y NATOPS and Brite Star Block II Ops Manual.
- PUI shall load a mission card consisting of both editable and non-editable waypoints, communication load, mission list and one route.
- PUI will adjust, at minimum, two route points in MAN build and two route points in AUTO build.
- PUI will use the mission card STORE function and conduct post flight debrief with new and adjusted routes.
- Plan and navigate a route in low level and contour flight of at least 5 checkpoints (20 NM minimum) using JOG (Air).
- PUI shall bring appropriate SLAP data to the brief, to include Lunar Elevation/Azimuth Angles (LEAA) and Lunar Daily Illumination (LDI) charts.
- PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. FAM-1117, NAV-1503

Crew. NSFI/PUI

2.11.9 Specific Weapons Delivery (SWD)

2.11.9.1 Purpose. To develop the ability to deliver air-to-ground weapons employing all available sensors and weapons systems.

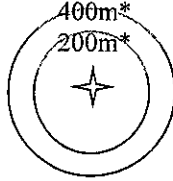
2.11.9.2 General. At the completion of this stage, PUI will demonstrate familiarity with all ordnance delivery methods.

The SWD stage shall focus on teaching the PUI proper weapons delivery switchology, techniques, and flight profiles. At the completion of the stage, the PUI should be able to perform prescribed weapons delivery demonstrating correct switchology and release profiles. SWD should be conducted on raked/scored ranges whenever possible. Focus should be on weapons delivery profiles and ordnance accuracy, not tactical scenarios. VTR debrief should be used to the maximum extent possible.

IPs shall evaluate ordnance effectiveness based on the following accuracy metrics.

CORE SKILL INTRODUCTION	UNGUIDED ROCKET STANDARD	GUN STANDARD	PURPOSE
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 <p>*Radius</p>	<p>-In correct profile per NTTP</p> <p>-No miss greater than 400 meters</p> <p>-CE90&lt;300 meters**</p>	<p>-On target within 5 seconds of trigger pull</p>	<p>-Based upon rocket Min Safe Distances (MSDs)***</p> <p>-Qualifies PUI to deliver rockets during CAS training events</p>
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\*\* CE90 example: SWD-1602 requires (7) 2.75" rockets. CE90<300 meters requires that 90% of the delivered rockets impact within 200 meters of the target. In order to calculate, simply disregard the worst 10% of rockets released and the remaining farthest SINGLE MISS DISTANCE = CE90. Conservative rounding is applied.

Examples:

- 3-10 rockets released ~ disregard one rocket, SECOND FARTHEST MISS = CE90
- 11-20 rockets released ~ disregard two rockets, THIRD FARTHEST MISS = CE90
- In no case can a single rocket miss the intended target by more than 400m, including the omitted rounds for CE90 calculation.

\*\*\* Minimum Safe Distances (MSDs) are based upon ALSA assumptions, which consider (among other factors) warhead fragmentation patterns and delivery accuracy. HE rocket delivery profiles outside of the NTTP Weapons Release Envelope will invalidate the MSDs listed in JFIRE, and will increase risk to ground personnel during CAS training events.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. SWD stage lecture, ICW complete.

References. Maneuver Description Guide, NATOPS manual, NTTP and NTRP.

SSWD-1600 1.5 \* R, SC, MR D FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Introduce ordnance checklists, weapons systems and setup and specific weapons delivery to include Fixed Forward GAU-17 delivery.

Requirements

Discuss

- All demonstrate and introduce maneuvers
- CRM during ordnance delivery
- Visual/Contact/Tally
- Ordnance checklists
- WPN page setup
- Emergency procedures
- HMSD boresight procedures/symbology sets

Demonstrate/Introduce

- Required switchology
- Ordnance checklists
- LASER system function
- WPN page setup
- Standard delivery patterns (running, diving, and fixed forward GAU-17) during ordnance evolutions

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the UH-1Y NATOPS, MDG and UH-1 NTTP.

PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan (final attack headings) and distances from target and weapons setup.  
PUI will utilize LASER rangefinder and laser designator to derive grids and store targets.  
PUI shall employ the GAU-17 Fixed Forward.

Prerequisites. ACAD-1013, SINST-1205, FORM-1301, NAV-1502

Crew. CSI or FRSI/PUI

SWD-1601 1.5 \* R,SC D A 1 UH-1Y

Goal. OS - Introduce Specific Weapons Delivery.

Requirements

Discuss

Weapons preflight  
Loading, arming, de-arming, safing and jettison procedures  
Switchology  
Rocket/Gun nomenclature and markings  
Rocket/Gun limitations  
Attack profiles  
Rapid g-onset  
Arming procedures  
Fence in/out procedures  
RIO procedures

Introduce

Live fire ordnance training with particular emphasis on standardization, crew resource management and weapons delivery accuracy

Review

ASTACSOP RIO

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the UH-1Y NATOPS, MDG and UH-1 NTTP.  
PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan (final attack headings) and distances from target and weapons setup.  
PUI will utilize LASER rangefinder and laser designator to derive grids and store targets.

Prerequisites. SSWD-1600

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, (400) M240

Range Requirement. Live fire LASER safe range (raked/scored range if available)

Crew. FRSI/PUI/CC

SWD-1602 1.5 \* D E A 1 UH-1Y

Goal. OS - Review and evaluate weapons systems and SWD.

Requirements

Discuss

Rocket scoring procedures  
Range safety considerations  
Use of DMS/FLIR for target identification  
Weapons delivery tables  
Unguided weapons delivery considerations and weapons delivery ballistics  
Communication procedures with crew chiefs  
Sighting procedures  
Visual/contact/tally

Demonstrate/Introduce

Fixed forward GAU-17 employment

Review

Rocket delivery from diving and running fire with emphasis on weapon systems operations  
All related emergencies  
Terminal control procedures  
Range safety considerations  
ASTACSOP RIO

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the UH-1Y NATOPS, MDG and UH-1 NTPP.

PUI shall load a mission card with ingress and egress route, vector overlay of the objective area to include range fan (final attack headings) and distances from target, weapons setup, and a data frame of the objective area diagram.

PUI shall demonstrate core skill intro accuracy metric while adhering to all range regulations.

PUI will employ the GAU-17 Fixed Forward.

Prerequisites. SWD-1601

Ordnance. (7) 2.75 inch rockets, (1500) 7.62mm GAU-17 and (400) M240 or (600) .50 Cal GAU-21

Range requirement. Live fire LASER safe range (raked/scored range if available)

Crew. FRSI/PUI/CC

2.11.10 Threat Counter-Tactics(TCT)

2.11.10.1 Purpose. To introduce offensive/defensive electronic and infrared countermeasures, and Aircraft Survivability Equipment (ASE).

2.11.10.2 General. At the completion of this stage, the PUI will be proficient at setup and operation of all aircraft survivability equipment and be exposed to threat indications and ASTACSOP threat reactions.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. N/A

STCT-1700 1.5 \* D FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Introduce ASE functionality and operations.

Requirements

Discuss

ASE suite operation (NATOPS checklists, visual displays and audio messages for power on and BIT)  
JMPS threat database  
Expendables  
    Nomenclature (training and tactical)  
    General purpose / applicable threat types  
AAR-47 and APR-39  
    General purpose / applicable threat types  
    Displays, controls, detectors and other components  
  
Visual and audio threat information  
Automatic and manual threat reaction capabilities & operation  
APR-39, AAR-47 and ALE-47 integration  
AAR-47 operating environment and principles of operation  
Software - version reporting and significance  
ALE-47  
    General purpose  
    Controls, displays and other components  
    System modes of operation  
    BIT, maintenance BIT and failure messages  
    MAG ID setting, reporting and implications  
    Dispense switch function

Demonstrate

RADAR search, acquire, track and launch visual/audio indications  
Successful IR missile, RADAR missile and RADAR ADA engagement and indications  
Automatically and manually dispense chaff to disrupt RADAR threat engagement  
Automatically and manually dispense flares to disrupt IR missile engagement  
Time permitting, execute ASTACSOP threat reactions (communication, maneuvering, and expendables) to visually acquired non-RADAR ADA, RADAR ADA, RADAR SAMs and IR SAMs

Introduce

ASE suite power on, BIT, settings and power off per NATOPS and TPG checklists  
ASE suite cockpit control switchology and related display information (EW page setup)  
Inventory reset  
Threat intervisibility

Performance Standards

Successfully operate (energize and BIT) and troubleshoot APR-39, AAR-47 and ALE-47 systems. Observe various threat system indications.  
PUI shall load a mission card with editable points from a local database and threats as directed by IP.  
PUI shall load a vector overlay with threat rings.

Prerequisites. ACAD-1012, SINST-1205

Crew. CSI or FRSI/PUI

2.11.11 Assault Support (ASPT)

2.11.11.1 Purpose. To develop proficiency in Tactical approaches, to include performing takeoffs and landings in confined areas, HIE and external operations.

2.11.11.2 General. PUI must demonstrate the capability to safely takeoff and land in a confined area during day and night conditions.

Crew Requirements. As listed at the end of each event. A qualified observer may be substituted for a crew chief.

Ground/Academic Training. Tactical phase lectures.

References. Maneuver Description Guide, NATOPS manual, NVD manual, NTTP

ASPT-1800 1.5 \* D A 1 UH-1Y

Goal. OS - Introduce confined area operations, to include tactical approaches.

Requirements

Discuss

- All demonstrate and introduce maneuvers
- Power settling (vortex ring state)
- Settling with power
- Blade stall
- Single engine power
- Performance and specific range charts
- Dual and single engine height-velocity diagram
- Landing zone brief
- Hover hold/hover box operations
- HOGE scan techniques
- Dynamic rollover
- Power computations
- Aircrew coordination with emphasis on crew chief briefs and utilization.

Introduce

- Confined area takeoffs/landings (to include steep approaches)
- Tactical approaches
- Slope landings
- Hover hold/hover box operations
- Maximum power takeoffs
- Power checks (ground and airborne)
- Minimum rotor clearance approaches

Review

- Tactical landing profile

Performance Standards

- IAW the UH-1Y NATOPS, NTTP and MDG.
- PUI shall load a mission card with editable waypoints of desired CAL sites, route between the CAL sites and a vector overlay of any ranges/restricted airspace to avoid.

Prerequisites. SINST-1205, ACAD-1014

Crew. FRSI/PUI/CC

ASPT-1801 1.5 \* R,SC D A 1 UH-1Y

Goal. OS - Introduce Tactical CAL approaches.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Threat conditions  
Tactical approaches and departures  
HIE considerations  
High altitude operations and considerations  
Brown out/white out landings  
Austere landing zone location and evaluation

Demonstrate

Brownout landings

Introduce

Tactical approaches and departures in a low and high threat environment  
Austere landing zone negotiation

Review

Confined area takeoffs/landings  
Slope landings  
Tactical approaches

Performance Standards

IAW the UH-1 NTTP and MDG.  
PUI shall load a mission card with editable waypoints of desired CAL sites, route between the CAL sites and a vector overlay of any ranges/restricted airspace to avoid.

Prerequisite. ASPT-1800

Crew. FRSI/PUI/CC

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ASPT-1802	1.5	*	R,SC,MR	NS	A	1 UH-1Y
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Goal. OS - Introduce NVD CALs.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Use of searchlight  
NVD brown out/white out landings  
Effects of moisture

Introduce

Takeoffs  
Approaches  
Normal landings  
Slope landings to a confined area  
NVD brown out landings

Performance Standards

IAW the UH-1 NTTP and MDG

PUI shall load a mission card with editable waypoints of desired CAL sites, route between the CAL sites, a vector overlay of any ranges/restricted airspace to avoid and a data frame of imagery of one of the CAL sites.

Prerequisites. FAM-1117, ASPT-1801

Crew. NSFI/PUI/CC

ASPT-1803 1.5 \* D A 1 UH-1Y

Goal. OS - Introduce external load and hoist procedures.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Engine failures  
Inadvertent IMC  
Hook/hoist capabilities/limitations  
Aircrew coordination  
HST teams  
Ground crew brief  
Load jettison

Introduce

Proper techniques for external and hoist pickup.

Performance Standards

IAW the UH-1Y NATOPS and MDG.  
PUI shall load a mission card with editable waypoints for the working area and demonstrate the functionality of the PIM feature.

External Syllabus Support. External weight, HST if available

Prerequisite. INST-1205

Crew. FRSI/PUI/CC

2.11.12 Core Skill Introduction Check (CSIX)

2.11.12.1 Purpose. To review all areas of instruction and demonstrate proficiency and knowledge of all maneuvers to certify the PUI as PQM and Core Skill Introduction Phase complete.

2.11.12.2 General. The PUI will demonstrate proficiency through the Core Skill Introduction phase. Upon completion of the evaluation event, the PUI will be designated as PQM IAW UH-1Y NATOPS Chapter 5. CSIX-1900/1901 meets the qualifications for the 7513/7563 MOS and will serve as the initial NATOPS evaluation (NTPS-6101). PUI shall have conducted at least 1.5 hours of FAM sustainment prior to CSIX phase or PUI shall be scheduled for a 1.5 hour FAM warm-up prior to SCIX-1901.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. N/A

SCSIX-1900 1.5 \* R,SC,MR D E FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Emergency procedures and CRM evaluation.

Requirements

Discuss

30 minutes of discussion time allotted to the NATOPS and crew brief.

Review

NATOPS brief  
Engine hot start  
Emergency shutdown  
Main driveshaft failure  
Loss of tail rotor thrust/components in a hover  
Loss of tail rotor thrust/components in flight  
Dual engine failure  
Any other aircraft emergencies with emphasis on causes, indications and procedures to recover aircraft  
CRM

Performance Standards

First half of sortie is scenario based using a ferry/cross country flight profile. PUI shall receive a scenario assignment with the published flight schedule, and conduct NATOPS and crew briefs to co-pilot. PUI shall act as PIC. A NAV-1500 complete copilot is mandatory.  
Current scenarios in use shall be published in the HMLAT-303 Course Catalog.  
PUI shall conduct all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI will demonstrate knowledge, safety and CRM considerations during the execution of emergency procedures.

Prerequisites. All Core Skill Introduction Phase events complete except CSIX-1901

Crew. CSI OR ASI/PUI/Co-pilot (NAV-1500 complete)

CSIX-1901 2.0 \* R,SC,MR D E A 1 UH-1Y

Goal. RS - Core Skill Introduction Check.

Requirements

Discuss

Responsibilities of the Pilot Qualified in Model (PQM) IAW OPNAV 3710.7  
Any aircraft system, limit, EP or MDG procedure

Review

FAM maneuvers  
IFR operations and procedures  
VFR operations and procedures  
Navigation  
Simulated emergencies  
Inflight contingencies

Performance Standards

PUI shall act as PIC and IP shall act as peer-level co-pilot. PUI shall plan, brief and lead the flight based on an assigned mission profile and IP guidance.  
Mission profile shall focus on the tasks related to ferry/cross



country flights and shall incorporate VFR and IFR components. Mission profile should include operations at controlled and uncontrolled airports and where possible, exposure to land as soon as possible and land as soon as practical emergencies away from homefield.

PUI shall demonstrate a detailed understanding and functional knowledge of any previously introduced procedure, emergency, system, and maneuver IAW the UH-1Y NATOPS and MDG.

PUI shall demonstrate the ability to safely execute any previously introduced procedure, maneuver or emergency.

PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. SCSIX-1900

Crew. ASI/PUI

2.12 CORE SKILL ACADEMIC PHASE (2000)

2.12.1 Purpose. To develop a Core Skill complete co-pilot. These academics facilitate understanding of functions/operations in the UH-1Y and ensure individuals possess the requisite knowledge to be a TERF, TCT, REC, ASPT, FCLP, SWD, NSQ and ANSQ qualified co-pilot. The focus of this training is co-pilot combat proficiency.

2.12.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 UH-1 Course Catalog. The academic courseware is a requirement. At the completion of each ACAD event, the appropriate training code shall be logged in M-SHARP by the individual pilot, contract instructor or squadron operations personnel, as appropriate. The codes listed below associated with these classes may NOT be the most up to date as the current UH-1 Course Catalog is the master document for stage academic requirements.

2.12.3 Core Skill academic events are listed below.

CORE SKILLS ACADEMIC PHASE	
TRAINING CODES	COURSEWARE
<b>GENERAL REQUIREMENTS</b>	
ACAD-2000	HMLA HAVEQUICK/SINGGARS
<b>TERF</b>	
ACAD-2012	H-1 Aerodynamics
ACAD-2013	The Night Operational Environment
ACAD-2014	NVG Systems and Image Characteristics
ACAD-2015	Human Factors
ACAD-2016	FLIR Introduction and Theory
ACAD-2017	NVG Components and Pre-flight Procedures
ACAD-2018	NVG Misperceptions and Illusions
ACAD-2019	Circadian Rhythm and Fatigue
ACAD-2020	Night Operations & Planning Aids
<b>TCT</b>	
ACAD-2021	(S) Evasive Maneuvers
ACAD-2023	(S) HMLA ASE*
<b>REC</b>	
ACAD-2011	Recognition of Combat Vehicles (ROC-V)**
ACAD-2042	UH-1 FLIR Employment
<b>ASPT</b>	
No Lectures	
<b>FCLP</b>	
No Lectures	

SWD	
ACAD-2060	UH-1 Ordnance Delivery
ACAD-2061	UH-1 Weapons Systems
ACAD-2062	UH-1 Rockets
ACAD-2063	(S) AGM-114 Hellfire
ANSQ	
No Lectures	
FAM	
No Lectures	
CORE SKILLS	
ACPM-8200	MACCS Agencies, Functions, and Control of Aircraft and Missiles
ACPM-8201	MWCS Brief
ACPM-8202	ACA and Airspace
ACPM-8210	Aviation Ground Support
ACPM-8230	ACE Battle Staff
ACPM-8231	Battle Command Display
ACPM-8240	Six Functions of Marine Aviation
ACPM-8241	ASR/JTAR Introduction and Practical Application
ACPM-8242	Site Command Primer
ACPM-8250	Theater Air Ground System (TAGS)
*Indicates classes that should be presented to all pilots annually.	
** ROC-V available at <a href="https://www.marinenet.usmc.mil">https://www.marinenet.usmc.mil</a> or <a href="https://roc.v.army.mil">https://roc.v.army.mil</a> .	

2.13 CORE SKILL PHASE (2000)

2.13.1 Purpose. To produce a Core Skill proficient co-pilot.

2.13.2 General. Upon completion of this phase, the pilot will be TERF, TCT, REC, ASPT, FCLP, SWD, NSQ and ANSQ complete, and may conduct additional skills as specified by the squadron commander.

Consideration should be given to scheduling a co-pilot in addition to the instructor during completion of some simulator events. Providing a co-pilot will provide a more realistic crew environment and facilitate better Crew Resource Management (CRM) techniques.

Completion of TERF-2101 meets the requirements for the PUI to be TERF qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as TERFQ shall be placed in the NATOPS jacket and APR.

Completion of TERF-2101 and ASPT-2403, meets the requirements for the PUI to be Night Systems Qualified (NSQ). At the discretion of the squadron commanding officer a letter assigning the PUI as NSQ shall be placed in the NATOPS jacket and APR.

Completion of ANSQ-2700 through 2703 and meets the requirements for the PUI to be Advanced Night Systems Qualified (ANSQ). At the discretion of the squadron commanding officer a letter assigning the PUI as ANSQ shall be placed in the NATOPS jacket and APR.

Prior to completion of the Core/Mission Skills Phase, Expeditionary Shore Based (FARP) Operations shall be conducted. Refer to Mission Skills Phase, paragraph 2.15.16 for sortie requirements. EXP-3600 through 3603 may be logged in conjunction with any Core or Mission Skills Phase event.

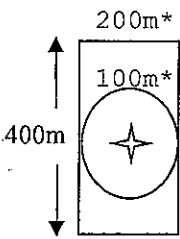
2.13.2.1 Stages. The following stages are included in the Core Skill Phase of training.

CORE SKILL PHASE	
PAR NO.	STAGE NAME
2.13.3	Terrain Flight (TERF)

2.13.4	Threat Counter-Tactics (TCT)
2.13.5	Reconnaissance (REC)
2.13.6	Assault Support (ASPT)
2.13.7	Field Carrier Landing Practice (FCLP)
2.13.8	Specific Weapons Delivery (SWD)
2.13.9	Advanced Night Systems Qualification (ANSQ)
2.13.10	Familiarization (FAM)

Pilots entering the Core Skill Phase shall have completed the Core Skill Introduction Phase.

2.13.2.2 Ordnance Delivery. For Core Skill events involving ordnance delivery, the PUI shall be evaluated on delivery accuracy. Fixed forward weapons and crew served weapons listed for each event will be selected based on training requirements IPs shall evaluate ordnance accuracy based on the following accuracy metrics.

CORE SKILL	UNGUIDED ROCKET STANDARD	GUN STANDARD	PURPOSE
 <p>*Radius</p>	<p>-In correct profile per NTTP</p> <p>-No miss greater than 200 meters long/short, 100 meters laterally</p> <p>-CE90&lt;100 meters**</p>	<p>-On target within 3 seconds of trigger pull</p> <p>-Crew served: Crew coordination sufficient to achieve AG metric.</p>	<p>-Based upon rocket Risk Estimate Distances (REDs)***</p> <p>-Qualifies PUI to deliver rockets during combat OAS</p>

\*\* CE90 example: SWD-2603 requires (7) 2.75" rockets. CE90<100 meters requires that 90% of the delivered rockets impact within 100 meters of the target. In order to calculate, simply disregard the worst 10% of rockets released and the remaining farthest SINGLE MISS DISTANCE = CE90. Conservative rounding is applied.

Examples:

- 3-10 rockets released ~ disregard one rocket, SECOND FARTHEST MISS = CE90
- 11-20 rockets released ~ disregard two rockets, THIRD FARTHEST MISS = CE90
- In no case can a single rocket miss the intended target by more than 200m, including the omitted rounds for CE90 calculation. This constitutes failure to meet the performance standard.

\*\*\* Risk Estimate Distances (REDs) are based upon ALSA assumptions, which consider (among other factors) warhead fragmentation patterns and delivery accuracy. HE rocket delivery profiles outside of the NTTP Weapons Release Envelope will invalidate the REDs listed in JFIRE, and will increase risk to ground personnel during CAS missions.

2.13.2.2.1 APKWS- Correct switchology, proper LASER placement, profile IAW UH-1 NTTP direct hit.

2.13.2.2.2 TOTs - Initial ordnance shall be delivered within +/- 30 seconds of established TOT.

2.13.2.3 Navigational Accuracy. At the completion of this phase, the PUI will have demonstrated increased navigational accuracy and timeliness during

under low threat conditions. The PUI shall demonstrate the ability to meet the Core Skills assault support accuracy metric. PUI shall consistently land within +/- 60 seconds of the assigned L-Hour and within 75 meters of the planned landing point. At least once, the PUI must be able to land within +/- 30 seconds of L-Hour. IP shall use MPS or aircraft systems to assess landing point accuracy.

2.13.3 Terrain Flight/Navigation (TERF)

2.13.3.1 Purpose. To refine proficiency in terrain flight and navigation.

2.13.3.2 General. PUI will demonstrate proficiency in terrain flight and navigation. Once complete in this stage the pilot may be TERF qualified at the discretion of the commanding officer.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

TERF-2100 2.0 180 R D A 1 UH-1Y

Goal. OS - Review TERF maneuvers and navigation.

Requirement

Discuss.

Terrain appreciation  
Effective CRM/TRM during navigation  
Navigation terminology  
Load computations and HIGE/HOGE requirements  
Assault Support Tactical SOP (ASTACSOP)  
Terrain flight tactical application  
Moving map navigational system use and operation  
High gross weight handling characteristics  
Obstacle avoidance

Review

TERF profiles  
TERF maneuvers  
Loading and operation of the moving map navigation system  
CRM during TERF

Performance Standards

PUI shall conduct the route brief.  
PUI shall complete a navigation route with a minimum of 5 checkpoints utilizing a 1:50,000 scale map and minimum length of 20 NM. Remain oriented on entire route within 500 meters, 15 degrees of heading and 1 minute of planned route time.  
PUI shall conduct all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTP.  
PUI shall conduct a minimum of 5 landings to an unimproved landing site.

Prerequisites. ACAD-2012

Range Requirement. Authorized TERF route, high bird if required

Crew. TERFI/PUI/CC

Note. For those pilots assigned to the Refresher and Series Conversion

POI. If NAV-1503 has been flown within the preceeding 180 days, they meet the Performance Standards of TERF-2100. Manual entry, i.e. baseline in M-SHARP with proficiency date of NAV-1503.

TERF-2101    2.0    180    R,SC,M    NS    A    1 UH-1Y

Goal. OS - Review TERF maneuvers and navigation using NVDs (HLL).

Requirements

Discuss

ASTACSOP lighting configurations  
NVD focus procedures  
NVG and A/C emergencies  
TERF maneuvers at night  
NVD scan patterns in TERF environment  
Cultural lighting  
Intercockpit and intraflight crew coordination during low altitude tactical flight utilizing NVGs

Review

Proper NVD scan patterns  
ASTACSOP lighting configurations  
NVD TERF flight and maneuvers considerations  
Effective CRM during navigation and obstacle avoidance

Performance Standards

PUI shall conduct the route brief.  
PUI shall complete a navigation route with a minimum of 5 checkpoints utilizing a 1:50,000 scale map and minimum length of 20 NM. Remain oriented on entire route within 500 meters, 15 degrees of heading and 1 minute of planned route time.  
PUI shall conduct all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTTP.  
PUI shall conduct a minimum of 5 landings to an unimproved landing site.

Prerequisites. ACAD-2013 through 2020, TERF-2100

Range Requirement. Authorized TERF route, high bird if required

Crew. NSI/PUI/CC/AO

2.13.4 Threat Counter Tactics (TCT)

2.13.4.1 Purpose. To introduce offensive/defensive electronic and infrared countermeasures, tactics, employment of Aircraft Survivability Equipment (ASE) in a radar/IR environment.

2.13.4.2 General. At the completion of this stage, the PUI will be proficient at setup, operation, and employment of all aircraft survivability equipment.

Aircraft should be configured with an operable APR-39, ALE-47, AAR-47, HMSD, NTIS, LTD/LRF and VTR.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

STCT-2200    1.5    \*    D    FFS/FTD S-TEN    1 UH-1Y

Goal. OS - Introduce ASE operation in a low to medium IR and RADAR threat environment.

Requirements

Discuss

ASTACSOP evasive maneuvers/threat reactions  
ALE-47 flare and chaff expendable characteristics  
HMSD Symbology

Demonstrate/Introduce

An entire RADAR threat missile engagement sequence with emphasis on system indications and function  
Threat RADAR systems and their associated APR-39 indications  
Pre-emptive and reactive expendable use against an IR threat  
A preplanned attack against a RADAR or IR threat  
A reactive attack against a RADAR or IR threat  
Brevity calls  
ASTACSOP threat reaction calls  
APR-39, AAR-47, and ALE-47 systems operations to include power up, Built In Test (BIT) procedures, training mode and basic mode/manual operations  
APR-39, AAR-47, and ALE-47 system trouble shooting

Performance Standards

Successfully operate (energize and BIT) APR-39, AAR-47, and ALE-47 systems.  
Successfully select the ALE-47 training mode.  
Given a threat, select an appropriate ALE MAG ID and program setting.  
Correctly identify APR-39 threat system displays based on system visual/aural indications.

Prerequisite. ACAD-2021, 2023

Crew. TSI/PUI

STCT-2201 1.5 365 R,SC,M (NS) FFS/FTD S-TEN+/A 1 UH-1Y & 1 H-1

Goal. OS - Introduce tactical employment of ASE versus RADAR and IR threat systems.

Requirements

Discuss

Capabilities/limitations/weapon envelopes of potential threat systems; (1) IR threat, (1) RADAR threat  
Terrain profile analysis and related tactical considerations  
Maneuvers/terrain masking necessary to avoid detection/acquisition from enemy infrared guided and optically tracked systems

Demonstrate/Introduce

How to plan a route in order to avoid a threat using mission planning software, threat overlays and WEZ analysis  
Use of aircraft systems to aid in threat avoidance (e.g. CLOS, intervisibility)

Review

APR-39, AAR-47, and ALE-47 systems operation

Tactical employment of PGMs versus preplanned and reactive targets in an IR SAM threat environment  
ALE-47 expendable characteristics

Performance Standards

Successfully operate (energize and BIT) APR-39, AAR-47, and ALE-47 systems.  
Successfully BIT and report MAGIDs on the ALE-47.  
Given a threat, select an appropriate ALE MAG ID and program setting  
Correctly identify APR-39 threat system displays based on system visual/aural indications.  
Correctly perform appropriate evasive maneuvers and expendable release in response to surface to air threat.  
Execute a preplanned attack against a RADAR or IR threat.  
Execute a reactive attack against a RADAR or IR threat.

Prerequisite. STCT-2200 (TERF-2100~AC, TERF-2101~NS AC)

Ordnance. If flown in aircraft: (60) chaff/flares

Range Requirement. EW range, LASER safe range

External Syllabus Support. TRTG, remote radar emitter and IR stimulator support

Crew. TSI(NSI)/PUI (WTO(NSI)/PUI~AC)

#### 2.13.5 Reconnaissance (REC)

2.13.5.1 Purpose. To develop proficiency in reconnaissance operations.

2.13.5.2 General. The PUI will demonstrate proficiency in aircraft system employment and sensor management for target detection, recognition and identification during reconnaissance operations.

Aircraft shall be configured with an operable NTIS, HMSD, and VTR.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

SREC-2300 1.5 \* D FFS/FTD S-TEN/A 1 UH-1Y

Goal. OS - Introduce day visual reconnaissance.

#### Requirements

##### Discuss

NTIS switchology, components and functions  
HMSD system components, operation and integration  
Sensor Management  
VTR functions and tactical use  
Basic Visual Reconnaissance techniques  
Commander's Critical Information Requirements (CCIRs)  
Traveling, traveling overwatch & bounding overwatch

##### Demonstrate/Introduce

Controller operation and image optimization (Grayscale, NUC, and Gyro Drift Null, etc)  
All operating modes (FIT, Cage, etc.)  
LASER operation  
VTR displays and functions  
S-2 debrief  
MISREP/IFREP procedures  
Intelligence collection/dissemination procedures  
Buddy Lase procedures

Performance Standards

Successfully operate (energize and boresight) NTIS system.  
Successfully operate NTIS to include gain/level, man/auto, polarity and focus.  
Successfully record and play back VTR.  
Correctly describe LASER range finder/designator and LASER functions.  
Correctly perform auto track, offset, pre-point, source selection functions.

Prerequisites. ACAD-2011, 2016, 2042 (TERF-2100~AC)

Range Requirement. Authorized TERF area, LASER safe range

External Syllabus Support. Thermally augmented threat vehicles, if available

Crew. TSI/PUI (WTO/PUI~AC)

REC-2301 1.5 120 R,M NS A 1 UH-1Y & 1 H-1

Goal. OQ - Introduce visual reconnaissance procedures (HLL).

Requirements

Discuss

Section TERF maneuvering  
Use of sensor performance prediction tools

Demonstrate/Introduce

Traveling, traveling overwatch & bounding overwatch  
Use of sensor performance prediction tools

Review

NTIS switchology/components/functions  
HMSD system components, operation and integration  
Sensor management  
Basic Visual Reconnaissance techniques  
Commander's Critical Information Requirements (CCIRs)  
MISREP/IFREP procedures  
Intelligence collection and dissemination procedures

Performance Standards

Utilize the proper reconnaissance method to acquire detect, identify and recognize targets.  
PUI shall demonstrate proficiency with sensors and modes.  
PUI shall conduct reconnaissance, while demonstrating functional knowledge of recce techniques and proper use of the sensor.  
PUI shall use the data recorder (VTR) for debrief and mission analysis.

Prerequisites. TERF-2101, SREC-2300

Range Requirement. Authorized TERF area, LASER safe range, if available

External Syllabus Support. Thermally augmented threat vehicles, if available

Crew. NSI/PUI/CC/AO



2.13.6 Assault Support (ASPT)

2.13.6.1 Purpose. To develop proficiency in section tactical approaches, landings and departures during day and HLL conditions.

2.13.6.2 General. The PUI will demonstrate proficiency in tactical landings, tactical approaches and section assault support skills.

Aircraft shall be configured with an operable NTIS, HMSD and VTR.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the UH-1 MAWTS-1 Course Catalog.

ASPT-2400 1.5 \* D A 2 UH-1Y

Goal. OS - Introduce section tactical approaches, landings and departures.

Requirements

Discuss

Section tactical approaches, landings and departures  
Flight and individual waveoffs  
Low to high rejoin IAW UH-1 NTTP  
IP to LZ timing  
Tactical landing profile  
Reduced Visibility Landings (RVLs) and CRM  
Landing zone selection criteria  
Use of HMSD symbology during approach, landing and takeoff  
Recommended waveoff parameters and use of HMSD Navigational systems utilization

Demonstrate/Introduce

Straight-in approach (IP to LZ) with timing  
Section tactical approaches, landings and departures  
Simultaneous landings  
Tactical landing profile  
Flight and individual waveoffs  
Low to high rejoin IAW UH-1 NTTP  
Medium altitude approach and approach entries and departures

Review

Tactical approaches  
Tactical departures  
Slope landings

Performance Standards

A minimum of two LZs shall be selected, with associated IPs and timing to LZs. PUI shall perform a minimum of two straight-in approaches.

A minimum of 4 landings shall be accomplished as lead and 4 landings shall be accomplished as the wingman, with a minimum of one (1) simulated/actual reduced visibility landing.

PUI shall perform a minimum of one (1) low to high rejoin as wingman IAW UH-1 NTTP.

Prerequisite. N/A

Crew. BIP/PUI/CC

ASPT-2401 1.5 \* NS A 2 UH-1Y

Goal. OS - Introduce section tactical approaches, landings and

departures (HLL).

Requirements

Discuss

- LZ diagrams
- Environmental impacts on LZ selection
- Use of overt / IR searchlight
- Far/near ITG
- NVD/HMSD considerations

Demonstrate/Introduce

- Section tactical approaches, landings and departures at night
- NVD compatible landing zone lighting aids
- Use of overt / IR searchlight
- NVD scan patterns during approach and landing in lead and -2 positions
- Night RVLs
- Far/near ITG
- Sensor usage in zone identification
- Low to high rejoin IAW UH-1 NTTP
- Medium altitude approach and approach entries and departures

Review

- Straight-in approach (IP to LZ) with timing
- Section tactical approaches, landings and departures
- Simultaneous landings
- Tactical landing profile
- Flight and individual waveoffs

Performance Standards

- A minimum of two LZs shall be selected with associated IPs and timing to LZs. A minimum of two straight-in approaches shall be performed.
- A minimum of 4 landings will be accomplished as lead and 4 landings will be accomplished as the wingman, with a minimum of 1 simulated/actual reduced visibility landing.
- PUI shall perform a minimum of one low to high rejoin as wingman IAW UH-1 NTTP.

Prerequisite. ASPT-2400

Crew. NSI/PUI/CC/AO

ASPT-2402 1.5 120 R D A 2 UH-1Y

Goal. OS - Introduce tactical assault support ingress profiles and landing formations IAW UH-1 NTTP.

Requirements

Discuss

- Tactical ingress profiles
- Tactical landing formations
- HIE profiles
- Tactical landing considerations and constraints
- LZ imagery
- Methods of insertion/extraction
- Accountability
- Air to air TACAN usage
- Power management and planning considerations
- Line of deconfliction (LOD) usage

Introduce

Single Point, Single Axis Ingress Profile  
Single Point, Dual Axis Ingress Profile  
Multiple Point, Single Axis Ingress Profile  
Multiple Point, Dual Axis Ingress Profile  
Fastrope/Rappel Profiles and communication  
Flight and individual waveoffs for single and multiple points

Review

Straight-in approach (IP to LZ) with timing  
Section tactical approaches, landings and departures  
Simultaneous landings  
Low to high rejoin IAW UH-1 NTPP

Performance Standards

PUI shall produce applicable LZ diagrams IAW UH-1 NTPP and brief LZs and ingress profiles.  
A minimum of one LZ shall be selected with associated IP and timing to LZ.  
A minimum of 4 ingress profiles shall be accomplished as lead and 4 ingress profiles shall be accomplished as the wingman.  
IP will demonstrate a fastrope or rappel profile.

Prerequisite. TERF-2100, ASPT-2400

Crew. BIP/PUI/CC

ASPT-2403 1.5 120 R,SC,M NS A 2 UH-1Y

Goal. OS - Conduct tactical assault support ingress profiles and landing formations IAW UH-1 NTPP (HLL).

Requirements

Discuss

Previously discussed stage items.

Review

Straight-in approach (IP to LZ) with timing  
Section tactical ingress profiles, approaches, landings and departures  
Simultaneous landings  
Low to high rejoin IAW UH-1 NTPP  
Slope landings  
Section tactical approaches, landings and departures at night  
NVD compatible landing zone lighting aids  
Use of overt / IR searchlight  
NVD scan patterns during approach and landing in lead and -2 positions  
Night RVLs  
Far/near ITG  
Sensor usage in zone identification  
Fastrope/Rappel Profiles and communication  
Flight and individual waveoffs  
Tactical ingress profiles  
Tactical landing formations  
HIE profiles  
Tactical landing considerations and constraints  
LZ imagery  
Methods of insertion/extraction  
Accountability  
Air to air TACAN usage  
Power management and planning considerations  
Line of deconfliction (LOD) usage

Evaluate

PUI's ability to safely conduct tactical ingress profiles, approaches and landings under HLL conditions  
All previously discussed NVD operations and system integration

Performance Standards

PUI shall demonstrate safe basic air work, sound judgment, and situational awareness in the lead and wingman positions.  
PUI shall produce applicable LZ diagram(s) and brief section tactical approaches, landings and departures.  
A minimum of 4 landings will be accomplished as lead and 4 landings will be accomplished as the wingman.  
PUI shall achieve at least one L-hour within +/- 30 seconds.

Prerequisite. TERF-2101, ASPT-2401, 2402

Crew. NSI/PUI/CC/AO

ASPT-2404 1.0 730 R,M D A 1 UH-1Y

Goal. OS - Conduct external cargo procedures.

Requirements

Discuss

External cargo flight profiles  
Power management planning  
Aircrew coordination  
Hand and arm signals  
ICS terminology  
Hook limitations/malfunctions  
Load release procedures  
Emergency procedures

Review

Operational check of cargo hook  
Cargo hook pendant and manual release  
Emergency procedures for external operations

Performance Standards

Demonstrate proper ICS terminology, hook operation and preflight.  
Perform at least two hook-up, flight and release operations for cargo hook.

Prerequisite. TERF-2100

External Syllabus Support. Helicopter Support Team (HST) and cargo

Crew. BIP/PUI/CC/AO

2.13.7 Field Carrier Landing Practice (FCLP)

2.13.7.1 Purpose. To introduce flight operations from a carrier deck or air capable ship during the day and at night using the simulator and by introducing day and night FCLPs.

2.13.7.2 General. The PUI will demonstrate/introduce proper communication procedures, patterns and aviation operations in the shipboard environment. Consideration should be given to conducting FCLPs to both LSD/LPD and LHA/LHD deck configurations. Refer to appropriate NATOPS and LHA/LHD/MCS NATOPS manuals for shipboard operations.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

SFCLP-2500 1.5 \* \_\_\_\_\_ D/NS/N\* FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Introduce day, night, and NVD shipboard operations.

Requirements

Discuss

Flight deck operations (e.g. lighting, air plan, starting procedures)  
Wind envelopes and engage/disengage envelopes  
Shipboard EPs  
Alpha, Charlie, and Delta patterns  
Shipboard instrument procedures (e.g. TACAN, Carrier Controlled Approaches (CCA), marshals)  
Lost communication procedures  
Shipboard lighting and NVG procedures  
Shipboard communication procedures  
Shipboard helicopter director visual signals

Demonstrate

Day, Night and NVD shipboard patterns and approaches  
Helicopter director visual signals  
Shipboard communications  
Landings to an L-class amphibious ship

Performance Standards

IAW the UH-1Y NATOPS and shipboard NATOPS manuals, conduct a minimum of 3 day, 3 NVD and 3 unaided night landings to an L-class amphibious ship.  
PUI shall conduct 1 CCA and 1 TACAN instrument approach in simulated instrument conditions.

Prerequisite. N/A

Crew. TSI+NSI/PUI

FCLP-2501 1.0 365 R \_\_\_\_\_ D \_\_\_\_\_ A \_\_\_\_\_ 1 UH-1Y

Goal. OS - Introduce day FCLP operations.

Requirements

Discuss

Types of air capable ships  
Shipboard specific crew coordination  
Deck crewman vest colors  
Helicopter director visual signals  
Emergency and ditching procedures  
Wind limitation and engage/disengage charts  
Shipboard terminology  
Different case departures and arrivals  
HERO conditions and ordnance operations  
Shipboard airspace  
Blade fold system and operations  
Rotor brake start procedures

Demonstrate/Introduce

Day shipboard patterns  
Sight picture and landings to an FCLP deck  
Blade fold or spread operations

Execute a rotor brake start

Review

Shipboard patterns  
Shipboard EPs

Performance Standards

PUI shall conduct a minimum of 5 day FCLP landings per the UH-1Y  
NATOPS and shipboard NATOPS manuals.  
PUI shall observe and participate in blade fold operations.

Prerequisites. SFCLP-2500

External Syllabus Support. FCLP pad

Crew. BIP/PUI/CC

FCLP-2502 1.0 365 R,M N\*/NS A 1 UH-1Y

Goal. OS - Introduce night and NVD FCLP operations.

Requirements

Discuss

Instrument scan considerations  
Night shipboard specific crew coordination  
Shipboard lighting considerations  
NVD failures and emergency procedures  
Spatial disorientation and vertigo  
Shipboard instrument procedures

Demonstrate/Introduce

Night unaided/NVD patterns  
Sight picture and HMSD usage  
Landings to an FCLP deck

Review

Shipboard communication procedures  
Shipboard helicopter director visual signals

Performance Standards

PUI shall conduct a minimum of 5 unaided and 5 NVD landings IAW the  
UH-1Y NATOPS and shipboard NATOPS manuals.

Prerequisite. FCLP-2501

External Syllabus Support. FCLP pad with overt and NVD deck lighting

Crew. NSI/PUI/CC/AO

2.13.8 Specific Weapons Delivery (SWD)

2.13.8.1 Purpose. To develop proficiency in SWD and weapons system  
employment.

2.13.8.2 General. At the completion of this stage, the PUI will have  
demonstrated proficiency in ordnance delivery and proper use of the sensors  
under all threat conditions with mixed ordnance loads. SWD should be  
conducted on raked/scored ranges whenever possible. Focus should be on  
weapons delivery profiles and ordnance accuracy, not tactical scenarios.  
Recorded mission footage should be used to debrief to the maximum extent  
possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while  
utilizing the ordnance systems.

Aircraft should be configured with an operable NTIS, crew-served weapons, HMSD, LTD/LRF, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

The ranges used for employing crew served weapons vary due to the intended training profile being used during specific weapons delivery execution. The ranges are based on the transition points throughout a full attack profile from ingress to pull off. The initial simulator event focuses on forward firing ordnance with ranges from 300-800 meters. The initial flight in each light condition dictates ranges for crew served weapons from 300-1500 meters in order to focus training on the second and third phase of an attack profile (transition from the pop to forward firing ordnance). Subsequent events in each light condition may dictate ranges from 300-2000 meters for crew served weapons in order to focus training on the complete attack profile from ingress to pull off.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

SSWD-2600 1.5 \* D FFS/FTD S-TEN 1 UH-1Y

Goal. OS - Conduct SWD with rockets and fixed forward GAU-17. Introduce sensor employment in conjunction with SWD.

Requirements

Discuss

- Sensor employment
- LASER designation considerations
- J-LASER terminology
- Weapons checklists
- Attack patterns
- FRAG patterns
- Bore sighting procedures/techniques
- Malfunction procedures
- Use of ordnance delivery charts
- APKWS characteristics
- APKWS employment procedures
- APKWS weaponeering considerations
- APKWS aircrew coordination
- Surface Danger Zones (SDZs)
- Flechette rockets and profiles
- HMSD symbology

Demonstrate/Introduce

- Flechette delivery profile
- APKWS employment and CRM
- Low/medium altitude delivery profiles

Review

- Ordnance procedures
- Aircrew coordination
- Weapon malfunctions/emergencies
- Rocket delivery profiles

Performance Standards

- Conduct the arm/dearm and the Penetration/After Firing checklist per UH-1Y NATOPS & TPG.
- PUI shall conduct diving fire, long range marking, APKWS rocket delivery, and fixed forward gun delivery.

Successful employment of 2.75" rockets at ranges from 500-1200 meters, exhibiting proper impact, detection, and adjustment.  
Successful employment of APKWS at ranges from 1500-5000 meters utilizing all profiles.  
Successful employment of the GAU-17 (fixed forward) at ranges from 300-1200 meters, exhibiting proper impact, detection, and adjustment.  
During at least one engagement PUI shall adhere to a TOT +/- 30 seconds.

Prerequisites. ACAD-2060 through 2062, TCT-2200

Crew. TSI/PUI

SWD-2603 1.5 \* D A 1 UH-1Y

Goal. OS - To develop proficiency at specific weapons delivery.

Requirements

Discuss

Ordnance and weapons nomenclature  
Engagement envelopes of 2.75" rockets  
Use of ordnance delivery charts  
Minimum Safe Distances (MSDs)  
Risk Estimate Distances (REDS)  
Danger Close  
SWD error analysis  
CRM and intracockpit communication during ordnance evolutions

Review

Sensor employment  
LASER designation considerations  
Weapons checklists  
Attack patterns  
FRAG patterns  
Bore sighting procedures/techniques  
Malfunction procedures  
Use of ordnance delivery charts  
APKWS employment procedures  
J-LASER terminology  
Flechette rockets and profiles  
HMSD symbology  
FRAG patterns

Performance Standards

PUI shall conduct crew served weapons delivery and attack profiles IAW the UH-1Y NATIP/NTTP.  
Successful employment of crew served weapons at ranges 300-1500 meters and 2.75 inch rockets at ranges from 500-1200 meters, exhibiting proper impact detection and adjustment, working towards Core Skill accuracy metric while adhering to all range regulations.  
PUI shall conduct Fixed Forward GAU-17 delivery.

Prerequisite. TERF-2100, SSWD-2600

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Live fire LASER safe range

Crew. WTO/PUI/CC/AG



SWD-2604    1.5    180    R                    D                    A                    1 UH-1Y & 1 H-1

Goal.    OS - To develop proficiency at ordnance delivery.

Requirements

Discuss

Weapon switchology with emphasis on ordnance trouble shooting  
Attack patterns  
SOP ordnance procedures  
Use of rocket charts and delivery techniques  
Target fixation  
ASE components/functions  
Rocket/gun related emergency procedures

Review

Ordnance procedures  
Aircrew coordination  
Weapons preflight  
Arming/de-arming, and clear and safe procedures  
All ordnance emergencies  
CRM during ordnance evolutions  
HMDS symbology

Performance Standards

PUI shall conduct crew served weapons delivery and attack profiles  
IAW the UH-1Y NATIP/NTTP.  
Employ rockets, fixed forward guns and crew served weapons in  
running and diving fire.  
Successful employment of crew served weapons at ranges 300-1500  
meters and 2.75 inch rockets at ranges from 500-1200 meters,  
exhibiting proper impact detection and adjustment, working  
towards core skill accuracy metric while adhering to all range  
regulations

Prerequisites.    STCT-2201, SWD-2603

Ordnance.    (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm  
GAU-17, or (400) 7.62mm M240

Range Requirement.    Live fire LASER safe range

Crew.    WTO/PUI/CC/AG

SWD-2605    1.5    180    R,SC,M                    D                    E                    A                    1 UH-1Y

Goal.    OS - To evaluate proficiency at specific weapons delivery.

Requirements

Discuss

Engagement envelopes of 2.75 inch rockets  
MILS settings and switchology errors  
CRM and intra cockpit communication during ordnance

Review

Rocket delivery utilizing a scored or raked range  
All ordnance emergencies  
Ordnance pre-flight checks  
SWD error analysis

Performance Standards

Successful employment of crew served weapons at ranges from 300-1500 meters and 2.75 inch rockets at ranges from 500-1200 meters, exhibiting proper impact detection and adjustment, attaining core skill accuracy metric while adhering to all range regulations.

After completion of the 2000 phase the accuracy metric for this event is dependent upon the pilot's current designation (e.g. UHC requires reply of SWD-2605 meeting the Mission Skills accuracy metric).

Prerequisite. SWD-2604

Ordnance. (14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Raked or scored LASER safe range

Crew. WTO/PUI/CC/AG

SSWD-2606 1.5 \* NS FFS/FTD S-TEN/A 1 UH-1Y

Goal. OS - To develop proficiency at ordnance delivery (HLL).

Requirements

Discuss

Night ordnance delivery effects  
Rocket and gun switchology errors  
IR LASER pointer usage and switchology  
CRM regarding target acquisition and hand-off  
Target/reticle fixation  
Illumination delivery profiles and adjustments  
APKWS CRM at night

Demonstrate/Introduce

IR LASER pointer usage and target handoff  
Illumination delivery profiles (both preplanned and on-call)

Review

Ordnance delivery profiles  
HMDS symbology and settings  
Aircrew coordination during ordnance evolutions  
APKWS employment

Performance Standards

Successful employment of crew served weapons at ranges 300-1500 meters, 2.75 inch rockets at ranges from 500-1200 meters.  
Successful employment of APKWS at ranges from 1500-5000 meters utilizing all profiles exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.

Prerequisites. SWD-2604

Ordnance. If flown in aircraft: (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares, IR Pointer

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

Crew. TSI(NSI)/PUI (NSI/PUI/CC/AG~AC)

SWD-2607 1.5 180 R,SC NS A 1 UH-1Y & 1 H-1

Goal. OS - To refine ordnance delivery (HLL).

Requirements

Discuss

2.75 inch rocket motors, warheads and fuses  
Rocket illumination considerations  
Section attack patterns  
Mutual support  
IR CAS and IR pointer techniques  
NVD sighting procedures  
Terminal control briefs  
Attack routing

Demonstrate

A RW CAS mission to include coordination with the terminal controller and section tactics

Introduce

Marking procedures

Review

Ordnance procedures  
Effects of ordnance delivery on NVDs  
Aircrew coordination  
Weapons preflight  
Arming/de-arming  
Buddy lase procedures (may be simulated)

Performance Standards

PUI shall conduct crew served weapons delivery and attack profiles IAW the UH-1Y NATIP/NTTP.  
Successful employment of crew served weapons at ranges from 300-1500 meters and 2.75 inch rockets at ranges from 500-1200 meters and APKWS at ranges from 1500-5000 meters exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.

Prerequisites. TERF-2101, SWD-2606

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

Crew. NSI/PUI/CC/AG

SSWD-2608 1.5 \* SC NS FFS/FTD S-TEN/A 1 UH-1Y

Goal. OS - Introduce ordnance delivery (LLL).

Requirements

Discuss

Penetration checklist procedures and techniques  
LLL target acquisition difficulties  
LLL ordnance delivery effects

Target/reticle fixation  
LLL ordnance delivery scan techniques  
HMDS symbology with respect to target handoff techniques and  
declutter modes  
Arming/de-arming procedures

Introduce

LLL ordnance delivery

Review

APKWS employment profiles and CRM  
Night ordnance delivery effects  
Rocket and gun switchology errors  
IR LASER pointer usage and switchology

CRM regarding target acquisition and hand-off  
Illumination delivery profiles (both preplanned and on-call)

Performance Standards

Conduct arm/de-arm procedures and penetration/de-penetration  
checklists IAW ASTACSOP and local directives.  
Detect and engage both point and area targets utilizing fixed  
forward guns and rocket attacks.  
Successful employment of crew served weapons at ranges 300-1500  
meters and 2.75 inch rockets at ranges from 500-1200 meters,  
exhibiting proper impact detection and adjustment, working  
towards core skill accuracy metric while adhering to all range  
regulations.  
Successful employment of APKWS at ranges from 1500-5000 meters  
utilizing all profiles.  
Conduct proper actions in response to simulated in-flight ordnance  
emergencies.

Prerequisites. SWD-2607, NSQ (ANSQ-2702~AC)

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm  
GAU-17, or (400) 7.62mm M240

Range Requirement. Live fire LASER safe range with thermally  
significant targets, if available

Crew. TSI+NSI/PUI or (NSI/PUI/CC/AG-AC)

SWD-2609    1.5    180    R,SC,M    NS                    A                    1 UH-1Y & 1 H-1

Goal. OS - Review ordnance delivery (LLL).

Requirements

Discuss/Review

Ordnance nomenclature and rocket warhead/fuse combinations  
LLL target acquisition difficulties  
LLL ordnance delivery effects  
Target fixation  
LLL ordnance delivery scan techniques  
HMDS symbology with respect to target handoff techniques, de-  
clutter modes  
SOP arming/de-arming procedures  
Ordnance delivery utilizing hover, running, diving fire  
Buddy lase procedures (may be simulated)  
Rocket illumination considerations  
Section attack patterns  
Mutual support  
IR CAS and IR pointer techniques

NVD sighting procedures  
Terminal control briefs  
Attack routing

Performance Standards

Conduct crew served weapons and rocket attacks utilizing running, pop-up and hover delivery.  
Conduct arm/de-arm procedures and penetration/de-penetration checklists IAW ASTACSOP and local directives.  
Detect and engage both point and area targets utilizing crew served weapons and rocket attacks.  
Successful employment of crew served weapons at ranges 300-1500 meters and 2.75 inch rockets at ranges from 500-1200 meters, APKWS at ranges from 1500-5000 meters utilizing all profiles exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.

Prerequisites. SSWD-2608, ANSQ-2702

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240 (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

Crew. NSI/PUI/CC/AG

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SWD-2610	1.5	365	R,M	(NS)	A/S-TEN	1 UH-1Y
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Goal. OS - Introduce moving target gunnery.

Requirements

Discuss

Unguided ordnance ballistics  
Attack profiles and geometry in regards to moving targets  
Sensor track considerations  
LASER-guided weapons considerations

Introduce/demonstrate

Moving target gunnery

Performance Standards

Validate, using VTR, an effective ordnance engagement of a moving target.  
Successful employment of the FF GAU-17 weapon system at ranges from 500-1100 meters and 2.75 inch rockets at ranges from 500-800 meters, exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.  
Successful employment of crew served weapons at ranges 300-1500 meters.

Prerequisites. SWD-2603 (SWD-2607~NS, SWD-2609~LLL)

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. Moving target or 1 aircraft to provide a

shadow

Crew. WTO(NSI)/PUI/CC/AG or (TSI(NSI)/PUI~SIM)

2.13.9 Advanced Night System Qualification (ANSQ)

2.13.9.1 Purpose. To develop proficiency during LLL operations.

2.13.9.2 General. At the completion of this stage, the PUI shall demonstrate core skills proficiency under LLL conditions. Once complete in this stage, and designated ANSQ by the squadron commanding officer, the PUI may complete the remaining combat qualification NVD training under any light level conditions.

Aircraft should be configured with an NTIS, HMSD, VTR, and an IR pointer.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

SANSQ-2700 1.5 \* NS FFS/FTD S-TEN 1 UH-1Y

Goal. RS - Perform NVD and aircraft emergency procedures during LLL conditions.

Requirements

Discuss

- Crew comfort level during LLL NVG operations
- Aircraft preparation for night operations
- NVD effects encountered during LLL conditions
- Use of the searchlight (covert/overt)
- LLL Emergency procedures considerations
- Inadvertent IMC (IIMC) procedures
- LLL scheduling restrictions
- Cockpit management during night operations

Introduce

- Pattern work at unlighted and lighted landing sites
- NVD/aircraft emergency procedures at unlighted and lighted landing sites
- IIMC procedures

Performance Standards

- PUI shall execute 5 landings at an unlighted site.
- PUI shall execute 5 landings at a lighted site.
- PUI shall execute 5 autorotations.
- PUI shall safely conduct NVD and aircraft emergencies IAW NATOPS.
- Demonstrate proper knowledge of IIMC procedures IAW ASTACSOP.

Prerequisites. NSQ

Crew. TSI+NSI/PUI

ANSQ-2701 2.0 \* SC NS A 1 UH-1Y

Goal. RS - Perform low work, pattern work and navigation (LLL).

Requirements

Discuss

Map preparation  
Checkpoint selection  
Sensor integration during navigation  
Cultural lighting  
Aircraft external lighting configurations and options  
Mission card preparation

Introduce

Basic low work and pattern work at an unlighted field or remote landing site  
NVD navigation techniques

Performance Standards

PUI shall conduct 5 landings at an unlighted field or remote landing site free from artificial illumination.  
PUI shall perform all FAM maneuvers IAW MDG and MAWTS-1 NVD manual.  
PUI shall plan, brief and navigate a route utilizing a 1:250,000 scale map consisting of a minimum of 5 checkpoints and 50 nautical miles remaining oriented within 1 NM of flight planned route, and 15 degrees of heading and arrive at final checkpoint within 1 minute of assigned time.  
Utilize NTIS to aid in identifying checkpoints enroute.  
PUI shall not use the GPS for a minimum of 2 legs of the route.

Prerequisites. SANSQ-2700

External Syllabus Support. Unlit field or remote landing site free from artificial illumination

Crew. NSI/PUI/CC/AO

ANSQ-2702 1.5 180 R,M NS A 1 UH-1Y & 1 H-1

Goal. OS - Develop proficiency in tactical formation flight and TERF navigation (LLL).

Requirements

Discuss

Tactical formations on NVGs  
LLL formation flight considerations  
Navigation hazards  
Night systems integration  
Night rendezvous and join-up procedures per UH-1 NTPP  
Loss of visual contact procedures

Introduce/Demonstrate

Tactical formation flight  
Navigation utilizing NVDs in low level, contour and NOE flight profiles  
Rendezvous and join-up procedures  
Loss of visual contact procedures  
TERF maneuvers in LLL conditions

Review

Proper NVD scan patterns  
External aircraft lighting

Performance Standards

PUI shall plan, brief and navigate a TERF route with a minimum of 5 checkpoints utilizing a 1:50,000 scale map and minimum length of 20 NM. Remain oriented on entire route within 500 meters, 15

degrees of heading and 1 minute of planned route time.  
PUI shall conduct all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTTP.  
IP shall demonstrate loss of visual contact and the subsequent rendezvous and join-up.

Prerequisites. ANSQ-2701

Range Requirement. Authorized TERF area

Crew. NSI/PUI/CC/AO

ANSQ-2703 1.5 180 R,SC,M NS A 2 UH-1Y

Goal. OS - Review section tactical ingress profiles, approaches, landings, and departures (LLL).

Requirements

Discuss

All previously discussed ASPT and ANSQ stage items.

Review

Straight-in approach (IP to LZ) with timing  
Section tactical ingress profiles, approaches, landings and departures  
Simultaneous landings  
Low to high rejoin IAW UH-1 NTTP  
Slope landings  
Section tactical approaches, landings and departures at night  
NVD compatible landing zone lighting aids  
Use of overt/IR searchlight  
NVD scan patterns during approach and landing in lead and -2 positions  
Night RVLs  
Far/near ITG  
Sensor usage in zone identification  
Flight and individual waveoffs

Performance Standards

PUI shall demonstrate safe basic air work, sound judgment, and situational awareness in the lead and wingman positions.  
PUI shall produce applicable LZ diagram(s) and brief section tactical approaches, landings and departures. A minimum of 4 landings will be accomplished as lead and 4 landings will be accomplished as the wingman.  
PUI shall achieve at least one L-hour within +/- 30 seconds.

Prerequisite. ANSQ-2701

External Syllabus Support. Unlit field or remote landing site free from artificial illumination

Crew. NSI/PUI/CC/AO

2.13.10 Familiarization (FAM)

2.13.10.1 Purpose. To develop and maintain familiarity with aircraft flight characteristics, limitations, and emergency procedures. To develop proficiency in all maneuvers, instrument flight and to instill basic CRM procedures.



2.13.10.2 General. PUI must demonstrate proficiency with all shore based FAM procedures to include normal/emergency procedures and basic aircraft maneuvers. Additionally, the PUI must display a thorough knowledge of limitations and flight characteristics.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

FAM-2800 1.5 90 R,SC,M (NS) A 1 UH-1Y

Goal. OS - Familiarization/instrument proficiency.

Requirements

Discuss

Aircraft limitations  
Emergency procedures  
Aircraft systems  
Complacency in the cockpit

Review

FAM stage maneuvers

Performance Standards

PUI shall perform all maneuvers IAW the UH-1Y NATOPS and MDG.  
PUI shall complete a minimum of 5 autorotations IAW the UH-1Y NATOPS and MDG.

Prerequisite. CSIX-1901

Crew. BIP(NSI)/PUI/(CC/AO)

Note. For those pilots assigned to the Refresher and Series Conversion POI. If CSIX-190 has been flown within the preceding 90 days, they meet the Performance Standards of FAM-2800. Manual entry, i.e. baseline in M-SHARP with proficiency date of CSIX-1901.

SFAM-2801 1.5 90 SC,R,M (NS) E FFS/FTD S-TEN/A 1 UH-1Y

Goal. OS - Review aircraft emergency procedures and systems failures.

Requirements

Review

Emergency procedures knowledge  
Recognizing emergencies  
Applying appropriate procedures  
Full (simulator only) and power recovery autorotations

Performance Standards

Demonstrate the ability to operate the aircraft under all emergency conditions IAW the UH-1Y NATOPS.  
PUI shall conduct a minimum of (2) Reduced Visibility Landings

Prerequisite. CSIX-1901

Crew. CSI/PUI or (BIP(NSI)/PUI/(CC/AO)~AC)

2.14 MISSION SKILL ACADEMIC PHASE (3000)

2.14.1 Purpose. To develop a Mission Skill proficient pilot. These academics facilitate understanding of operations in the UH-1Y and MAGTF level functions to ensure individuals possess the requisite knowledge to be designated Utility Helicopter Commander (UHC) and Forward Air Controller (Airborne) [FAC(A)].

2.14.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 UH-1 Course Catalog. The academic courseware is a requirement. At the completion of each ACAD event, the appropriate training code shall be logged in M-SHARP by the individual pilot, contract instructor or squadron operations personnel, as appropriate. The codes listed below associated with these classes may NOT be the most up to date as the current UH-1 Course Catalog is the master document for stage academic requirements.

2.14.3 Mission Skill academic events are listed below.

MISSION SKILLS ACADEMIC PHASE	
TRAINING CODES	COURSEWARE
<b>GENERAL REQUIREMENTS</b>	
ACAD-3000	Intelligence Preparation of the Battlespace
ACAD-3001	Problem Framing
ACAD-3002	ROE Planning
ACAD-3003	GCE Raid Planning
ACAD-3004	Execution Checklist
ACAD-3005	Objective Area Planning*
ACAD-3006	NEO Execution
ACAD-3007	Rapid Response Planning
ACAD-3008	(S) Radar Guided Surface to Air Missiles
ACAD-3009	(S) REC Threat to the MAGTF
ACAD-3010	(S) IR SAM threat to RW Aircraft*
ACAD-3011	(S) ADA threat to RW Aircraft*
ACAD-3012	(S) LASER Threat
ACAD-3013	(S) Electronic Warfare
<b>ESC</b>	
ACAD-3019	Assault Support Escort Tactics*
<b>ASPT</b>	
ACAD-3023	UH-1 Assault Support Planning
ACAD-3024	UH-1 Assault Support Execution
<b>AD</b>	
No Lectures	
<b>EVAC</b>	
No Lectures	
<b>CC</b>	
No Lectures	
<b>CAS/AR/SCAR</b>	
ACAD-3030	(S) RW OAS*
ACAD-3031	Urban CAS*
ACAD-3032	Close Air Support
ACAD-3033	CAS Standardization*
ACAD-3034	(S) Weaponing
ACAD-3035	HMLA AR and SCAR TTPs
<b>TRAP</b>	
ACAD-3038	(S) Personnel Recovery
ACAD-3039	(S) TRAP
<b>FAC(A)</b>	
ACAD-3041	JFAC(A) Courseware lectures taught by Squadron FAC(A) I*
ACAD-3042	FAC(A) TTPS
<b>EXP</b>	
ACAD-3045	HMLA FARP Ops

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MISSION SKILL	
ACPM-8300	Air Defense
ACPM-8310	Forward Arming Refueling Point (FARP) Operations
ACPM-8311	Marine Corps Tactical Fuel Systems
ACPM-8320	Joint Structure and Joint Air Operations
ACPM-8321	Joint Air Tasking Cycle, Phase 1: Strategy Development
ACPM-8322	Joint Air Tasking Cycle, Phase 2: Target Development
ACPM-8323	Joint Air Tasking Cycle, Phase 3: Weaponing and Allocation
ACPM-8324	Joint Air Tasking Cycle, Phase 4: Joint ATO Production
ACPM-8325	Joint Air Tasking Cycle, Phase 5: Force Execution
ACPM-8326	Joint Air Tasking Cycle, Phase 6: Combat Assessment
ACPM-8340	Integrating Fires and Airspace within the MAGTF
ACPM-8350	Phasing Control Ashore
ACPM-8351	TACRON Organizations and Functions
*Indicates classes that should be presented to all pilots annually.	

2.15 MISSION SKILL PHASE (3000)

2.15.1 Purpose. To produce a Mission Skill proficient pilot. Upon completion of the Mission Skills Phase, pilots should be proficient in Mission Essential Tasks.

2.15.2 General. Upon completion of the Mission Skills phase, pilots may be designated Utility Helicopter Commander (UHC) and Forward Air Controller (Airborne) [FAC(A)].

Completion of the Core Skill phase and the ESC, ASPT, EXP, and OAS stages through SSCAR-3307 of the Mission Skill phase meet the requirements for the PUI to be eligible for the DESG-6398 (UHC Evaluation flight). Upon completion of the DESG-6398 and refly of SWD-2605 meeting Mission Skills ordnance accuracy standards, and at the discretion of the squadron commanding officer, a letter designating the PUI as an UHC shall be placed in the NATOPS jacket and APR.

Completion of the FAC(A) stage and compliance with the JFAC(A) MOA meet the requirements for the PUI to be FAC(A) qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as FAC(A) qualified shall be placed in the NATOPS jacket and APR.

Prior to completion of the Core/Mission Skills Phase, Expeditionary Shore Based (FARP) Operations shall be conducted. Refer to Mission Skills Phase, paragraph 2.15.16 for sortie requirements. EXP-3600 through EXP-3603 shall be logged in conjunction with any Core or Mission Skills Phase event.

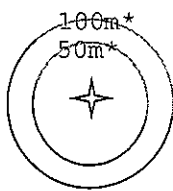
2.15.2.1 Stages. The following stages are included in the Mission Skills Phase of training.

MISSION SKILLS PHASE	
PAR NO.	STAGE NAME
2.15.3	Escort (ESC)
2.15.4	Assault Support (ASPT)
2.15.5	Aerial Delivery (AD)

2.15.6	Casualty Evacuation (EVAC)
2.15.7	Command and Control (CC)
2.15.8	Close Air Support (CAS)
2.15.9	Armed Reconnaissance (AR)
2.15.10	Strike Coordination and Reconnaissance (SCAR)
2.15.11	Tactical Recovery of Aircraft Equipment and Personnel (TRAP)
2.15.12	Forward Air Controller (Airborne) FAC(A)
2.15.13	Expeditionary Operations (EXP)

2.15.2.2 Ordnance Delivery. At the completion of this phase, the PUI will have demonstrated increased accuracy during ordnance delivery and proper use of the NTIS under all threat conditions with mixed ordnance loads. At the completion of the OAS syllabus, prior to UHC (DESG-6398), the PUI shall refly SWD-2605 and will be required to meet the Mission Skills ordnance accuracy metric. SWD should be conducted on raked/scored ranges whenever possible. Focus should be on weapons delivery profiles and ordnance accuracy, not tactical scenarios. VTR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

2.15.2.2.1 IPs shall evaluate ordnance effectiveness based on the following accuracy metrics.

MISSION SKILL	UNGUIDED ROCKET STANDARD	GUN STANDARD	PURPOSE
 <p>*RADIUS</p>	<p>-In correct profile per NTTP</p> <p>-No miss greater than 100 meters</p> <p>-CE90&lt;50 meters**</p> <p>-(1) rocket must impact within 10 meters</p>	<p>-On target within 3 seconds of trigger pull</p> <p>-Crew served: crew coordination sufficient to achieve AG metric.</p>	<p>-Based upon M151 Effective Casualty Radius (ECR)***</p> <p>-Demonstrates the ability to damage targets</p>

\*\* CE90 example: SWD-2603 requires (7) 2.75" rockets. CE90<50 meters requires that 90% of the delivered rockets impact within 50 meters of the target. In order to calculate, simply disregard the worst 10% of rockets released and the remaining farthest SINGLE MISS DISTANCE = CE90.

Conservative rounding is applied. Examples:

- 3-10 rockets released ~ disregard one rocket, SECOND FARTHEST MISS = CE90
- 11-20 rockets released ~ disregard two rockets, THIRD FARTHEST MISS = CE90
- In no case can a single rocket miss the intended target by more than 100m, including the omitted rounds for CE90 calculation.

\*\*\* Effective Casualty Radii (ECRs) are generic distances intended to be applied versus the anticipated target set for a particular weapon, based primarily upon explosive yield and warhead/fuse characteristics. Variables to weapon effectiveness include target vulnerability and composition of underlying terrain. Weapons that impact the target vicinity at distances beyond the warhead's ECR are predicted to be ineffective for target damage.

2.15.2.2.2 APKWS- Correct switchology, proper LASER placement, profile IAW UH-1 NTTP direct hit.

2.15.2.2.3 TOTs - Initial ordnance shall be delivered within +/- 30 seconds of established TOT.

2.15.2.2.4 During this phase, one of the night ordnance events shall employ (7) 2.75 inch illumination rockets (i.e. M257/M278). Illumination employment shall be evaluated on effectiveness and account for wind, elevation, delivery and flight release parameters. SOTC-6900 shall be logged in conjunction with the appropriately flown sortie.

2.15.2.2.5 During this phase, one of the ordnance events shall employ (4) 2.75 inch Advanced Precision Kill Weapons System (APKWS) rockets. APKWS employment shall be evaluated on effectiveness, delivery and flight release parameters. SOTC-6901 shall be logged in conjunction with the appropriately flown sortie.

2.15.2.2.6 During this phase one of the ordnance events shall employ (7) 2.75 inch flechette rockets. Flechette employment shall be evaluated on effectiveness, delivery and flight release parameters. SOTC-6902 shall be logged in conjunction with the appropriately flown sortie.

2.15.2.3 Navigational Accuracy. At the completion of this phase, the PUI will have demonstrated increased navigational accuracy and timeliness during assault support operations, under varied threat conditions. At the completion of the ASPT stage, prior to UHC (DESG-6398), the PUI shall demonstrate the ability to meet the Mission Skills assault support accuracy metric. PUI shall land within +/- 30 seconds of the assigned L-Hour and within 50 meters of the planned landing point. During HIE/external profiles or urban landings, the PUI must land directly to the intended spot. IP shall use MPS or aircraft systems to assess landing point accuracy.

### 2.15.3 Escort (ESC)

2.15.3.1 Purpose. To develop proficiency in prescribed airborne and surface escort formations and maneuvers.

2.15.3.2 General. The pilot will develop a detailed understanding and functional knowledge of escort formations, maneuvers and techniques associated with assault support and surface operations. Ordnance is not required for each event in this stage, but is required for at least one event in the escort stage. If ordnance is utilized, the PUI shall have completed the Core Skills SWD flight corresponding to the appropriate ordnance load and event condition.

Aircraft should be configured with an operable NTIS, VTR, HMSD, (also LTD/LRF, APR-39, AAR-47, ALE-47, and IR Pointer if ordnance is utilized).

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

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ESC-3100	1.5	*	D	A	1 UH-1Y & 1 H-1
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Goal. OS - Demonstrate and introduce day assault support escort procedures in a low to medium threat environment.

#### Requirements

##### Discuss

- Purpose of escort
- EFL responsibilities

Categories of assault support  
Six missions of assault support escort  
Assault support escort techniques  
Advantages/disadvantages of escort techniques  
Escort patterns  
LZ clearance/coverage scan techniques  
Fire support planning ISO LZ clearance and GCE Ground Tactical Plan (GTP)  
LZ clearance procedures and communication  
Threat reaction and immediate action procedures  
Escort/assault support terminology  
Capabilities/employment of ordnance during escort  
Lighting and threat detection  
Supporting arms coordination  
Fragmentation patterns  
Assault sectors of fire and escort/assault integration and deconfliction  
Tilt-rotor considerations  
TRAP considerations and procedures

Demonstrate/Introduce

Escort/assault support mission planning  
Escort responsibilities  
Attached/detached/combined escort  
Objective area fires integration/deconfliction  
Objective area flow and communications  
LZ coverage patterns and ordnance delivery procedures  
Tactical employment of ordnance in close proximity to assault support aircraft enroute and in the LZ (objective area)

Performance Standards

PUI shall exhibit a thorough understanding of escort responsibilities and assault support operations.  
PUI shall properly plan and employ escort assets in the objective area.  
PUI shall properly employ escort techniques and patterns for the assigned mission  
PUI shall integrate fire support in objective area (if required).  
PUI shall use correct terminology and techniques for LZ clearance and coverage.

Prerequisite. ACAD-3008, 3009, SSWD-2600 (SWD-2604~ORD)

Ordnance (Optional). (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. One or more assault support aircraft

Crew. WTO/PUI/CC/AO(AG)

ESC-3101 1.5 365 R NS A 1 UH-1Y & 1 H-1

Goal. OS - Demonstrate and introduce night assault support escort in a low to medium threat environment.

Requirements

Discuss

Night LZ clearance/coverage techniques and procedures

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Night escort techniques/procedures  
 ASTACSOP assault support aircraft lighting  
 Night formation, lighting and threat detection  
 AMC/AFL/EFL relationship  
 Supporting arms coordination  
 NTIS and IR Pointer usage  
 Assault support aircraft sectors of fire  
 Escort/assault integration and deconfliction  
 Fixed wing escort procedures  
 Waveoff criteria and actions

Demonstrate/Introduce

Tactical employment of ordnance in close proximity to assault aircraft en route and in the LZ (objective area)  
 LZ coverage and scan patterns  
 ITG with IR pointer

Review

Ordnance delivery procedures with NVDs  
 Escort responsibilities  
 Attached/detached/combined escort  
 Objective area fires integration  
 Objective area flow and communications

Performance Standards

PUI shall conduct the EFL brief.  
 PUI shall exhibit a thorough understanding of assault support escort responsibilities and assault support operations IAW the UH-1Y NTTP and ASTACSOP.  
 PUI shall properly plan for and employ escort assets in the objective area.  
 PUI shall conduct enroute attached escort of assault support aircraft.  
 PUI shall properly employ escort techniques and patterns for assigned mission.  
 PUI shall integrate fire support in objective area (if required).  
 PUI shall utilize IR Pointer for initial terminal guidance to LZ or to alert crews to a simulated enemy position.  
 PUI shall use correct terminology and techniques for LZ clearance and coverage.

Prerequisites. ACAD-3010, 3011, ESC-3100, ASPT-2403~NS, NSQ~NS, ANSQ-2702~LLL, SWD-2607~NS ORD, SWD-2609~LLL ORD

Ordnance (Optional). (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. One or more assault support aircraft

Crew. NSI/PUI/CC/AO(AG)

SESC-3102 1.5 365 R,M (NS) FFS/FTD S-TEN+/A 1 UH-1Y & 1 H-1

Goal. OS - Review assault support escort procedures in a medium threat environment.

RequirementsDiscuss

Six missions of assault support escort



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Guided rockets during escort missions  
 Advantages/disadvantages of escort techniques  
 Escort patterns  
 Sensor employment  
 LZ clearance/coverage scan techniques and procedures  
 Threat reaction SOPs and immediate action procedures  
 Escort/assault support terminology

Demonstrate/Introduce

Escort responsibilities and current tactical doctrine during assault support operations  
 Attached/detached/combined escort  
 Escort/assault support mission planning and operations within the objective area.

Performance Standards

PUI shall exhibit a thorough understanding of escort responsibilities and assault support operations IAW NTTP.  
 PUI shall perform threat reactions IAW NTTP, ASTACSOP.  
 PUI shall plan, brief and execute an assault support escort mission in a medium threat environment, with a specific focus on contingencies and threat reaction.

Prerequisite. ACAD-3003 through 3005, 3019, ESC-3101 (NSQ~NS, ANSQ-2702~LLL, SWD-2607~NS ORD, SWD-2609~LLL ORD)

Ordnance (Optional). (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire and LASER safe range, if required

External Syllabus Support. Device operator. If flown in aircraft: One or more assault support aircraft

Crew. TSI(NSI)/PUI (WTO(NSI)/CC(AG)~AC)

ESC-3103 1.5 \* R (NS) A 1 UH-1Y & 1 H-1

Goal. OS - Introduce surface force escort operations in a low to medium threat environment.

Requirements

Discuss

Surface force units needs  
 Surface force escort procedures and techniques  
 Escort profiles  
 Terminal controller procedures and communications (enroute/objective)  
 Non-JTAC qualified convoys  
 PID and ROE considerations  
 Tactical employment of ordnance in close proximity to surface vehicles  
 Ordnance employment in support of GCE scheme of maneuver  
 Ordnance fragmentation patterns  
 Fire support planning/integration with the supported unit  
 Fixed Wing integration  
 Escort fire support coordination  
 Methods of escort, route and objective clearance/coverage techniques and procedures

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Introduce

Route coverage patterns  
Targets of opportunity  
Actions in the objective area  
Ordnance delivery techniques and procedures ISO convoy operations

Performance Standards

PUI shall exhibit a thorough understanding of surface force escort responsibilities in support of the GCE scheme of maneuver.  
PUI shall properly plan and employ escort assets enroute and in objective area.  
PUI shall properly employ escort techniques and patterns for the assigned mission.  
PUI shall integrate fire support assets enroute and in the objective area (if required).

Prerequisites. SSWD-2600 (2403~NS, ANSQ-2702~LLL, SWD-2604~ORD, SWD-2607~NS ORD, SWD-2609~LLL ORD)

Ordnance (Optional). (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. One ground/amphibious unit, minimum 3 vehicles

Crew. WTO(NSI)/PUI/CC/AO(AG)

2.15.4 Assault Support Operations (ASPT)

2.15.4.1 Purpose. To develop procedures and skills to tactically employ the UH-1Y, while conducting a variety of combat assault support missions, under varying threat conditions.

2.15.4.2 General. Upon the completion of each ASPT event the pilot will be tactically proficient in the planning, briefing and execution of that particular mission profile. Upon completion of the ASPT stage, the pilot will be Mission Skills proficient for ASPT.

Aircraft shall be configured with an operable HMSD, NTIS, VTR and appropriate mission kit. Aircraft should be configured with an operable APR-39, AAR-47, ALE-47 and IR Pointer (night events) to the maximum extent practical.

Actual embarked troops shall be utilized on at least one assault support event. Actual embarked troops should be incorporated to the maximum extent practical, but in the event that support is not available, the IP can simulate these assets during the conduct of a sortie (with the exception of ASPT-3200 and ASPT-3201).

The initial ASPT-3200 and ASPT-3201 shall be performed with actual ropers. Proficiency may be maintained by conducting HIE profiles with simulated ropers.

Actual ordnance for crew served weapons should be incorporated to the maximum extent practical. At least one flight shall carry and employ live crew-served ordnance ISO tactical execution.

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ASPT-3202 through ASPT-3204 initial events require 2 x UH-1Y; however, all reflly codes may be logged with 1 x UH-1Y and 1 additional helicopter.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

ASPT-3200 1.0 365 R D A 1 UH-1Y

Goal. OS - Develop proficiency in tactical fastrope/rappel operations.

Requirements

Discuss

Aircraft rigging/configuration  
 Discuss Crew Restraint System (CRS) and components  
 Insertion techniques and planning considerations  
 Aircrew coordination/CRM during HRST operations  
 Emergencies with ropers  
 Fastrope/rappel profiles  
 Specific HIE communication  
 Cabin management  
 Zone selection considerations and power requirements  
 Threat mitigation/gunner threat reaction  
 Left seat / right seat considerations  
 HRST master briefing requirements  
 HIE manual / applicable local orders  
 Hover hold usage / HMSD usage

Demonstrate/Introduce

Power management planning  
 Fastrope/rappel ingress, approach, objective area, egress and  
 join-up  
 HIE specific communication  
 Fouled rope / hung roper procedures

Review

Straight-in approach (IP to LZ) with timing  
 Section tactical ingress profiles, approaches, landings and  
 departures  
 Flight and individual waveoffs  
 Low to high rejoin IAW UH-1 NTTP  
 Environmental impacts on LZ selection

Performance Standards

PUI shall produce applicable LZ diagram(s) IAW UH-1 NTTP and conduct the HRST brief.  
 A minimum of one fastrope/rappel site shall be selected with associated IP and timing. A minimum of 2 ingress profiles will be accomplished and a total of three insertions of two ropers will be completed. Performance standards are +/- 30 sec and insertion to the fastrope/rappel site.

Prerequisite. ASPT-2402

Ordnance (Optional). (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or  
 (400) 7.62mm M240

Range Requirement. Simulated/actual rooftop or landing point  
 (authorized fastrope/rappel site)

External Syllabus Support. HRST Master and at least two ropers

Crew. WTO/PUI/CC/AO (AG)

ASPT-3201 1.0 365 R,M NS A 1 UH-1Y

Goal. OS - Develop proficiency in tactical fastrope/rappel operations at night.

Requirements

Discuss

Section HIE tactical approaches, landings and departures  
Waveoff criteria  
Selection of alternate zone for HIE or landing  
NVD considerations for HIE operations  
Environmental considerations for HIE execution  
Cultural lighting considerations

Demonstrate/Introduce

HIE section mechanics  
Fastrope/rappel ingress, approach, objective area and join-up at night

Performance Standards

PUI shall conduct a Utility Brief, to include section considerations.  
PUI shall plan and brief a tactical scenario with a simulated section.  
A minimum of one fastrope/rappel site shall be selected with associated IP and timing. A minimum of 2 ingress profiles will be accomplished and a total of three insertions of two ropers will be completed. Performance standards are +/- 30 sec and insertion to the fastrope/rappel site.

Prerequisite. ASPT-3200, NSQ~NS, ANSQ~LLL

Ordnance (Optional). (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Simulated/actual rooftop or landing point (authorized fastrope/rappel site)

External Syllabus Support. HRST Master and at least two ropers

Crew. NSI/PUI/CC/AO (AG)

ASPT-3202 2.0 \* D A 2 UH-1Y

Goal. OS - Tactically employ the UH-1Y in a long range insert/extract or raid in a low to medium threat environment.

Requirements

Discuss

Power management, fuel planning and route selection  
Aircraft configuration  
AFL responsibilities and authority  
Mission criteria (Go, No-Go, LZ Criteria)  
LZ and alternate LZ planning  
Pickup Zone (PZ) planning  
Escort requirements  
Far/near ITG  
Contingency planning  
On/off drills

Check in procedures  
Post insert actions  
Extract plan  
Raid specific considerations

Demonstrate/Introduce

Long range tactical day insert/extract or raid  
Actions on contact

Performance Standards

PUI shall plan a route consisting of no less than 100NM from the PZ to the LZ and conduct the AFL brief.  
PUI shall land within +/- 50m from landing point within +/- 30 seconds of L-hour.

Prerequisites. (SWD-2604~ORD)

Ordnance (Optional). (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Live fire LASER safe range

External Syllabus Support. Embarked troops

Crew. WTO/PUI/CC/AO(AG)

ASPT-3203 1.5 180 R,SC,M NS A 2 UH-1Y

Goal. OS - Conduct an insert/extract or raid at night in a medium threat environment.

Requirements

Discuss

Far/near ITG  
Night landing point marking  
ASSAT/ASLT  
Accountability procedures  
Aircraft MACO markings  
Sensor integration  
Wave sequencing  
Illumination support  
Deception planning/execution  
Aural/visual detection considerations  
Section illumination procedures  
Section LZ reconnaissance

Demonstrate/Introduce

Insert/extract at night  
Battlefield Illumination ISO insert/extract  
Section LZ reconnaissance

Evaluate

Power management, fuel planning and route selection  
Aircraft configuration  
AFL responsibilities and authority  
Mission criteria (Go, No-Go, LZ Criteria)  
LZ and alternate LZ planning  
Pickup Zone (PZ) planning  
Escort requirements  
Actions on contact  
Contingency planning  
Actions on contact  
RVL procedures

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Performance Standards.

PUI shall conduct AFL brief.  
 PUI shall land within +/- 50m from landing point within +/- 30 seconds of L-hour.  
 Brief alternate section illumination procedures.  
 Conduct section LZ reconnaissance.

Prerequisite. NSQ-NS, ANSQ~LLL, ASPT-3202 (SWD-2607~NS ORD, SWD-2609~LLL ORD)

Ordnance (Optional). (7) 2.75" Illumination, (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Live fire LASER safe range

External Syllabus Support. Embarked troops

Crew. NSI/PUI/CC/AO(AG)

ASPT-3204 1.5 365 R,M NS A 2 UH-1Y

Goal. OS - Conduct an insert/extract mission at night in a medium threat, degraded navigation environment (LLL).

Requirements

Discuss

Degraded navigation techniques and systems integration  
 Map preparation  
 Cockpit management  
 Use of ground speed for enroute planning  
 MINCOM procedures  
 Terrain analysis

Demonstrate/Introduce

Degraded navigation techniques during a night insert/extract or raid.

Review

Power management, fuel planning and route selection  
 Aircraft configuration  
 AFL responsibilities and authority  
 Mission criteria (Go, No-Go, LZ Criteria)  
 LZ and alternate LZ planning  
 Pickup Zone (PZ) planning  
 Escort requirements  
 Actions on contact  
 Contingency planning  
 Actions on contact  
 RVL procedures  
 Far/near ITG  
 Night landing point marking  
 ASSAT/ASLT  
 Accountability procedures  
 Aircraft MACO markings  
 Sensor integration  
 Wave sequencing  
 Illumination support  
 Deception planning/execution  
 Aural/visual detection considerations

Performance Standards.

PUI will conduct AFL brief.  
PUI will land within +/- 50m from landing point within +/- 30 seconds of L-hour. PUI shall not utilize GPS/moving map for duration of sortie.

Prerequisite. ACAD-3023, 3024, NSQ, ANSQ~LLL, ASPT-3203 (SWD-2609~LLL ORD)

Ordnance (Optional). (7) 2.75" Illumination, (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Live fire LASER safe range

External Syllabus Support. Embarked troops

Crew. NSI/PUI/CC/AO

SASPT-3205 1.5 365 R,M (NS) FFS/FTD S-TEN+/A 1 UH-1Y & 1 H-1

Goal. OS - Conduct an insert/extract mission in a medium threat, urban environment.

Requirements

Discuss

- Urban navigation procedures
- Map preparation/GRG usage
- Urban FFIRs
- Urban communication
- Urban night operations
- Urban threat considerations
- Ingress/egress profiles in urban terrain
- Zone identification in an urban environment
- IP, LZ selection considerations
- ROE
- Contingencies in urban environment

Demonstrate/Introduce

- Insert/extract in a urban environment
- Urban navigation
- ITG in urban environment
- GRG usage

Review

- Power management, fuel planning and route selection
- Aircraft configuration
- AFL responsibilities and authority
- Mission criteria (Go, No-Go, LZ Criteria)
- LZ and alternate LZ planning
- Pickup Zone (PZ) planning
- Escort requirements
- Actions on contact
- Contingency planning
- RVL procedures
- Far/near ITG
- Night landing point marking
- ASSAT/ASLT
- Accountability procedures
- Aircraft MACO markings
- Sensor integration
- Wave sequencing
- Illumination support
- Deception planning/execution
- Aural/visual detection considerations

Degraded navigation procedures

Performance Standards

PUI shall conduct AFL brief.

PUI shall land within +/- 50m from landing point within +/- 30 seconds of L-hour.

Prerequisite. ASPT-3202 (SWD-2604~ORD, SWD-2607~NS ORD SWD-2609~LLL ORD ASPT-3203~NS AC)

Ordnance (Optional). (7) 2.75" Illumination, (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Live fire LASER safe range

External Syllabus Support. Embarked troops

Crew. TSI+NSI/PUI/Co-pilot (NSI/PUI/CC/AO(AG)~AC)

2.15.5 Air Delivery (AD)

2.15.5.1 Purpose. To develop procedures and skills to tactically employ the UH-1Y while conducting aerial delivery.

2.15.5.2 General. Upon the completion of the AD stage the pilot will be capable of performing that particular mission profile.

Aircraft shall be configured with an operable HMSD, NTIS, VTR and appropriate mission kit. Aircraft should be configured with an operable APR-39, AAR-47, ALE-47 and IR Pointer (night events) to the maximum extent practical.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

AD-3206      0.0      \*      SC      (NS)      A STATIC      1 UH-1Y

Goal. OS - Develop proficiency at the tactical loading and unloading of cargo and passengers on a static UH-1Y.

Requirements

Discuss

Cabin configuration management  
Aircraft assault support configuration considerations  
Assault support mission specific kits  
Combat Restraint System (CRS)  
Combat resupply planning considerations  
Internal transport of cargo  
On/off drills and rehearsals  
PZ operations  
Cargo lifting devices  
Helicopter support team (HST)  
Cargo safety considerations  
TFOA avoidance  
Escort requirements  
Signal plan  
Manifest procedures  
Aircraft MACO markings  
Accountability procedures  
Required communication



Demonstrate/Introduce

Load and unload a static UH-1Y with airworthy combat cargo configuration  
Passenger securing procedures and checks  
Passenger briefing requirements  
On/off drills

Review

Power management, fuel planning and route selection  
Aircraft configuration  
Actions on contact  
Contingency planning

Performance Standards.

PUI shall brief UH-1Y cargo and passenger loading and unloading procedures.  
PUI shall observe loading and unloading of cargo.  
PUI shall observe on/off drills.

Prerequisites. N/A

Ordnance. Aircraft configured with guns (no ordnance)

External Syllabus Support. Troops embarked (6 preferred) and actual cargo

Crew. WTO/PUI/CC

SAD-3207 1.5 365 R,M NS FFS/FTD S-TEN+/A 1 UH-1Y & 1 H-1

Goal. OS - Tactically employ the UH-1Y for a pre-planned aerial delivery mission in a non-permissive environment.

Requirements

Discuss

Types of aerial delivery missions  
Internal transport of cargo  
External transport of cargo planning and flight profiles  
Night cargo operations  
Night cargo illumination  
External cargo safety considerations

Demonstrate/Introduce

Preplanned aerial delivery mission

Review

Power management, fuel planning and route selection  
Aircraft configuration  
Escort requirements  
Actions on contact  
Contingency planning  
Cabin configuration management  
Aircraft assault support configuration  
Considerations  
Assault support mission specific kits  
Combat restraint system  
Combat resupply planning considerations  
Internal transport of cargo  
On/off drills and rehearsals  
PZ operations

Cargo lifting devices  
Helicopter support team (HST)  
Cargo safety considerations  
TFOA avoidance  
Escort requirements  
Signal plan  
Manifest procedures  
Aircraft MACO markings  
Accountability procedures  
Required communication

Performance Standards.

PUI shall brief and lead the AD portion of this mission IAW the UH-1Y NATIP/NTTP.

Prerequisites. ASPT-3202

Ordnance (Optional). (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (400) 7.62mm M240

Range Requirement. Optional. Live fire range

External Syllabus Support. If flown in aircraft: HST

Crew. TSI+NSI/PUI/Co-pilot (NSI/PUI/CC/AO(AG)-AC)

2.15.6 Casualty Evacuation (EVAC)

2.15.6.1 Purpose. To develop the ability to perform CASEVAC operations.

2.15.6.2 General. EVAC-3208 is a tracking code only and shall be performed in conjunction with any 3000 level event. Upon the completion of the EVAC event, the pilot will be considered capable of performing CASEVAC.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

EVAC-3208 0.0 365 R,M (NS) A 1 UH-1Y

Goal. OS - Tactically employ UH-1Y as a CASEVAC platform

Requirements

Conduct a CASEVAC in conjunction with any 3000 phase event.

Discuss

CASEVAC planning considerations  
CASEVAC mission assignment  
Patient priority  
Asset allocation  
Medical facilities and levels of care  
Patient Evaluation Team (PET) and location  
Patient loading  
CASEVAC flight procedures  
Casualty Evacuation Request Joint Army 9-Line/NATO 10-Line.  
CASEVAC cabin configuration

Demonstrate/Introduce

Casualty evacuation procedures

Evaluate

Contingency CASEVAC execution procedures

Performance Standards

PUI shall brief CASEVAC procedures IAW the UH-1 NTTP.

Prerequisites. ASPT-2400 (ASPT-2403~NS, ANSQ-2703~LLL)

2.15.7 Command and Control (CC)

2.15.7.1 Purpose. To develop the ability to perform Command and Control missions.

2.15.7.2 General. Upon the completion of the CC event the pilot will be considered capable of performing that particular mission profile.

Aircraft shall be configured with an operable command and control mission kit and NTIS. Aircraft should be configured with an operable HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events) to the maximum extent practical.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

CC-3209      1.5      730      R,M                      (NS)                      A                      1 UH-1Y

Goal. OS - Tactically employ the UH-1Y during a command and control mission.

Requirements

Discuss

- Crew coordination
- Cabin configuration
- Radio setup and allocation
- Command and control mission kit employment
- Communication responsibilities
- MCA planning, selection and routing
- MACCS integration
- Execution checklist
- ASSAT/ASLT
- PZ operations
- Assault support aircraft considerations
- Air assault doctrinal relationships
- Cockpit management
- Radio relay function
- SATCOM
- Scan setup and employment
- RCU operation

Demonstrate/Introduce

- Radio setup and management
- Cabin configuration and seating configurations
- AMC and MC communication requirements
- MACCS integration
- RCU familiarization
- Command and control kit setup and use

Performance Standards

- PUI shall demonstrate effective communications, fuel and airspace planning.
- PUI shall demonstrate effective data management and MACCS integration.

Prerequisite. ASPT-2400 (NSQ~NS, ANSQ~LLL)

Crew. WTO(NSI)/PUI/CC/AO

2.15.8 Close Air Support (CAS)

2.15.8.1 Purpose. To develop procedures and skills to tactically employ the aircraft while conducting CAS missions under varying threat conditions.

2.15.8.2 General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of CAS missions. In addition, the pilot will be proficient in the operation and employment of all organic weapons systems.

Aircraft should be configured with an operable NTIS, crew served weapons, LTD/LRF, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, TACP, and indirect fire asset support should be incorporated to the maximum extent practical, but in the event that support is not available, the IP can simulate these assets during the conduct of a sortie.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

SCAS-3300 1.5 \* D/NS FFS/FTD S-TEN+ 1 UH-1Y & 1 H-1

Goal. OS - Introduce RW CAS missions in a rural and urban environments during both day and night in a low to medium threat environment.

Requirements

Discuss

Execution Template IAW TACP TACSOP  
CAS check-in brief  
Nine line and five line attack briefs  
Battle position selection  
Plotting BPs/HA  
Holding area selection  
Movement from HAs to BPs  
Objective area timing  
CRM and lookout doctrine in the tactical environment  
Day and night CAS considerations

Demonstrate/Introduce

CAS check-in brief  
9-line attack brief  
5-line attack brief  
IR CAS terminology and use  
Tactical RW CAS missions during both day and night  
Move from a low to medium threat environment during the sortie utilizing CAS mission briefs with and without target marks

Review

All ordnance delivery procedures  
Buddy lase procedures

Performance Standards

PUI shall exhibit a thorough understanding of the CAS mission brief and standard fire support coordination measures used when providing RW CAS.  
PUI shall conduct a minimum of six (6) RW CAS missions (3 day and 3

night) utilizing rockets and crew-served weapons.  
 PUI shall demonstrate a detailed understanding and functional knowledge of all weapons systems, common trouble shooting techniques and delivery techniques.

Prerequisites. ACAD-3030 through 3033, STCT-2201, REC-2301, SSWD-2608

Crew. TSI+NSI/PUI

CAS-3301 1.5 180 R, SC D A 1 UH-1Y & 1 H-1

Goal. OS - Provide RW CAS to ground forces in a low threat environment.

Requirements

Discuss

Objective area timing  
 Attack and cover elements  
 UH-1Y weapons integration/synchronization with GCE assets and scheme of maneuver  
 Friendly marking techniques/procedures  
 Identification of friendly/enemy positions  
 MACCS integration

Demonstrate/Introduce

Tactical RW CAS missions utilizing CAS mission briefs  
 Integration of utility helicopters into the ground scheme of maneuver  
 Conduct CAS with and without a visual mark  
 Conduct CAS in a low to medium threat environment  
 Integration of FW CAS and indirect fire assets into objective area mechanics

Review

Fire Support Coordination Measures  
 Types of terminal attack control  
 BP location  
 HA to BP movement  
 Ordnance delivery per NTTP  
 CRM principles during RW CAS  
 Buddy lase procedures (may be simulated)

Performance Standards

PUI shall utilize mission planning software to conduct elevation analysis and line of sight communication considerations.  
 PUI shall brief the objective area portion of the OAS brief.  
 PUI shall conduct all missions utilizing CAS procedures and communications.  
 PUI shall conduct a minimum of four (4) RW CAS missions utilizing CAS mission briefs.  
 IP shall ensure all attacks adhere to assigned attack brief parameters and restrictions.  
 PUI shall achieve the desired effects as stipulated by the terminal controller.  
 PUI shall ensure all missions are within 30 seconds of TOT during engagements or fall within the assigned engagement window.

Prerequisites. SCAS-3300

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. TACP

Crew. WTO/PUI/CC/AG

CAS-3302 1.5 \* SC NS A 1 UH-1Y & 1 H-1

Goal. OS - To provide RW CAS to ground forces at night in a medium threat environment.

Requirements

Discuss

Night/IR marking methods  
IR CAS terminology and use  
Employment capabilities of the FLIR  
Sensor management  
Terminal attack control procedures at night  
CRM during night RW CAS missions

Demonstrate/introduce

Friendly position marking techniques and procedures  
Tactical RW CAS missions at night with NVDs utilizing CAS Mission briefs  
Conduct CAS in a medium threat environment

Review

J-LASER terminology  
IR pointer usage  
Integration of utility helicopters into the ground SOM  
Friendly marking techniques/procedures  
Identification of friendly/enemy positions  
Objective area timing  
Buddy lase procedures (may be simulated)

Performance Standards

PUI shall brief the objective area portion of the OAS brief.  
PUI shall conduct a minimum of four (4) NVD RW CAS missions utilizing CAS mission briefs.  
PUI shall conduct all missions utilizing CAS procedures and communications.  
IP shall ensure all attacks adhere to assigned attack brief parameters and restrictions.  
PUI shall achieve the desired effects as stipulated by the terminal controller.  
PUI shall ensure all missions are within 30 seconds of TOT during engagements or fall within assigned engagement window.  
IP shall validate, using video, an effective engagement of a point target.

Prerequisites. ANSQ-2702, CAS-3301 (SWD-2609~LLL)

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. TACP

Crew. NSI/PUI/CC/AG

CAS-3303 1.5 180 R,M NS A 1 UH-1Y & 1 H-1

Goal. OS - Provide CAS to ground forces at night during LLL conditions in a medium threat environment.

Requirements

Discuss

MACCS agencies and integration  
J-LASER terminology  
Elevation analysis and line of sight communication considerations as a part of mission planning

Demonstrate/Introduce

Night CAS in a medium threat environment  
Integration of FW CAS and indirect fires assets into objective area mechanics  
FAC(A) game plan in support of the OAS brief (developed and briefed by IP)

Performance Standards

PUI shall brief objective area portion of the OAS brief.  
PUI shall conduct a minimum of four (4) RW CAS missions utilizing CAS mission briefs.  
PUI shall conduct all missions utilizing CAS procedures and communications.  
IP shall ensure all attacks adhere to assigned attack brief parameters and restrictions.  
PUI shall ensure the desired effects as stipulated by the terminal attack controller.  
PUI shall ensure all missions are within 30 seconds of TOT during engagements or fall within the assigned engagement window.  
PUI will conduct two (2) call for fire missions in support of terminal attack controller's objectives.  
PUI shall utilize mission planning software to conduct elevation analysis and line of sight communication considerations.  
IP shall validate, using video, an effective IDF engagement of a point target.

Prerequisites. SWD-2609, CAS-3302

Ordnance. (7) 2.75 inch rockets, (400) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. TACP, 2 FW aircraft, and indirect fire assets

Crew. NSI+FAC(A)/PUI/CC/AG

CAS-3304 1.5 365 R,M (NS) A/S-TEN+ 1 UH-1Y & 1 H-1

Goal. OS- Review urban CAS in a low to medium threat environment.

Requirements

Discuss

Urban terrain considerations  
Line of sight considerations for weapons and communications  
Weapon selection  
ROE/PID

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Collateral Damage Estimation(CDE)  
Gridded Reference Graphic(GRG)  
LASER spot/LGW considerations  
Urban threat considerations

Introduce/Demonstrate  
GRG usage

Performance Standards

PUI shall brief objective area portion of the OAS brief.  
PUI shall remain oriented within 1 city block for navigation.  
PUI shall receive, coordinate and execute a minimum of four (4) RW  
CAS missions utilizing 5-line or 9-line attack briefs.  
PUI shall conduct urban targeting using a gridded reference graphic  
(GRG).  
PUI shall integrate with GCE maneuver and fire support plan.

Prerequisites. CAS-3301 (CAS-3302~NS, CAS-3303~LLL)

Ordnance (Optional). (7) 2.75 inch rockets, (600) rounds .50cal,  
(1500) rounds 7.62mm, (60) chaff/flares

Range Requirement. Live fire LASER safe range, if required

External Syllabus Support. JTAC with appropriate marking devices (if  
available), suitable urban environment or MOUT facility

Crew. WTO(NSI)/PUI/CC/AO(AG)

2.15.9 Armed Reconnaissance (AR)

2.15.9.1 Purpose. To develop proficiency in Armed Reconnaissance under  
varying threat conditions.

2.15.9.2 General. Upon completion of this stage the pilot will be proficient  
in the planning, briefing and execution aspects of AR missions. In addition,  
the pilot will be proficient in the operation and employment of all organic  
weapons systems.

Aircraft should be configured with an operable NTIS, crew served  
weapons, LTD/LRF, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night  
events).

Actual fixed wing aircraft, MACCS agencies and indirect fire asset  
support should be incorporated to the maximum extent practical. In the event  
that support is not available, the IP can simulate these assets during the  
conduct of a sortie.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

AR-3305      1.5      365      R,M      (NS)      A      1 UH-1Y & 1 H-1

Goal. OS - Conduct an armed reconnaissance mission in a low to medium  
threat environment.

Requirements

Discuss  
Primary purpose of AR



AR planning considerations  
Named areas of interest (NAI)  
Target areas of interest (TAI)  
Modified combined obstacle overlay (MCOO)  
High, medium, and low threat levels  
Threat radar planning considerations with the emphasis on mission  
planning systems  
Radar terrain masking  
Radar Resolution Cell (RRC)  
Global Area Reference System (GARS)  
Kill boxes

Review

IFREP/MISREP procedures  
Traveling, traveling overwatch, bounding overwatch procedures  
Intelligence collection and dissemination procedures

Performance Standards

PUI shall give the entire OAS brief.  
PUI shall demonstrate a basic knowledge of AR planning, execution  
and mechanics.  
PUI shall achieve successful destruction of targets of opportunity  
(TOO) utilizing correct weapons-to-target methodology and  
standard weapons delivery profiles.  
IP shall validate, using the VTR, an effective APKWS engagement of a  
point target.  
PUI shall consolidate BDA and pass through appropriate MACCS  
channels.

Prerequisites. ACAD 3030, 3035, ANSQ-2702 (SWD-2607~NS, SWD-2609~LLL)

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm  
GAU-17, or (400) 7.62mm M240, (60) chaff/flares flares

Range Requirement. Live fire LASER safe range with thermally  
significant targets

Crew. WTO(NSI)/PUI/CC/AG

2.15.10 Strike Coordination And Reconnaissance (SCAR)

2.15.10.1 Purpose. To develop procedures and skills to tactically employ the  
aircraft while conducting SCAR missions under varying threat conditions.

2.15.10.2 General. Upon completion of this stage the pilot will be  
proficient in the planning, briefing and execution aspects of SCAR missions.  
In addition, the pilot will be proficient in the operation and employment of  
all organic weapons systems.

Aircraft should be configured with an operable NTIS, crew served  
weapons, LTD/LRF, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night  
events).

Actual fixed wing aircraft, MACCS agencies and indirect fire asset  
support should be incorporated to the maximum extent practicable. However,  
in the event that support is not available, the IP can simulate these assets  
during the conduct of a sortie.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

SSCAR-3307 1.5 730 R,M (NS) FFS/FTD S-TEN+/A 1 UH-1Y & 1 H-1

Goal. OS - Conduct a SCAR mission in a medium threat environment.

Requirements

Discuss

SCAR planning considerations  
Suppression of Enemy Air Defense (SEAD)  
Destruction of Enemy Air Defense (DEAD)  
Sensor capabilities  
Target Priority List (TPL)  
Joint Surveillance and Target RADAR System (JSTARS)  
Targeting process  
MACCS integration for deep battle operations  
Organic MAGTF EW capabilities/limitations  
IPB process  
Global Area Reference System (GARS)  
Kill boxes

Review

FSCMs  
MACCS  
ROE/PID considerations  
JMEMs/JWS  
Weapon to target match  
IFREP/MISREP procedures  
Traveling, traveling overwatch, bounding overwatch procedures  
Intelligence collection and dissemination procedures

Performance Standards

PUI shall conduct the OAS brief.  
PUI shall demonstrate a basic knowledge of SCAR planning, execution and mechanics.  
PUI shall properly employ all ASE IAW UH-1Y NTRP.  
PUI shall achieve the desired effects (as stipulated by the mission objectives) on at least two (2) known targets with timely, accurate engagements with minimal exposure time as the SCAR while using proper weapon to target match.  
IP shall validate, using video, an effective PGM engagement of a point target.  
PUI shall consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. ACAD-3030, 3035, SWD-2608, ANSQ-2702 (SWD~2609~AC LLL)

Ordnance. (7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. FW or RW aircraft

Crew. TSI+NSI/PUI (WTO(NSI)/CC/AG~AC)

2.15.11 Tactical Recovery of Aircraft and Personnel (TRAP)

2.15.11.1 Purpose. To develop procedures and skills to tactically employ the aircraft while conducting TRAP missions under varying threat conditions.

2.15.11.2 General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of TRAP missions. In addition, the pilot will be proficient in the operation and employment of all organic weapons systems.

Aircraft should be configured with an operable NTIS, crew served weapons, LTD/LRF, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, ground recovery forces, and indirect fire support assets should be incorporated to the maximum extent practical, but in the event that support is not available, the IP can simulate these assets during the conduct of a sortie.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

TRAP-3308 1.5 365 R,M (NS) A 1 UH-1Y & 1 H-1

Goal. OS - Conduct a TRAP in a low to medium threat environment.

Requirements

Discuss

Survivor location and authentication  
ISOPREP and authentication procedures for downed survivor  
CSAR SPINS  
SARDOT  
SARNEG  
TRAP zones  
GCE TRAP Force composition  
Fire support coordination  
ASTACSOP TRAP matrix

Introduce

Isolated personnel authentication  
CSAR SPINS application

Review

Escort/assault support mission planning  
Escort responsibilities  
Attached/detached/combined escort  
Objective area fires integration  
Objective area flow and communications

Performance Standards

PUI shall give the Escort Flight Lead portion of the AMC brief.  
PUI shall properly plan for and employ escort assets in objective area.  
PUI shall utilize CSAR SPINS and ISOPREP data to properly authenticate the downed aircrew.  
PUI shall properly employ escort techniques and patterns for the assigned mission.  
PUI shall integrate fire support assets in the objective area.  
PUI shall use the correct terminology and techniques for LZ clearance and coverage.

Prerequisites. ACAD-3038, 3039, ANSQ-2702, ESC-3100, (SWD-2604~ORD,  
ESC-3101~NS)

Ordnance (Optional). (7) 2.75 inch rockets, (600) .50 Cal GAU-21,  
(3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range, if required

External Syllabus Support. One or more external assault support  
aircraft or one ground/amphibious unit (minimum three vehicles)

Crew. WTO(NSI)/PUI/CC/AO(AG)

#### 2.15.12 Forward Air Controller (Airborne) FAC(A)

2.15.12.1 Purpose. To qualify PUI as a FAC(A) in accordance with  
applicable directives.

2.15.12.2 General. At the completion of this stage, the PUI should have  
demonstrated a thorough knowledge of CAS and FAC(A) procedures used to  
control FW aircraft, RW aircraft, and supporting arms under varied  
environmental and threat conditions. At the completion of this stage the PUI  
will have met the certification requirements of the Joint FAC(A) MOA. The  
PUI may be designated a FAC(A) by the squadron commanding officer. Outlined  
requirements are listed in the most recent JCAS AP MOA-JFAC(A), and the T&R  
Program Manual Chapter 3. The JFAC(A) MOA can be found on the NIPRNET at:  
<https://vcepub.tecom.usmc.mil/sites/msc/magtftc/mawts1/jfaca/default.aspx>

Pilots shall be designated PQM (DESG-6300) to conduct FACA-3400, and  
UHC (DESG-6398) for all subsequent events.

Non-qualified aircrew shall fly FACA-3401 through FACA-3404 with a  
FAC(A)I. The FAC(A)I may simulate the ground FAC if one is not available.

One event FACA-3401 through FACA-3404 shall be flown in support of a  
qualified JTAC. Four of the controls during the initial POI shall be under  
non-permissive conditions. A non-permissive control is defined as a control  
where the target area threat level dictates that the FAC(A) must use threat  
counter-tactics and countermeasures. The FAC(A) must use a tactical scenario  
which requires a full 9-line CAS brief (IP to target area).

Upon successful completion of this stage of training through  
FAC(A)-3404 and compliance with JFAC(A) MOA certification requirements, the  
commanding officer may issue a T&R FAC(A) qualification as well as a JFAC(A)  
MOA FAC(A) certification.

In order to ensure compliance with the JFAC(A) MOA qualification standards,  
FAC(A)s shall complete a SOTC-6906 every 24 months and a standardized ATF  
shall be written by the supervising FAC(A)I. A SOTC-6906 should be logged at  
the completion of the initial FAC(A) POI. **FAC(A)s shall lose their  
qualification if they fail the recurring evaluation or if their evaluation  
period lapses.** In order to regain qualification, FAC(A)s shall meet the T&R  
and the JFAC(A) MOA requirements, as well as complete a subsequent re-  
evaluation under the supervision of a FAC(A)I.

Aircrew who have lost the FAC(A) qualification due to failure to  
meet JFAC(A) MOA currency requirements shall regain the FAC(A) qualification  
by successfully completing events as delineated in the appropriate T&R  
syllabus under the supervision of a current and qualified FAC(A) or FAC(A)I.  
At a minimum, such aircrew must complete the number and category (appropriate  
night, control type, ordnance, etc.) of controls the individual failed to  
accomplish during the appropriate six-month currency period (reference the  
current JFAC(A) MOA).

Aircrew who have lost the FAC(A) qualification due to exceeding the re-fly interval in all associated qualification events, or who have been FAC(A) unqualified for 24 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the refresher FAC(A) syllabus under the supervision of a FAC(A)I and conduct a minimum of six successful live controls IAW the current JFAC(A) MOA.

To regain currency once it has expired, the next FAC(A) sortie shall be flown with a current FAC(A). JFAC(A) MOA proficiency requirements will be met by meeting T&R proficiency requirements. If a FAC(A) loses T&R proficiency, then the sorties required to regain T&R proficiency must be flown with a current FAC(A). FAC(A)s who are unqualified for 18 consecutive months must regain qualification by completing the refresher syllabus below and a minimum of 6 controls in accordance with the current JFAC(A) MOA. This refresher syllabus must be flown with a FAC(A)I.

FACA-3400 is annotated A/S\*. If this event is an initial sortie for the PUI, it SHALL be flown in the aircraft. Subsequent flights of this event can be flown in the simulator to maintain proficiency.

FACA-3401 and 3402 are annotated A/S\* sorties. If these events are initial sorties for the PUI, they SHALL be flown in the aircraft. Subsequent flights for these two events can be flown in the simulator to log controls for JFAC(A) proficiency requirements. Controls logged during simulator events SHALL only be daytime, type 2 or type 3. The FTD/FSS SHALL be operated by a TSI from the terminal station (not from the crew seat). Where a S-TEN+ is specified the IP may simulate the man in the loop. A co-pilot SHALL be required for CRM purposes and cockpit management.

An aircraft control for the purpose of defining requirements is a mission that ends with a "cleared hot," "continue dry," "cleared to engage" or "abort" issued from the terminal attack controller. If a FAC(A) sortie is flown with a FAC(A)I and PUI, and terminal attack control is conducted by PUI, credit for each control will go to both pilots. Also, if the crew consists of two FAC(A) proficient, qualified pilots, both shall receive control credit.

Aircraft should be configured with an operable NTIS, crew served weapons, LTD/LRF, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

FACA-3400 1.5 365 R,M (NS) A/S\*--TEN 1 UH-1Y

Goal. OS - Introduce indirect fire supporting arms control.

Requirements

Discuss

Integration of Indirect Fires with CAS Assets in support of the GCE SOM

Fire Support Coordination Measures

Airspace Control Measures

Relationship of the Intelligence Cycle to the Targeting Process

Capabilities and limitations of indirect fire assets

Marine indirect fire asset organization

Naval Surface Fire Support (NSFS) capabilities, limitations and employment

CFF parts and elements

Suppression of Enemy Air Defenses (SEAD)  
Ground Delivered Illumination  
LASER call for fire procedures

Introduce

Call for fire procedures

Performance Standards

PUI shall demonstrate a basic knowledge of indirect fire support planning, preparation and execution.  
PUI shall conduct a minimum of four (4) fire missions, two (2) of which shall be adjust fire missions, one (1) shall be a SEAD mission.  
PUI shall achieve desired effects (destroy, neutralize or suppress) on selected targets.

Prerequisites. ACAD-3041, 3042, DESG-6300

Ordnance (Optional). (7) RP 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. 1 indirect fire asset (with 8 rounds)

Crew. WTO(NSI)+FAC(A)/PUI/CC/AO(AG) (TSI(NSI)+FAC(A)/PUI~SIM)

FACA-3401 1.5 365 R,M (NS) A/S\*-TEN+ 1 UH-1Y & 1 H-1

Goal. OS - Introduce control of RW aircraft.

Requirements

Discuss

RW CAS and FAC(A) aircraft capabilities, limitations and employment  
Use and submission of the Joint Tactical Airstrike Request (JTAR)  
CAS specific Rules of Engagement (ROE), Proportional Response and Collateral Damage Considerations  
Marine and Joint Command and Control Structure and impact on CAS/FAC(A) planning  
Types of Terminal Attack Control, Bomb on Coordinate (BOC) and Bomb on Target (BOT) methods of attack and their application to RW CAS assets  
RW FAC(A) crew coordination  
Task shedding/sharing in the FAC(A) environment  
FAC(A) section game-plan  
JFAC(A) MOA certification and qualification requirements

Introduce

Integration of RW CAS assets into objective area mechanics  
RW communication and control procedures  
LASER designation for Hellfire (if available)

Performance Standards

PUI shall demonstrate a basic knowledge of RW CAS aircraft planning, preparation and execution.  
PUI shall conduct a minimum of four (4) RW controls consisting of at least:  
(1) Type 1 RW control  
(1) Type 2 RW control  
(1) Type 3 RW control  
PUI shall utilize a minimum of one (1) 9-Line CAS attack brief.

PUI shall utilize at least two (2) 5-Line CAS attack briefs.

Prerequisites. ACAD-3041, 3042, DESG-6398

Ordnance. (7) RP 2.75 inch rockets, (600) .50 Cal GAU-21, (3000)  
7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally  
significant targets, if available

External Syllabus Support. 2 RW CAS aircraft with ordnance and ground  
maneuver unit with TACP

Crew. FAC(A)I/PUI/CC/AG

FACA-3402 1.5 365 R,M D A/S\*-TEN+ 1 UH-1Y & 1 H-1

Goal. OS - Introduce control of FW aircraft.

Requirements

Discuss

FW CAS aircraft ordnance capabilities, limitations and employment  
Marine and Joint UAS capabilities, limitations and employment  
Effects of weather, terrain and threat on FW CAS assets and RW  
FAC(A)  
Types of Terminal Attack Control, Bomb on Coordinate (BOC) and  
Bomb on Target (BOT) methods of attack and their application to  
FW CAS assets  
Airspace Control Order (ACO), Air Tasking Order (ATO) and their  
impact on CAS/FAC(A) planning  
LASER guided, sensor guided, coordinate dependant and non-  
precision weapons deliveries  
Visual and sensor target marking  
SEAD in support of FW CAS attacks  
Target location procedures in support of CAS  
FAC(A) coordination within the flight and intracockpit  
Task shedding/sharing in the FAC(A) environment

Introduce

Integration of FW CAS assets  
FW lase for Hellfire setup and execution (if available)  
Objective area mechanics  
Communication and control procedures  
LASER designation for LST/LGB (if available)

Performance Standards

PUI shall brief a FAC(A) game plan.  
PUI shall demonstrate a basic knowledge of FW CAS aircraft planning,  
preparation and execution.  
PUI shall conduct a minimum of four (4) FW Type 1 controls, with  
emphasis on utilization of forward firing or unguided "free-  
fall" ordnance.  
PUI shall utilize a minimum of two (2) 9-Line CAS attack briefs.

Prerequisites. ACAD-3041, ACAD-3042, DESG-6398

Ordnance. (7) RP 2.75 inch rockets, (600) .50 Cal GAU-21, (3000)  
7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. 2 FW CAS aircraft with ordnance, prefer forward firing or unguided free-fall, ground maneuver unit with TACP

Crew. FAC(A)I/PUI/CC/AG

FACA-3403 1.5 365 R,M NS A 1 UH-1Y & 1 H-1

Goal. OS - Introduce control of FW aircraft at night.

Requirements

Discuss

FW CAS aircraft sensor capabilities, limitations and employment  
Effects of weather, terrain and threat at night to FW CAS assets and RW FAC(A)  
Types of Terminal Attack Control, Bomb on Coordinate (BOC) and Bomb on Target (BOT) methods of attack and their application to FW CAS assets  
LASER guided, sensor guided, coordinate dependant and non-precision weapons deliveries  
Visual and sensor target marking  
Ground and aviation delivered illumination in support of CAS  
Urban CAS considerations  
AC-130 integration and Call For Fire  
SEAD in support of FW CAS attacks  
Target location procedures in support of CAS  
Night FAC(A) coordination within flight and intracockpit

Introduce

RW lase for FW ordnance

Review

FW aircraft ordnance capabilities, limitations and employment  
Marine and Joint UAS capabilities, limitations and employment  
FAC(A) crew coordination  
Task shedding/sharing in the FAC(A) environment  
Integration of FW CAS assets  
Objective area mechanics  
Communication and control procedures

Performance Standards

PUI shall brief a FAC(A) gameplan.  
PUI shall demonstrate a basic knowledge of FW CAS aircraft planning, preparation, execution and night considerations.  
PUI shall conduct a minimum of four (4) FW controls, with emphasis on utilization of LASER guided, sensor guided or coordinate dependant ordnance. Of those at least two (2) should be FW Type 1 and at least two (2) should be FW Type 2 controls, one (1) of which should be BOC.  
PUI shall utilize a minimum of two (2) 9-Line CAS attack briefs.  
PUI shall utilize onboard systems to generate coordinates for a coordinate dependant weapon delivery, either live or simulated.

Prerequisites. ACAD-3041, ACAD-3042, DESG 6398

Ordnance. (7) RP 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available



External Syllabus Support. 2 FW CAS aircraft with LASER guided, sensor guided or coordinate dependant ordnance and ground maneuver unit with TACP.

Crew. FAC(A)I/PUI/CC/AG

FACA-3404 1.5 365 R,M (NS) A 1 UH-1Y & 1 H-1

Goal. OS - Review FAC(A) and the use of supporting arms and their integration in support of the GCE SOM.

Requirements

Discuss

Fire support planning documents (Appendix 19, target list worksheet, scheduling worksheet)  
Target acquisition via aided or unaided vision or remote observer  
Integration of air and surface fires in support of the ground scheme of maneuver  
Weaponing process for RW, FW and UAS ordnance and weapon to target match  
Integration of Digital systems (VMF, Link-16, etc...)  
MISREP and BDA assessment

Review

Discussion items from previous FAC(A) flights  
Integration of multiple CAS assets (FW, RW, UAS, IDF)  
Objective area mechanics  
Communication and control procedures

Performance Standards

PUI shall brief a FAC(A) game plan that supports the GCE SOM.  
PUI shall demonstrate sound knowledge of FW and RW CAS aircraft planning, preparation, and execution.  
PUI shall integrate and provide FAC(A) for multiple assets in support of the GCE SOM during a dynamic scenario.  
PUI shall conduct a minimum of (4) FW controls, of which at least two (2) are FW Type 1 controls and at least two (2) are FW Type 2 controls, one (1) of which should also be BOC.  
If utilizing RW CAS, PUI shall conduct a minimum of four (4) RW controls, either Type 1 or 2, integrated with FW attacks.  
If utilizing IDF, PUI shall conduct a minimum of two (2) calls for fire integrated with CAS attacks. At least one (1) shall be SEAD.  
PUI shall utilize a minimum of two (2) 9-Line CAS attack briefs.  
PUI will coordinate SEAD in support of FW target engagement.

Prerequisites. FACA-3400 through 3402 (FACA-3403~NS)

Ordnance. (7) RP 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (400) 7.62mm M240, (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. 2 FW CAS aircraft with ordnance, 1 indirect fire support asset or 1 section of RW aircraft with ordnance (separate from flight), ground maneuver unit with TACP

Crew. FAC(A)I/PUI/CC/AG

20 Sep 13

2.15.13 Expeditionary Shore-based Site Operations

2.15.13.1 Purpose. To introduce day and night flight and ground operations from an expeditionary site.

2.15.13.2 General. IAW applicable directives, PUI will emphasize proper communication procedures, patterns, and aviation operations in a FARP environment. Refer to appropriate NATOPS, NTTP, ASTACSOP and Aircraft Refueling NATOPS Manual for FARP operations. An actual FARP, ADGR site is preferred but not required. Squadrons may elect to simulate one of these environments at an outlying field, austere landing zone(s) or other appropriate landing sites.

Expeditionary Operations shall be flown in conjunction with any Core/Mission Skills Phase event once prerequisites are complete.

EXP-3602 and EXP-3603 are annotated A/S\* sorties. If these events are initial sorties for the PUI, they SHALL be flown in the aircraft. Subsequent flights for these two events can be flown in the simulator to maintain proficiency.

Aircraft should be configured with an operable NTIS and HMSD.

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

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EXP-3600    0.0    \*                                  D                                  A/S-TEN                                  1 UH-1Y

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Goal. OS - Conduct day Expeditionary Shore-based Site Operations (FARP).

Requirements

Discuss

- FARP types
- FARP equipment
- FARP procedures and personnel
- Landing point markings
- Movement within the FARP
- Ordnance procedures
- FARP emergency procedures
- MMF communications/nets
- FARP OIC communications/nets
- ADGR platforms, equipment and capabilities
- Pax and MACO procedures

Introduce

- Day FARP operations
- Inbound & outbound formations and approaches

Review

- Landing procedures to an unprepared surface

Performance Standards

- PUI shall conduct a FARP brief.
- PUI shall conduct a minimum of one (1) landing and one (1) takeoff.
- PUI should conduct refueling.

Prerequisites. ACAD-3045, ACPM-8310, 8311, TERF-2100

External Syllabus Support. Actual or simulated FARP

Crew. BIP/PUI/CC

EXP-3601 0.0 180 R,M NS A/S-TEN 1 UH-1Y

Goal. OS - Conduct NVD Expeditionary Shore-based Site Operations (FARP).

Requirements

Discuss

Night landing point markings  
Aircraft lighting  
FARP types  
FARP equipment  
FARP procedures and personnel  
Movement within the FARP  
Ordnance procedures  
FARP emergency procedures  
MMT communications/nets  
FARP OIC communications/nets  
ADGR platforms, equipment and capabilities  
Pax and MACO procedures

Demonstrate/Introduce

Night FARP operations

Review

Landing procedures to an unprepared surface

Performance Standards

PUI shall conduct a FARP brief.  
PUI shall conduct a minimum of one (1) landing and one (1) takeoff.  
PUI should conduct refueling.  
PUI shall conduct rendezvous and join-up procedures.

Prerequisites. ACAD-3045, ACPM-8310, ACPM-8311, TERF-2101 (ANSQ-2701~LLL)

External Syllabus Support. Actual or simulated FARP

Crew. NSI/PUI/CC/AO

EXP-3602 0.0 \* D A/S\*-TEN 1 UH-1Y

Goal. OS - Conduct Reduced Visibility Landings (RVL)

Requirements

Discuss

Reduced visibility landing profile and CRM  
Use of HMSD & hover aid graphic symbology during approach, landing and takeoff  
Recommended waveoff parameters and use of HMSD  
Landing zone selection criteria

Demonstrate/Introduce  
Reduced visibility landings  
Waveoffs

Review  
Landings to an unimproved landing site

Performance Standards  
PUI shall conduct a minimum of (1) RVL approach.  
PUI shall conduct a minimum of (1) reduced visibility takeoff.  
PUI shall conduct a minimum of (1) waveoff.

Prerequisites. TERF-2100

Crew. BIP/PUI/CC

EXP-3603 0.0 120 R,SC,M NS A/S\*-TEN 1 UH-1Y

Goal. OS - Conduct NVD Reduced Visibility Landings (RVL).

Requirements

Discuss  
Reduced visibility landing profile and CRM  
Use of HMSD and hover aid graphic symbology during approach,  
landing and takeoff  
Recommended waveoff parameters and use of HMSD  
Landing zone selection criteria  
Aircraft lighting use  
Use of searchlight

Demonstrate/Introduce  
NVD Reduced visibility landings  
Waveoffs

Review  
Landings to an unimproved landing site.

Performance Standards  
PUI shall conduct a minimum of (1) RVL approach.  
PUI shall conduct a minimum of (1) reduced visibility takeoff.  
PUI shall conduct a minimum of (1) waveoff.

Prerequisites. TERF-2101 (ANSQ-2701~LLL)

Crew. NSI/PUI/CC/AO

2.16 CORE PLUS/MISSION PLUS ACADEMIC PHASE (4000)

2.16.1 Purpose. To develop a Core Plus Skill complete pilot. These academics facilitate understanding of higher threat operations in the UH-1Y and MAGTF/Joint level functions to ensure individuals possess the requisite knowledge to execute large scale integrated mission events, unique mission tasking, events having a low probability of execution in combat, are theater specific, and/or are relatively high-threat events.

2.16.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in

the MAWTS-1 UH-1 Course Catalog. The academic courseware is a requirement. At the completion of each ACAD event, the appropriate training code shall be logged in M-SHARP by the individual pilot, contract instructor or squadron operations personnel, as appropriate. The codes listed below associated with these classes may NOT be the most up to date as the current UH-1 Course Catalog is the master document for stage academic requirements.

2.16.3 Core Plus/Mission Plus Academic Phase events are listed below.

CORE PLUS/MISSION PLUS ACADEMIC PHASE	
TRAINING CODES	COURSEWARE
<b>GENERAL REQUIREMENTS</b>	
ACAD-4001	(S) Airborne Early Warning
<b>ASPT</b>	
ACAD-4010	Review UH-1 Assault Support Planning
ACAD-4011	Review UH-1 Assault Support Execution
ACAD-4012	Mountain Area Operations
<b>ESC</b>	
No Lectures	
<b>CAS</b>	
ACAD-4021	Review Raid Planning
ACAD-4022	Review Problem Framing
ACAD-4023	Review (S) Urban CAS
ACAD-4024	Review Objective Area Planning
ACAD-4025	Review ROE Planning
ACAD-4026	Review (S) RW OAS
<b>SCAR</b>	
ACAD-4027	Review HMLA AR & SCAR TTPs
<b>DACM</b>	
ACAD-4030	UH-1 Air-to-Air Considerations
ACAD-4031	DACM Training
ACAD-4032	DACM Tactical Gameplan
ACAD-4033	(S) RW Threat to the MAGTF
ACAD-4034	(S) Attack Helo Threat to RW A/C
ACAD-4035	(S) FW Threat to the MAGTF
ACAD-4036	(S) FW Threat to RW A/C
<b>CBRN</b>	
No Lectures	
<b>TAC (A)</b>	
ACAD-4050	TACC
ACAD-4051	TAC (A) TTPs
<b>CQ</b>	
No Lectures	
*Indicates classes that should be presented to all pilots annually.	

2.17 CORE PLUS/MISSION PLUS SKILL PHASE (4000)

2.17.1 Purpose. To certify the PUI in large scale integrated mission events having unique mission tasking, a low probability of execution in combat, are theater specific, and/or are relatively high-threat events.

2.17.2 General. Upon completion of each individual stage, the pilot will be considered Core Plus/Mission Plus proficient in that stage.

Completion of DACM-4301, DACM-4302 and DACM-4303 meets the requirements for the PUI to be RWDACM qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as RWDACM qualified shall be placed in the NATOPS jacket and APR.

Completion of DACM-4304 and DACM-4305 meets the requirements for the PUI to be FWDACM qualified. At the discretion of the squadron commanding

officer a letter assigning the PUI as FWDACM qualified shall be placed in the NATOPS jacket and APR.

Completion of the TAC(A) stage meets the requirements for the PUI to be TAC(A) qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as TAC(A) qualified shall be placed in the NATOPS jacket and APR.

Completion of SCBRN-4400 meets the requirements for the PUI to be CBRN qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as CBRN qualified shall be placed in the NATOPS jacket and APR.

Completion of the CQ stage meets the requirements for the PUI to be CQ qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as CQ qualified shall be placed in the NATOPS jacket and APR.

2.17.2.1 Stages. The following stages are included in the Core Plus/Mission Plus Phase of training.

CORE PLUS/MISSION PLUS SKILLS PHASE	
PAR NO.	STAGE NAME
2.17.3	Assault Support (ASPT)
2.17.4	Escort (ESC)
2.17.5	Close Air Support (CAS)
2.17.6	Strike Coordination and Reconnaissance (SCAR)
2.17.7	Rotary Wing Defensive Air Combat Maneuvering (RWDACM)
2.17.8	Fixed Wing Defensive Air Combat Maneuvering (FWDACM)
2.17.9	Chemical, Biological, Radiological and Nuclear Warfare (CBRN)
2.17.10	Tactical Air Coordinator (Airborne) TAC(A)
2.17.11	Carrier Qualified (CQ)

2.17.2.1 Ordnance Delivery. At the completion of this phase, the PUI will have demonstrated increased accuracy during ordnance delivery and proper use of the NTIS under medium to high threat conditions with mixed ordnance loads. For the Core Plus/Mission Plus Skills Phase, the PUI shall meet the ordnance metrics outlined for the Mission Skill Phase (See Paragraph 2.15.4.). VTR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

2.17.2.2 Navigational Accuracy. At the completion of this phase, the PUI will have demonstrated increased navigational accuracy and timeliness during assault support operations, under medium to high threat conditions. For the Core Plus Skills Phase, the PUI shall meet the ordnance metrics outlined for the Mission Skill Phase. See Paragraph 2.15.5. IP shall use MPS or aircraft systems to assess landing point accuracy.

2.17.3 Assault Support (ASPT)

2.17.3.1 Purpose. To develop the ability to perform specialized assault support missions.

2.17.3.2 General. Upon completion of each core plus event, the pilot will be considered capable of performing that particular mission.

Aircraft should be configured with appropriate HIE equipment, an operable NTIS, crew served weapons, LTD/LRF, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Crew Requirements. As listed at the end of each event.

Ground/Academic Training. IAW the MAWTS-1 Course Catalog.

ASPT-4100 1.0 \* (NS) A 1 UH-1Y

Goal. OS - Introduce techniques for paradrop operations.

Requirements

Discuss

Aircraft rigging specific to paradrops  
Insertion techniques  
Aircrew coordination  
Emergencies

Performance Standards

Perform paradrop maneuvers IAW the UH-1Y NATIP/NTTP and appropriate HIE Manual.

PUI shall conduct paradrops with at least two jumpers

Prerequisites. ASPT-2400 (ASPT-2403~NS, ANSQ-2703~LLL)

Range Requirement. Drop Zone or authorized paraops area

External Syllabus Support. Jump Master and two jumpers (Jump Master may be one of the jumpers)

Crew. BIP(NSI)/PUI/CC/(AO)

ASPT-4101 1.5 \* D A 1 UH-1Y

Goal. OS - Introduce techniques for water insertion.

Requirements

Discuss

Aircraft rigging specific to water insertion  
Insertion and extraction techniques  
Aircrew coordination  
Emergencies

Performance Standards

Perform Tactical maneuvers IAW the UH-1Y NATIP/NTTP and appropriate HIE Manual.

PUI shall insert at least two swimmers.

Prerequisites. TERF-2100, ASPT-2400

Range Requirement. Water drop zone or authorized helocast area

External Syllabus Support. Helocast Master and two swimmers (Helocast Master may be one of the swimmers)

Crew. BIP/PUI/CC

ASPT-4102 1.5 365 R,M (NS) A 1 UH-1Y

Goal. OS - Introduce techniques for insertion/extraction using the Special Personnel Insertion/Extraction (SPIE) rig or Jacob's Ladder

Requirements

Discuss

Aircraft rigging specific to SPIE  
Insertion and extraction techniques  
Aircrew coordination  
Emergencies

Introduce

SPIE flight profiles

Performance Standards

Perform Tactical maneuvers IAW UH-1Y NATIP/NTTP and appropriate HIE Manual.  
Complete three evolutions consisting of an extract, transition to flight, and insert.

Prerequisite. ASPT-2400

Range Requirement. Drop zone/landing zone or authorized SPIE area

External Syllabus Support. HRST Master and two ropers

Crew. BIP(NSI)/PUI/CC(AO)

SASPT-4103 1.5 \* D FFS/FTD S-TEN/A 1 UH-1Y

Goal. OS - Introduce Mountain Area Training

Requirements

Discuss

High altitude operations  
Loss of tail rotor effectiveness  
Turbulence  
Orographic lifting  
Downdrafts

Performance Standards

Perform 5 mountain area landings in mountainous terrain above 5,000ft DA or in mountainous terrain with simulated representative power limitations.  
Perform 2 simulated fastrope or rappel approaches in a mountain environment.

Prerequisite. ASPT-2400

Crew. TSI/PUI (TERFI/PUI/CC)

ASPT-4104 2.0 365 R,M (NS) A 1 UH-1Y

Goal. OS - Review Mountain Area Training.

Requirements

Discuss

High altitude operations  
Loss of tail rotor effectiveness  
Turbulence  
Orographic lifting  
Downdrafts

Performance Standards