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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.

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

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

	PARAGRAPH	PAGE
TRAINING AND READINESS REQUIREMENTS	1.0	1-3
MISSION	1.1	1-3
TABLE OF ORGANIZATION (T/O)	1.2	1-3
SIX FUNCTIONS OF MARINE AVIATION	1.3	1-4
ABBREVIATIONS	1.4	1-4
DEFINITIONS	1.5	1-6
MISSION ESSENTIAL TASK LIST (METL)	1.6	1-7
MET TO SIX FUNCTIONS OF MARINE AVIATION	1.7	1-8
MET TO CORE/MISSION/CORE PLUS/MISSION PLUS SKILL MATRIX	1.8	1-8
MISSION ESSENTIAL TASK OUTPUT STANDARDS	1.9	1-9
CORE MODEL MINIMUM REQUIREMENT (CMMR) FOR READINESS REPORTING (DRRS-MC)	1.10	1-10
CORE MODEL TRAINING STANDARD (CMTS)	1.11	1-13
INSTRUCTOR DESIGNATIONS	1.12	1-14
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD)	1.13	1-15
HMLA ORDNANCE REQUIREMENTS	1.14	1-16
APPENDIX A (MET WORKSHEETS)		A-1

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
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
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														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.

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 16/12/8
MCT 1.3.4.1 **ASPT**	Conduct Combat Assault Transport		12/8/4 16/12/8
MCT 3.2.3.1.1 **CAS**	Conduct Close Air Support		12/8/4 16/12/8
MCT 3.2.3.1.2.2 **AR**	Conduct Armed Reconnaissance		12/8/4 16/12/8
MCT 3.2.3.1.2.3 **SCAR**	Conduct Strike Coordination and Reconnaissance		12/8/4 16/12/8
MCT 3.2.5.4 **FAC(A)**	Conduct Forward Air Control (Airborne)		8/4/2 10/6/4
MCT 4.3.4 **AD**	Conduct Air Delivery		12/8/4 16/12/8
MCT 5.3.2.7.4 **CC**	Provide an Airborne Command and Control Platform for Command Elements		12/8/4 16/12/8
MCT 6.2.1.1 **TRAP**	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel		12/8/4 16/12/8
MCT 6.1.1.11 **ESC**	Conduct Aerial Escort		12/8/4 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 16/12/8
MCT 1.3.4.1.1 **RIE**	Conduct Airborne Rapid Insertion/Extraction		8/4/4 10/6/4
MCT 5.3.2.7.3 **TAC(A)**	Conduct Tactical Air Coordination (Airborne)		1/1/1 1/1/1
MCT 6.1.1.8 **AAD**	Conduct Active Air Defense		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	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.

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	9	6	3
1.3.4.1 (ASPT)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	9	6	3
3.2.3.1.1 (CAS)	MSP, UHC	ANSQ	MSP, ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.2 (AR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.3 (SCAR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.5.4 (FAC(A))**	MSP, UHC, FAC(A)	ANSQ	ANSQ, AG*	ANSQ, AG*	5	3	2
4.3.4 (AD)	MSP, UHC	ANSQ	ANSQ	ANSQ	9	6	3
5.3.2.7.4 (CC)	MSP, UHC	ANSQ	ANSQ	ANSQ	9	6	3
6.2.1.1 (TRAP)	MSP, UHC	ANSQ	ANSQ	ANSQ	9	6	3
6.1.1.11 (ESC)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	9	6	3
6.2.2 (EVAC)	MSP, UHC	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	12	8	4
1.3.4.1.1 (RIE)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	5	3	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)	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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[1]: 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[2]: 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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[1]: 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[2]: 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 (WTTP).

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 ORNDANCE 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:

1. Requirement for all Basic pilots to complete 2000, 3000, and 4000 Phase.
2. Requirement for all Series Conversion pilots to complete 2000 Phase.
3. Requirement to complete 2000 and 3000 Phase Refresher.
4. Requirement to complete 2000 and 3000 Phase Maintain.
5. 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.
6. 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:

1. 1000 Phase is based upon throughput of the FRS and is not part of a Fleet squadron requirements.
2. Basic requirements are drawn from 2000,3000, and 4000 Phases.
3. Series Conversion is drawn from 2000 Phase.
4. Refresh requirements are drawn from 2000, 3000, 5000, and 6000 Phases.
5. Maintain requirements are drawn from 2000 and 3000 Phases.
5. 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[1]**	**IUT[2]**	**ANNUAL[3,4]**
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
  - 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 6.1.1.11 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

  - 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

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
  - 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

	PARAGRAPH	PAGE
TRAINING AND READINESS REQUIREMENTS	1.0	1-3
MISSION	1.1	1-3
TABLE OF ORGANIZATION (T/O)	1.2	1-3
SIX FUNCTIONS OF MARINE AVIATION	1.3	1-4
ABBREVIATIONS	1.4	1-4
DEFINITIONS	1.5	1-6
MISSION ESSENTIAL TASK LIST (METL)	1.6	1-7
MET TO SIX FUNCTIONS OF MARINE AVIATION	1.7	1-8
MET TO CORE/MISSION/CORE PLUS/MISSION PLUS SKILL MATRIX	1.8	1-8
MISSION ESSENTIAL TASK OUTPUT STANDARDS	1.9	1-9
CORE MODEL MINIMUM REQUIREMENT (CMMR) FOR READINESS REPORTING (DRRS-MC)	1.10	1-10
CORE MODEL TRAINING STANDARD (CMTS)	1.11	1-13
INSTRUCTOR DESIGNATIONS	1.12	1-14
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD)	1.13	1-15
HMLA ORDNANCE REQUIREMENTS	1.14	1-16
APPENDIX A (MET WORKSHEETS)		A-1

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
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
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														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.

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 16/12/8
MCT 1.3.4.1 **ASPT**	Conduct Combat Assault Transport		12/8/4 16/12/8
MCT 3.2.3.1.1 **CAS**	Conduct Close Air Support		12/8/4 16/12/8
MCT 3.2.3.1.2.2 **AR**	Conduct Armed Reconnaissance		12/8/4 16/12/8
MCT 3.2.3.1.2.3 **SCAR**	Conduct Strike Coordination and Reconnaissance		12/8/4 16/12/8
MCT 3.2.5.4 **FAC(A)**	Conduct Forward Air Control (Airborne)		8/4/2 10/6/4
MCT 4.3.4 **AD**	Conduct Air Delivery		12/8/4 16/12/8
MCT 5.3.2.7.4 **CC**	Provide an Airborne Command and Control Platform for Command Elements		12/8/4 16/12/8
MCT 6.2.1.1 **TRAP**	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel		12/8/4 16/12/8
MCT 6.1.1.11 **ESC**	Conduct Aerial Escort		12/8/4 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 16/12/8
MCT 1.3.4.1.1 **RIE**	Conduct Airborne Rapid Insertion/Extraction		8/4/4 10/6/4
MCT 5.3.2.7.3 **TAC(A)**	Conduct Tactical Air Coordination (Airborne)		1/1/1 1/1/1
MCT 6.1.1.8 **AAD**	Conduct Active Air Defense		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	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.

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	9	6	3
1.3.4.1 (ASPT)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	9	6	3
3.2.3.1.1 (CAS)	MSP, UHC	ANSQ	MSP, ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.2 (AR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.3.1.2.3 (SCAR)	MSP, UHC	ANSQ	ANSQ, AG*	ANSQ, AG*	9	6	3
3.2.5.4 (FAC(A))**	MSP, UHC, FAC(A)	ANSQ	ANSQ, AG*	ANSQ, AG*	5	3	2
4.3.4 (AD)	MSP, UHC	ANSQ	ANSQ	ANSQ	9	6	3
5.3.2.7.4 (CC)	MSP, UHC	ANSQ	ANSQ	ANSQ	9	6	3
6.2.1.1 (TRAP)	MSP, UHC	ANSQ	ANSQ	ANSQ	9	6	3
6.1.1.11 (ESC)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	9	6	3
6.2.2 (EVAC)	MSP, UHC	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	12	8	4
1.3.4.1.1 (RIE)	MSP, UHC	ANSQ	MSP, ANSQ	ANSQ	5	3	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)	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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[1]: 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[2]: 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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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) [1]									
SKILL	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]	PILOTS	CC	AO[2]
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[1]: 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[2]: 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 (WTTP).

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 ORNDANCE 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:

1. Requirement for all Basic pilots to complete 2000, 3000, and 4000 Phase.
2. Requirement for all Series Conversion pilots to complete 2000 Phase.
3. Requirement to complete 2000 and 3000 Phase Refresher.
4. Requirement to complete 2000 and 3000 Phase Maintain.
5. 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.
6. 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:

1. 1000 Phase is based upon throughput of the FRS and is not part of a Fleet squadron requirements.
2. Basic requirements are drawn from 2000,3000, and 4000 Phases.
3. Series Conversion is drawn from 2000 Phase.
4. Refresh requirements are drawn from 2000, 3000, 5000, and 6000 Phases.
5. Maintain requirements are drawn from 2000 and 3000 Phases.
5. 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[1]**	**IUT[2]**	**ANNUAL[3,4]**
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
  - 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 6.1.1.11 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
  - 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 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

  - 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

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
  - 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)

	PARAGRAPH	PAGE
INDIVIDUAL TRAINING AND READINESS REQUIREMENTS	2.0	2-3
TRAINING PROGRESSION MODEL	2.1	2-3
PROFICIENCY AND CURRENCY	2.2	2-3
INDIVIDUAL CORE SKILL PROFICIENCY REQUIREMENTS	2.3	2-4
INDIVIDUAL MISSION SKILL PROFICIENCY REQUIREMENTS	2.4	2-6
INDIVIDUAL CORE PLUS SKILL PROFICIENCY REQUIREMENTS	2.5	2-7
REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS	2.6	2-9
PROGRAMS OF INSTRUCTION (POI)	2.7	2-10
ACADEMIC TRAINING	2.8	2-13
EVENT REQUIREMENTS	2.9	2-14
CORE SKILL INTRODUCTION FRS ACADEMIC PHASE (1000)	2.10	2-17
CORE SKILL INTRODUCTION PHASE (1000)	2.11	2-18
CORE SKILL ACADEMIC PHASE (2000)	2.12	2-57
CORE SKILL PHASE (2000)	2.13	2-58
MISSION SKILL ACADEMIC PHASE (3000)	2.14	2-82
MISSION SKILL PHASE (3000)	2-15	2-84
CORE PLUS/MISSION PLUS ACADEMIC PHASE (4000)	2.16	2-116
CORE PLUS/MISSION PLUS SKILL PHASE (4000)	2.17	2-117
INSTRUCTOR UNDER TRAINING ACADEMIC PHASE (5000)	2.18	2-134
INSTRUCTOR TRAINING PHASE (5000)	2.19	2-135
REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD) ACADMICS PHASE (6000)	2.20	2-161
REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD) PHASE (6000)	2.21	2-163
AVIATION CAREER PROGRESSION MODEL (8000)	2.22	2-185
SYLLABUS EVALUATION FORMS	2.23	2-193
SYLLABUS MATRICES	2.24	2-193

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.

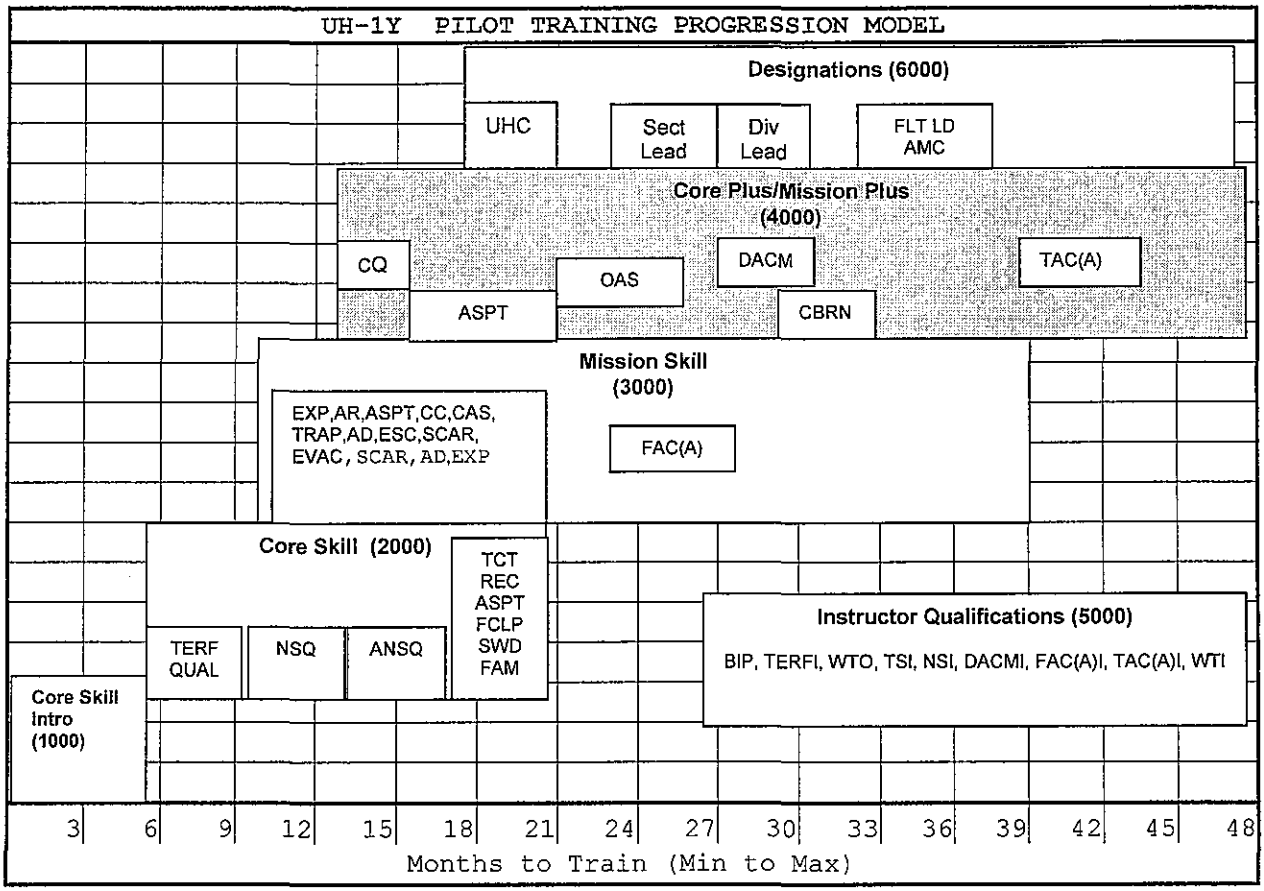


Figure 2-1. UH-1Y Recommended Training Progression Model (months)

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 on 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
	SWD	Intro Moving Tgt	2610R	2610R		2610R
ANSQ	SANSQ	(S) NVD LLL A/C EPs	S2700			
	ANSQ	NVD LLL FAM/NAV	2701		2701	
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
	ANSQ	NVD LLL SEC LANDINGS	2703R	2703R	2703R	2703R
FAM	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 DECRIPTION	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

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 DECRIPTION	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

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.

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/msc/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.

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)

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

SFAM-1104	1.5	*	R,SC,MR	D	FFS/FTD S-TEN 1 UH-1Y

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

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 NSFI/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

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

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 NTTP.

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
SINCGARS/HAVEQUICK operation and switchology
Section landings

Demonstrate
Send/Receive time (HAVEQUICK)
Send/Receive ERF (SINCGARS)

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, NTTP 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

given conditions.
PUI shall bring appropriate SLAP data to the brief, to include Lunar Elevation/Azimuth Angles (LEAA) and Lunar Daily Illumination (LDI) charts.

Prerequisite. FORM-1301, ASPT-1802

Crew. NSFI/PUI

FORM-1304 2.0 * D E A 2 UH-1Y

Goal. OS - Evaluate day formation flight.

Requirements

Discuss
Any previously introduced item in the FORM stage
Aircraft emergencies during formation flight
CRM during formation flight

Review
Parade flight
Cruise flight
Parade turns
Crossovers
Breakup and rendezvous
Cruise turns
Formation landing
Formation takeoff
Wingman awareness
Formation communication
Lead change
ASTACSOP RIO
ASTACSOP lost comm
ASTACSOP IIMC
ASTACSOP loss of visual contact
Section tactical landings

Performance Standards
PUI shall act as PIC, receive the brief from the section leader, ask questions as appropriate, conduct crew brief and safely execute MDG FORM sequence as wingman and lead. IP shall act as peer-level co-pilot.
PUI shall execute an abbreviated parade and cruise sequence as -2 and be prepared to execute contingency items such as ASTACSOP IIMC, loss of visual contact, lost comm and/or other emergencies.
PUI shall demonstrate a detailed understanding and functional knowledge of all formation procedures IAW the UH-1Y NATOPS, MDG, ASTACSOP and NTTP.
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 MDG formation maneuvers as lead and wingman. IP will conduct jacket review.

Prerequisites. FORM-1302, 1303

Crew. ANI/PUI

2.11.7 Terrain Flight (TERF)

2.11.7.1 Purpose. To introduce low level, contour and NOE modes of TERF

flight and develop proficiency in the application of TERF procedures. To develop the PUI's stage specific flight skills, systems and procedural knowledge, and CRM and prepare the PUI for Core Skill Phase TERF training.

2.11.7.2 General. PUI will demonstrate an understanding of the TERF modes (low level, contour, and NOE) and proficiency in low level, contour and NOE flight maneuvers. At least one TERF event will be flown as a section to introduce high bird responsibilities.

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

Ground/Academic Training. TERF stage lecture and ICW.

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

TERF-1400	2.0	*	D	A	1 UH-1Y

Goal. OS - Introduce TERF maneuvers.

Requirements

Discuss
All demonstrate and introduce maneuvers

Demonstrate
TERF portion of NATOPS brief
Loss of tail rotor effectiveness

Introduce
Low level flight
Contour flight
Nap of Earth (NOE)
Power checks
NOE takeoff
NOE approach
NOE quickstop
Masking and unmasking
Bunt
Roll
Turns
TERF navigation

Review
High speed approach and landing
Fixed pitch tail rotor malfunctions
High altitude emergencies
Additional FAM sustainment as required
NOE approach

Performance Standards
PUI shall have a working knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.
PUI shall load a mission card with a mission list, a serpentine route of a selected TERF route, a vector overlay of the route and set up terrain banding.
PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. ACAD-1009, SINST-1205 (FORM-1301~Section)

External Syllabus Support. Authorized TERF area

Crew. FRSI/PUI/CC/AO

TERF-1401	2.0	*	NS	A	1 UH-1Y

Goal. RS - Introduce NVD TERF maneuvers.

Requirements

Discuss
All demonstrate and introduce maneuvers
NVD considerations in the TERF environment

Demonstrate
TERF and NVD portions of NATOPS brief
Loss of tail rotor effectiveness

Introduce
Low level flight
Contour flight
Nap of Earth (NOE)
Power checks
NOE takeoff
NOE approach
High speed approach and landing
Masking and unmasking
Bunt
Roll
Turns
TERF navigation

Review
High speed approach and landing
Pattern autorotations
Fixed pitch tail rotor malfunctions
Additional FAM sustainment as required

Performance Standards
PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS, MDG and NVD manual.
PUI shall load a mission card with a mission list, a serpentine route of a selected TERF route, a vector overlay of the route and set up terrain banding.
PUI shall complete an accurate weight and balance 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.

Prerequisite. FAM-1117, TERF-1400 (FORM-1303~Section)

External Syllabus Support. Authorized TERF area

Crew. NSFI/PUI/CC/AO

2.11.8 Navigation (NAV)

2.11.8.1 Purpose. To develop the ability to conduct day/night navigation. NAV stage proficiency will be evaluated as part of CSIX-1901.

2.11.8.2 General. PUI must demonstrate the ability to navigate preplanned routes and identify positions using both charts/maps and mission planning software/moving map display at altitude and in the TERF environment.

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 NTTP.

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
- HMSD 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

SNAV-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)

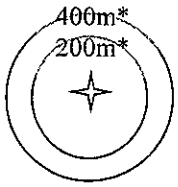
2.11.9.1 Purpose. To develop the ability to deliver air-to-ground weapons employing all available sensors and weapons systems.

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

 *Radius	-In correct profile per NTTP -No miss greater than 400 meters -CE90≤300 meters**	-On target within 5 seconds of trigger pull	-Based upon rocket Min Safe Distances (MSDs)*** -Qualifies PUI to deliver rockets during CAS training events

** 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 NTTP.
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

ASPT-1802	1.5	*	R,SC,MR	NS	A	1 UH-1Y

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
GENERAL REQUIREMENTS	
ACAD-2000	HMLA HAVEQUICK/SINCGARS
TERF	
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
TCT	
ACAD-2021	(S) Evasive Maneuvers
ACAD-2023	(S) HMLA ASE*
REC	
ACAD-2011	Recognition of Combat Vehicles (ROC-V)**
ACAD-2042	UH-1 FLIR Employment
ASPT	
No Lectures	
FCLP	
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 https://www.marinenet.usmc.mil or https://rocv.army.mil.	

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.

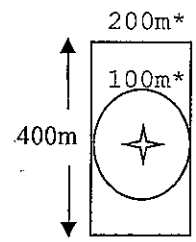
2.13.2.1 Stages. The following stages are included in the Core Skill Phase of training.

	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
 *Radius	-In correct profile per NTTP -No miss greater than 200 meters long/short, 100 meters laterally -CE90≤100 meters**	-On target within 3 seconds of trigger pull -Crew served: Crew coordination sufficient to achieve AG metric.	-Based upon rocket Risk Estimate Distances (REDs)*** -Qualifies PUI to deliver rockets during combat OAS

** 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 asses 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 NTTP.
- 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. OS - 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 NTTP

Performance Standards
PUI shall produce applicable LZ diagrams IAW UH-1 NTTP 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 NTTP (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 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
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
- HMSD 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 refly 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
HMSD 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
HMSD 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
HMSD 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

SWD-2610	1.5	365	R,M	(NS)	A/S-TEN	1 UH-1Y

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 NTTP
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 preceeding 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
GENERAL REQUIREMENTS	
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
ESC	
ACAD-3019	Assault Support Escort Tactics*
ASPT	
ACAD-3023	UH-1 Assault Support Planning
ACAD-3024	UH-1 Assault Support Execution
AD	
No Lectures	
EVAC	
No Lectures	
CC	
No Lectures	
CAS/AR/SCAR	
ACAD-3030	(S) RW OAS*
ACAD-3031	Urban CAS*
ACAD-3032	Close Air Support
ACAD-3033	CAS Standardization*
ACAD-3034	(S) Weaponeering
ACAD-3035	HMLA AR and SCAR TTPs
TRAP	
ACAD-3038	(S) Personnel Recovery
ACAD-3039	(S) TRAP
FAC(A)	
ACAD-3041	JFAC(A) Courseware lectures taught by Squadron FAC(A)I*
ACAD-3042	FAC(A) TTPS
EXP	
ACAD-3045	HMLA FARP Ops

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: Weaponeering 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.

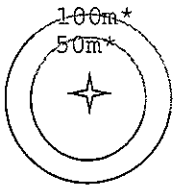
2.15.2.1 Stages. The following stages are included in the Mission Skills Phase of training.

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
 *RADIUS	-In correct profile per NTTP -No miss greater than 100 meters -CE90≤50 meters** -(1) rocket must impact within 10 meters	-On target within 3 seconds of trigger pull -Crew served: crew coordination sufficient to achieve AG metric.	-Based upon M151 Effective Casualty Radius (ECR)*** -Demonstrates the ability to damage targets

** 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 asses 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.

ESC-3100	1.5	*	D	A	1 UH-1Y & 1 H-1

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

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.

Requirements

Discuss
Six missions of assault support escort

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

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.

ASPT-3202 through ASPT-3204 initial events require 2 x UH-1Y; however, all refly 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

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
Dograded 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 additional, 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

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 refly 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.