DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON, DC 20350-3000

NAVMC 3500.20D
PSD
NOV 24 2021

NAVMC 3500.20D

From: Commandant of the Marine Corps
To: Distribution List

Subj: UH-1Y TRAINING AND READINESS MANUAL

Ref: (a) NAVMC 3500.14E

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

1. Purpose. Per the reference, the UH-1Y Training and Readiness (T&R) Manual, contained in enclosure (1) provides revised standards, regulations, and policy regarding the training of UH-1Y aircrew.

2. Cancellation. NAVMC 3500.20C.

3. Scope. Highlights of major changes are:

a. Chapter 1

(1) The definition of critical military occupational specialty (MOS) has been revised to add that MOS shortages shall be reported by the unit via the Defense Readiness Reporting System.

(2) The tactical and reserve squadron critical MOS table has been revised to allow only primary or billet MOSs that appear on a unit table of organization.

b. Chapter 2

(1) Unguided rocket allocations have been redistributed from the Mission Phase to the Core Phase to ensure unguided rocket delivery for proficiency for pilots prior to training to complex mission sets such as close air support.

(2) The Forward Air Controller Airborne syllabus adopted a building block approach with more simulator integration.

(3) Field carrier landing practice events have been moved from the Core Phase to the Core Plus Phase.

(4) Flight leadership events shall include at least one event performed with an instructor in the same aircraft as the pilot being evaluated.

4. Information. Commanding General (CG), Training and Education Command (TECOM) will update the UH-1Y T&R Manual as necessary to provide current and relevant training standards to commanders. All questions pertaining to this manual should be directed to: CG, TECOM, Policy and Standards Division, 1019 Elliot Road, Quantico, Virginia 22134.

5. Command. This Manual is applicable to the Marine Corps Total Force.

6. Certification. Reviewed and approved this date.

K. M. IIAMS
Commanding General
Training and Education Command
By direction

DISTRIBUTION: PCN 10033195600

CHAPTER 1

UH-1Y

	PARAGRAPH	PAGE
TRAINING AND READINESS REQUIREMENTS	1.0	1-3
MISSION	1.1	1-3
TABLE OF ORGANIZATION (T/O)	1.2	1-3
MISSION ESSENTIAL TASK LIST (METL)	1.3	1-4
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION	1.4	1-5
MET TO CORE/MISSION/CORE PLUS SKILL MATRIX	1.5	1-5
MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS	1.6	1-5
CORE MODEL MINIMUM REQUIREMENTS (CMMR) / ADVANCED AND BASELINE TRAINING STANDARDS FOR READINESS REPORTING (DRRS-MC)	1.7	1-7
CORE MODEL TRAINING STANDARD (CMTS)	1.8	1-8
INSTRUCTOR DESIGNATIONS	1.9	1-9
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD)	1.10	1-9
APPENDIX A MET WORKSHEETS		A-1
APPENDIX B ABBREVIATIONS AND ORDNANCE REQUIREMENTS		B-1
APPENDIX C READINESS SUPPLEMENTS		C-1

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CHAPTER 1

UH-1Y

1.0 TRAINING AND READINESS REQUIREMENTS. The goal of Marine Aviation is to attain and maintain combat readiness to support Expeditionary Maneuver Warfare while conserving resources. The standards established in this program are validated by subject matter experts to maximize combat capabilities for assigned METs. 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

1.1.1 Tactical and Reserve Squadron. 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.

1.1.2 Fleet Replacement Squadron. Conduct Core Introduction training for pilots and aircrew in the UH-1Y, pilots in the AH-1Z, and to provide technical training for aviation maintenance personnel.

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

1.2.1 HMLA UH-1Y Tactical and Reserve Squadrons

HMLA UH-1Y				
TABLE OF ORGANIZATION T/O				
CATEGORY	SQUADRON	SQUADRON(-)	DETACHMENT	DETACHMENT
Aircraft	12	8	4	3
Pilots	30	20	10	7
Crew Chiefs	25	17	8	6
Aerial Gunner / Observer	19	12	6	4

1.2.2 HMLA UH-1Y Tactical and Reserve Squadron Critical MOSs

UH-1Y TACTICAL AND RESERVE SQUADRON CRITICAL MOSs			
MOS Description	PRIMARY MOS	Billet and/or MOS Description	SECONDARY MOS
Pilot	7563	Maintenance Control (Safe-for-flight)	6012
Crew Chief	6174	Collateral Duty Inspector (CDI)	6016
Aircraft Maintenance Chief	6019	Collateral Duty QAR (CDQAR)	6017
Avionics Tech	6324	Quality Assurance Representative (QAR)	6018
Airframe Mechanic	6154	WTI Pilot	7577
Ordnance Technician	6531	WTI Crew Chief	6177
Helicopter Mechanic	6114	Night Systems Instructor (NSI) [Pilot}	7547
Ordnance Chief	6591	Forward Air Controller (Airborne) Instructor {FAC(A)I}	7544
		Night Systems Instructor (NSI) [Crew Chief]	6171
Critical MOS – Those specialties that directly affect the unit's ability to undertake its mission and appear as either Primary or Billet MOS on a unit T/O. Definition per MCO 3000.13. MOS shortage shall be reported by the unit/squadron via DRRS-MC			
MOS shortages shall be reported by the squadron (12 Aircraft) only via DRRS-MC (See MET Worksheets Appendix A).			
Note: Critical MOSs for Section Leader, Division Leader, Flight Leader, and Air Mission Commander are reported in DRRS-MC via the CMMR paragraph under Combat Leadership (Para 1.7).			

RULE	**P1**	**P2**	**P3**	**P4**
Personnel Strength	≥90%	80-89%	70-79%	≤70%
Critical MOS	≥85%	75-84%	65-74%	≤65%

1.2.3 HMLAT-303 Fleet Replacement Squadron

HMLAT-303 UH-1Y	
TABLE OF ORGANIZATION T/O	
CATEGORY	**SQUADRON**
Aircraft	14
Pilots	17
Crew Chiefs	30
CMT	11
Aerial Gunner / Observer	14

1.3 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, and/or theater specific. Core Plus METs may be included in Readiness Reporting when contained within an Assigned Mission METL. An Assigned Mission METL normally consists of selected METs (drawn from Core and Core Plus METs) necessary to conduct the assigned mission. MCO 3000.13 provides additional information on readiness reporting.

HMLA UH-1Y		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	**SKILL ABBREVIATION**	**MCT DESCRIPTION**
MCT 1.3.4.1	**CAT**	Conduct Combat Assault Transport
MCT 3.2.3.1.1	**CAS**	Conduct Close Air Support
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 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	**AE**	Conduct Air Evacuation
CORE PLUS		
MET	**SKILL ABBREVIATION**	**MCT DESCRIPTION**
MCT 1.3.3.3.1	**SEA**	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 1.3.4.1.1	**RIE**	Conduct Airborne Rapid Insertion/Extraction
MCT 4.3.4	**AD+**	Conduct Air Delivery
MCT 5.3.2.7.3	**TAC(A)**	Conduct Tactical Air Coordination (Airborne) Operations
MCT 5.3.2.7.4	**AC2**	Provide an Airborne Command and Control platform for Command Elements

1.4 MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION. As Aviation Ground units provide universal impact across all six functions of Marine Aviation, this table is optional for the Aviation Ground community.

HMLA UH-1Y							
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION							
CORE							
MET	SKILL ABBREVIATION	SIX FUNCTIONS OF MARINE AVIATION					
		OAS	ASPT	AAW	EW	CoA&M	AerRec
MCT 1.3.4.1	CAT		X				
MCT 3.2.3.1.1	CAS	X					
MCT 3.2.3.1.2.3	SCAR	X					X
MCT 3.2.5.4	FAC(A)	X	X				
MCT 6.2.1.1	TRAP	X	X				
MCT 6.1.1.11	ESC	X	X				
MCT 6.2.2	AE		X				
SEA							
MCT 1.3.3.3.1	SEA	X	X	X		X	X
MCT 1.3.4.1.1	RIE	X	X				
MCT 4.3.4	AD+		X				
MCT 5.3.2.7.3	TAC(A)	X				X	
MCT 5.3.2.7.4	AC2		X			X	

1.5 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.

HMLA UH-1Y																														
MET TO CORE/MISSION/CORE PLUS/MISSION PLUS SKILL MATRIX																														
MET	CORE SKILLS (2000 Phase)									MISSION SKILLS (3000 Phase)							CORE PLUS (4000 Phase)													
																	SKILLS							MISSIONS					
	TERF	TCT	REC	CAT	FCLP	SWD	ANSQ	FAM	EXP	CAT	CAS	SCAR	FAC(A)	TRAP	ESC	AE	ESC	CAT	AD	EW	CAS	SCAR	DACM	CBRN	SEA	RIE	AD +	TAC(A)	AC2
MCT 1.3.4.1 CAT		X		X		X	X	X	X	X								X						X					
MCT 3.2.3.1.1 CAS	X	X	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	X	X					
MCT 3.2.5.4 FAC(A)	X	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		X	X		X	X					
MCT 6.1.1.11 ESC	X	X	X			X	X	X							X		X			X			X	X					
MCT 6.2.2 AE		X	X	X		X	X	X	X							X								X					
CORE PLUS																														
MCT 1.3.3.3.1 SEA					X		X	X															X	X	X					
MCT 1.3.4.1.1 RIE		X	X	X		X	X	X		X														X		X				
MCT 4.3.4 AD+		X	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	
MCT 5.3.2.7.4 AC2		X	X	X		X	X	X																X					X

1.6 MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS. The following MET output standards are the required level of performance a HMLA (UH-1Y) squadron/detachment must be capable of sustaining during contingency operations by MET to be considered MET-ready.

1.6.1 Output standards will be demonstrated through the incorporation of unit training Events.

1.6.2 A core capable HMLA (UH-1Y) squadron/detachment 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% Mission Capable (MC) aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET and >90% T/O aircrew on hand. If unit MC aircraft is <70% or T/O aircrew <90%, core capability will be degraded by a like percentage.

HMLA UH-1Y									
MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS									
CORE									
MET	SKILL ABBREVIATION	OUTPUT STANDARDS BY TASK ORGANIZATION (NUMBER OF AIRCRAFT)							
		MAXIMUM MCT SORTIES PER MET				MAXIMUM DAILY SORTIES**			
		Squadron	Squadron(-)	Detachment	Detachment	Squadron	Squadron(-)	Detachment	Detachment
		12 A/C	8 A/C	4 A/C	3 A/C	12 A/C	8 A/C	4 A/C	3 A/C
MCT 1.3.4.1	CAT	16	12	4	4	16	12	4	4
MCT 3.2.3.1.1	CAS	16	12	4	4				
MCT 3.2.3.1.2.3	SCAR	16	12	4	4				
MCT 3.2.5.4	FAC(A)*	18	13	5	4				
MCT 6.2.1.1	TRAP	16	12	4	4				
MCT 6.1.1.11	ESC	16	12	4	4				
MCT 6.2.2	AE	16	12	4	4				
MET	SKILL ABBREVIATION	Squadron	Squadron(-)	Detachment	Detachment				
		12 A/C	8 A/C	4 A/C	3 A/C				
MCT 1.3.3.3.1	SEA	16	12	4	4				
MCT 1.3.4.1.1	RIE	10	6	4	4				
MCT 4.3.4	AD+	16	12	4	4				
MCT 5.3.2.7.3	TAC(A)	1	1	1	1				
MCT 5.3.2.7.4	AC2	16	12	4	4				
* FAC(A) sorties may be sourced by both UH and AH aircrew. The numbers shown are HMLA Squadron/Squadron(-)/Detachment totals.									
** A 12/8/4/3 plane Mission Capable HMLA(UH-1Y) Squadron/Squadron(-)/Detachment is able to execute 16/12/4/4 total overall sorties on a daily (24 hour period) basis during contingency/combat operations.									

1.7 CORE MODEL MINIMUM REQUIREMENTS (CMMR) / ADVANCED AND BASELINE TRAINING STANDARDS FOR READINESS REPORTING (DRRS-MC). The paragraphs and tables below delineate the minimum crew qualifications, designations, and/or training for the Advanced and Baseline Training Standards.

1.7.1 CMMR / Advanced Training Standard: The minimum crew qualifications, designations, and/or training required to execute the MET output standards of paragraph 1.6. Units can be expected to perform a critical role in a mission or OPLAN and normally requires external MAGTF support.

1.7.2 Baseline Training Standard: The level of readiness expected from a unit sustained through CORE training at home station. Normally equates to approximately 70% of CMMR.

1.7.3 In the matrix below the first number in the "Crews Trained" columns reflect the CMMR or Advanced Training Standard, the numbers in parentheses indicate the Baseline Training Standard.

Note: Combat Leadership is depicted as only one value (CMMR).

HMLA UH-1Y

CORE MODEL MINIMUM REQUIREMENT (CMMR) TRAINING STANDARDS FOR READINESS REPORTING (DRRS-MC)

CORE MISSIONS

SKILL	CREW POSITION				CREWS TRAINED			
	PILOT UHC	COPILOT	CC	AO	Squadron 12 A/C	Squadron(-) 8 A/C	Detachment 4 A/C	Detachment 3 A/C
CAT	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)
CAS	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)
SCAR	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)
FAC(A)**	MSP, FAC(A)	ANSQ	ANSQ,AG*	ANSQ,AG*	9(6)	7(4)	3(2)	2(2)
TRAP	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)
ESC	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)
AE	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)
MISSION PLUS								
SEA	MSP,CQ	ANSQ, CQ	MSP,CQ	ANSQ,CQ	12(8)	8(5)	4(2)	3(2)
RIE	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	5(3)	3(2)	2(1)	2(1)
AD+	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)
TAC(A)	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	1(1)	1(1)	1(1)	1(1)
AC2	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8(5)	6(4)	2(1)	2(1)

* AG Qualified in one or more weapons systems, or paired with NSI CC if Under Training (UT).
** FAC(A) training requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH crew).

COMBAT LEADERSHIP

DESIGNATION	Squadron 12 A/C	Squadron(-) 8 A/C	Detachment 4 A/C	Detachment 3 A/C
Utility Helicopter Commander (UHC)	12	8	4	3
Section Leader (SL)	6	4	2	2
Division Leader (DL)***	4	3	1	1
Flight Leader (FL)***	4	3	1	1
Air Mission Commander (AMC)***	4	3	1	1

*** Division Leader, Flight Leader, and Air Mission Commander Leadership requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH pilot). Detachment division leader requirements are per TMS.
Note: Crew definitions for training are identified within each T&R event.

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

1.8.1 HMLA (UH-1Y) Tactical and Reserve Squadron

HMLA UH-1Y

CORE MODEL TRAINING STANDARD (CMTS)

CORE SKILLS (2000 Phase)

CORE SKILLS	Squadron 12 Aircraft			Squadron(-) 8 Aircraft			Detachment 4 Aircraft			Detachment 3 Aircraft		
	P	CC	AO[1]	P	CC	AO[1]	P	CC	AO[1]	P	CC	AO[1]
TERF	24	12	12	16	8	8	8	4	4	6	3	3
TCT	24	-	-	16	-	-	8	-	-	6	-	-
REC	24	12	12	16	8	8	8	4	4	6	3	3
CAT	24	12	12	16	8	8	8	4	4	6	3	3
FCLP	24	12	12	16	8	8	8	4	4	6	3	3
SWD	24	12	12	16	8	8	8	4	4	6	3	3
ANSQ	24	12	12	16	8	8	8	4	4	6	3	3
FAM	24	-	-	16	-	-	8	-	-	6	-	-
EXP	24	-	-	16	-	-	8	-	-	6	-	-

MISSION SKILLS (3000 Phase)

MISSION SKILLS	Squadron 12 Aircraft			Squadron(-) 8 Aircraft			Detachment 4 Aircraft			Detachment 3 Aircraft		
	P	CC	AO[1]	P	CC	AO[1]	P	CC	AO[1]	P	CC	AO[1]
CAT	22	11	-	14	7	-	8	4	-	6	3	-
CAS	22	11	11	14	7	7	8	4	4	6	3	3
SCAR	22	-	-	14	-	-	8	-	-	6	-	-
FAC(A)	4	-	-	3	-	-	1	-	-	1	-	-
TRAP	22	-	-	14	-	-	8	-	-	6	-	-
ESC	22	11	11	14	7	7	8	4	4	6	3	3
AE	22	-	-	14	-	-	8	-	-	6	-	-

CORE PLUS SKILLS[2] (4000-4499 Phase)

CORE PLUS SKILLS	Squadron 12 Aircraft						Squadron(-) 8 Aircraft						Detachment 4 Aircraft						Detachment 3 Aircraft					
	P		CC		AO[1]		P		CC		AO[1]		P		CC		AO[1]		P		CC		AO[1]	
ESC	3	11	-	-	-	-	2	7	-	-	-	-	1	4	-	-	-	-	1	3	-	-	-	-
CAT	3	11	-	-	-	-	2	7	-	-	-	-	1	4	-	-	-	-	1	3	-	-	-	-
AD	3	11	-	-	-	-	2	7	-	-	-	-	1	4	-	-	-	-	1	3	-	-	-	-
EW	3	11	-	-	-	-	2	7	-	-	-	-	1	4	-	-	-	-	1	3	-	-	-	-
CAS	3	11	-	-	-	-	2	7	-	-	-	-	1	4	-	-	-	-	1	3	-	-	-	-
SCAR	3	11	-	-	-	-	2	7	-	-	-	-	1	4	-	-	-	-	1	3	-	-	-	-
DACM	4	8	2	4	2	4	2	4	1	2	1	7	2	4	1	1	1	2	2	4	1	2	1	2
CBRN	2	22	2	25	2	22	1	20	1	17	1	15	1	10	1	8	1	7	2	7	1	5	1	5

MISSION PLUS SKILLS[2] (4500-4999 Phase)

MISSION PLUS SKILLS	Squadron 12 Aircraft						Squadron(-) 8 Aircraft						Detachment 4 Aircraft						Detachment 3 Aircraft					
	P		CC		AO[1]		P		CC		AO[1]		P		CC		AO[1]		P		CC		AO[1]	
SEA	4	22	2	11	2	11	1	14	1	7	1	7	1	8	1	4	1	4	2	6	1	3	1	3
RIE	3	11	3	11	-	-	2	7	2	7	-	-	1	4	1	4	-	-	1	3	1	2	-	-
AD+	4	22	2	11			1	14	1	7			1	8	1	4			1	6	1	3		
TAC(A)	1	2	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-
AC2	4	22					1	14					1	8					1	6				

Note 1: A qualified crew chief may substitute the AO crew position

Note 2: For Core Plus Skills and Mission Plus Skills, the first number (in blue font and highlighted in gray) represents the number of individuals the unit or 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 should train if that MET becomes an Assigned/Directed Mission Set. For the 4000 Phase the commanding officer determines the number of aircrew to train. The CMTS is based upon the community's collective recommendation.

1.9 INSTRUCTOR DESIGNATIONS

1.9.1 HMLA (UH-1Y) Tactical and Reserve Squadron

HMLA UH-1Y												
INSTRUCTOR TRAINING (5000 PHASE)												
CORE SKILLS	Squadron 12 Aircraft			Squadron(-) 8 Aircraft			Detachment 4 Aircraft			Detachment 3 Aircraft		
	P	CC	AO[1]	P	CC	AO[1]	P	CC	AO[1]	P	CC	AO[1]
BIP	6	-	-	4	-	-	2	-	-	2	-	-
TERF(I)	6	9	-	4	6	-	2	3	-	2	3	-
WTO	6	-	-	4	-	-	2	-	-	2	-	-
NSI	5	5	-	3	3	-	2	2	-	2	2	-
WTI	3	3	-	2	2	-	1	1	-	1	1	-
FAC(A)I	2	-	-	1	-	-	-	-	-	-	-	-
TAC(A)I*	2	-	-	-	-	-	-	-	-	-	-	-
DACM(I)	2	2	-	1	1	-	-	-	-	-	-	-
FLSE**	3	-	-	3	-	-	1	-	-	1	-	-
AGI	-	7	-	-	4	-	-	2	-	-	2	-
*Per MAG												
**FLSEs are Designated by the Group CO												

1.9.2 HMLAT-303

HMLAT-303 UH-1Y (14 Aircraft)			
INSTRUCTOR TRAINING (5000 PHASE)			
DESIGNATION	PILOT	CC	AO
BIP	17	-	-
TERF(I)	17	12	-
WTO	17	12	-
IP/FRSI	17	-	-
NS FRSI*	10	6	-
NSFI	8	9	-
NSI*	9	6	-
NI/ANI	10	4	
AGI	-	12	-
*HMLAT-303 NS Instructor requirements may include NSIs as well as NSFIs.			

1.10 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD)

1.10.1 HMLA (UH-1Y) Tactical and Reserve Squadron

HMLA UH-1Y				
REQUIREMENT, CERTIFICATIONS, DESIGNATIONS, AND QUALIFICATIONS (RCQD)				
DESIGNATIONS	Squadron 12 Aircraft	Squadron(-) 8 Aircraft	Detachment 4 Aircraft	Detachment 3 Aircraft
Functional Check Pilot (FCP)	6	4	2	2

1.10.2 HMLAT-303 Fleet Replacement Squadron

HMLAT-303 UH-1Y (14 Aircraft)	
REQUIREMENT, CERTIFICATIONS, DESIGNATIONS, AND QUALIFICATIONS (RCQD)	
DESIGNATIONS	PILOTS
Utility Helicopter Commander (UHC)	17
Section Leader (SL)	17
Division Leader* (DL)	6
Flight Leader* (FL)	3
Functional Check Pilot (FCP)	14
* Flight Leader and Division Leader requirements apply to HMLAT squadron, not individual aircraft models (may be filled by UH or AH pilot). Note: Crew definitions for training are identified within each T&R event.	

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Appendix A

HMLA (UH-1Y)

MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	**SKILL ABBREVIATION**	**MCT DESCRIPTION**
MCT 1.3.4.1	**CAT**	Conduct Combat Assault Transport
MCT 3.2.3.1.1	**CAS**	Conduct Close Air Support
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 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	**AE**	Conduct Air Evacuation
CORE PLUS		
MET	**SKILL ABBREVIATION**	**MCT DESCRIPTION**
MCT 1.3.3.3.1	**SEA**	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 1.3.4.1.1	**RIE**	Conduct Airborne Rapid Insertion/Extraction
MCT 4.3.4	**AD**	Conduct Air Delivery
MCT 5.3.2.7.3	**TAC(A)**	Conduct Tactical Air Coordination (Airborne) Operations
MCT 5.3.2.7.4	**AC2**	Provide an Airborne Command and Control Platform for Command Elements

MCT 1.3.4.1 Conduct Combat Assault Transport (CAT)

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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting CAT in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting CAT in a medium threat environment.

Output Standards:
- 16/12/4/4 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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting CAS in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting CAS in a medium threat environment.

Output Standards:
- 16/12/4/4 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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting SCAR in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting SCAR in a medium threat environment.

Output Standards:
- 16/12/4/4 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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 9/7/3/2 UH-1Y and AH-1Z combined aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting FAC(A) in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 6/4/2/2 UH-1Y and AH-1Z combined aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting FAC(A) in a medium threat environment.

Output Standards:
18/13/5/4 combined UH and AH 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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting TRAP in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting TRAP in a medium threat environment.

Output Standards:
- 16/12/4/4 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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting ESC in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting ESC in a medium threat environment.

Output Standards:
- 16/12/4/4 sorties daily sustained during contingency/combat

MCT 6.2.2 Conduct Air Evacuation (AE)

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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting AE in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting AE in a medium threat environment.

Output Standards:
- 16/12/4/4 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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 12/8/4/3 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting SEA in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 8/5/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting SEA in a medium threat environment.

Output Standards:
- 16/12/4/4 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

Standards:
UH-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 5/3/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting RIE in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 3/2/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting RIE in a medium threat environment.

Output Standards:
- 10/6/4/4 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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting AD in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting AD in a medium threat environment.

Output Standards:
- 16/12/4/4 sorties daily sustained during contingency/combat

MCT 5.3.2.7.3 Conduct Tactical Air Coordination (Airborne) Operations [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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 1/1/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting TAC(A) in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 1/1/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting TAC(A) in a medium threat environment.

Output Standards:
- 1/1/1/1 sorties daily sustained during contingency/combat

MCT 5.3.2.11 Provide an Airborne Command and Control Platform for Command Elements (AC2)

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-1Y Squadron (12)/Squadron(-)(8)/Detachment (4) /Detachment (3) {12/8/4/3} Aircraft

Personnel:
- 13/9/4/3 UH-1Y aircrews formed
- P-level of 2 or better

Equipment:
- 70% Mission Capable aircraft with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET. (8/5/3/2 UH-1Y aircraft)
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):
- 8/6/2/2 UH-1Y aircrews MET capable IAW T&R requirements

Advanced Capability:
- Capable of supporting AC2 in a high threat environment.

Baseline Training Standard (70% of CMMR):
- 5/4/1/1 UH-1Y aircrews MET capable IAW T&R requirements

Baseline Capability:
- Capable of supporting AC2 in a medium threat environment.

Output Standards:
- 16/12/4/4 sorties daily sustained during contingency/combat

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Appendix B

ABBREVIATIONS

Skill/Stage Abbreviations	
AD	Aerial Delivery
ESC	Aerial Escort
AE	Air Evacuation
AMC	Air Mission Commander
ANSQ	Advanced Night Systems Qualification
AR	Armed Reconnaissance
CAT	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

HMLA ORDNANCE REQUIREMENTS

General

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.

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

Ordnance Tables

UH-1Y ORDNANCE ROLL-UP TABLE BY PROGRAM OF INSTRUCTION (POI) AND DESIGNATION[1]

BASIC POI

Ordnance Requirements By Phase (per pilot)							Ordnance Requirements By Syllabus (per pilot)							
PHASE / ORDNANCE	1000	2000	3000	4000	5000	6000	**POI** / ORDNANCE	ANSQ[2]	UHC[3]	FAC(A)	SL	DL	WTO	NSI
2.75 " HE	14	84	42	14	56	42	2.75 " HE	0	126	0	14	14	14	42
2.75" RP	0	0	21	0	14	7	2.75" RP	0	0	21	0	0	0	0
APKWS	0	0	4	0	0	0	APKWS	0	4	0	0	0	0	0
Illum	0	0	7	0	0	0	Illum	0	7	0	0	0	0	0
Flechette	0	0	7	0	0	0	Flechette	0	7	0	0	0	0	0
.50 Cal (GAU-21)	800	3,200	4,000	800	2,800	2,400	.50 Cal (GAU-21)	0	6,400	1,200	800	800	800	4,000
7.62mm (GAU-17)	2,000	16,000	19,000	4,000	12,000	7,000	7.62mm (GAU-17)	0	29,000	6,000	2,000	2,000	2,000	6,000
7.62mm (M240)	800	3,200	4,000	800	2,800	2,400	7.62mm (M240)	0	6,400	1,200	800	800	800	4,000
Chaff	0	90	270	60	210	180	Chaff	0	300	90	60	60	60	90
Flare	0	90	270	240	450	180	Flare	0	300	90	60	60	60	90

REFRESHER POI

Ordnance Requirements By Phase (per pilot)							Ordnance Requirements By Syllabus (per pilot)							
PHASE / ORDNANCE	1000	2000	3000	4000	5000	6000	**POI** / ORDNANCE	ANSQ[2]	UHC[3]	FAC(A)	SL	DL	WTO	NSI
2.75 " HE	7	70	35	14	35	28	2.75 " HE	0	105	0	7	7	7	28
2.75" RP	0	0	21	0	7	0	2.75" RP	0	0	21	0	0	0	0
APKWS	0	0	0	0	0	0	APKWS	0	0	0	0	0	0	0
Illum	0	0	0	0	0	0	Illum	0	0	0	0	0	0	0
Flechette	0	0	0	0	0	0	Flechette	0	0	0	0	0	0	0
.50 Cal (GAU-21)	400	2,000	3,600	800	1,600	1,200	.50 Cal (GAU-21)	0	4,800	1,200	400	400	400	800
7.62mm (GAU-17)	1,000	5,000	17,000	4,000	7,000	3,000	7.62mm (GAU-17)	0	21,000	6,000	1,000	1,000	1,000	2,000
7.62mm (M240)	400	2,000	3,600	800	1,600	1,200	7.62mm (M240)	0	4,800	1,200	400	400	400	800
Chaff	0	90	240	60	120	90	Chaff	0	330	90	30	30	30	60
Flare	0	90	240	150	120	90	Flare	0	330	90	30	30	30	60

SERIES CONVERSION POI

Ordnance Requirement (per pilot)		
POI / ORDNANCE	UHC	Full T&R
2.75 " HE	70	77
2.75" RP	0	0
APKWS	0	0
Illum	0	0
Flechette	0	0
.50 Cal (GAU-21)	2,800	3,200
7.62mm (GAU-17)	12,000	13,000
7.62mm (M240)	2,800	3,200
Chaff	150	180
Flare	150	180

Note 1: Crew-served weapon amounts are calculated to be two-thirds of the total rounds required if each weapon was used on each applicable T&R event, based on the fact that only two of the three weapons will be used for each event. This assumes an even distribution of ammunition types across all events.

Note 2: Includes required NSQ and ANSQ Core Skills events.

Note 3: Only includes Mission Skills events through TRAP-3308.

UH-1Y YEARLY CURRENCY ORDNANCE REQUIREMENT (PER PILOT)[1]			
DESIGNATION / ORDNANCE	UHC	FAC(A)	CPSP
2.75 " HE	84	0	14
2.75" RP	0	21	0
APKWS	0	0	0
Illum	0	0	0
Flechette	0	0	0
.50 Cal (GAU-21)	3,600	1,200	800
7.62mm (GAU-17)	17,000	6,000	2,000
7.62mm (M240)	3,600	1,200	800
Chaff	210	90	60
Flare	210	90	60

HMLA (UH-1Y) YEARLY ORDNANCE REQUIREMENT[1 4 5]												
POI & DESIG / ORD	BASIC (ATTAIN)							REFRESHER		MAINTAIN		**Total**
	CSP	UHC	SL	WTO	NSI	FAC(A)	DL	UHC	Full T&R	UHC	Full T&R	
2.75 " HE	672	336	56	42	84	0	28	210	308	504	125	**2,365**
2.75" RP	0	0	0	0	0	42	0	0	42	0	105	**189**
APKWS	0	32	0	0	0	0	0	0	0	0	0	**32**
Illum	0	56	0	0	0	0	0	0	0	0	0	**56**
Flechette	0	56	0	0	0	0	0	0	0	0	0	**56**
.50 Cal	25,600	25,600	3,200	2,400	8,000	2,400	1,600	9,600	16,000	21,600	28,000	**144,000**
7.62mm (GAU-17)	128,000	104,000	8,000	6,000	12,000	12,000	4,000	42,000	64,000	102,000	125,000	**607,000**
7.62mm (M240)	25,600	25,600	3,200	2,400	8,000	2,400	1,600	9,600	16,000	21,600	28,000	**144,000**
Chaff	720	1,680	240	180	180	180	120	660	1140	1,260	1,800	**8,160**
Flare	720	1,680	240	180	180	180	120	660	1140	1,260	1,800	**8,160**

Note 4: Total squadron requirements listed within this table are calculated for pilot training/proficiency and do not include crew served ammunition requirements for Crew Chief/Aerial Gunner training/proficiency.

Note 5: Totals based on the following assumptions, a T/O squadron broken down as follows: 8 pilots in the basic POI for CSP and UHC, 6 pilots maintaining the UHC qual and 5 pilots maintaining all T&R events. Of the pilots maintaining UHC, 4 are in the basic POI for SL, 3 are in the basic POI for WTO, and 2 are in the basic POI for NSI, DL and FAC(A). 2 pilots are in the UHC refresher syllabus and 2 pilots are in the full T&R refresher syllabus.

External 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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APPENDIX C - READINESS SUPPLEMENTS

Squadron 12 Aircraft

HMLA (UH-1Y) Squadron 12 Aircraft

MISSION ESSENTIAL TASK (MET)	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES}	CREWS TRAINED: ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	CREWS TRAINED: BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	CREWS TRAINED: PILOT UHC	CREWS TRAINED: COPILOT	CREWS TRAINED: CC	CREWS TRAINED: AO	AIRCRAFT MAINTENANCE: PAA	AIRCRAFT MAINTENANCE: MC	AIRCRAFT MAINTENANCE: # MC	COLLECTIVE MAX DAILY SORTIE OUTPUT	T/O PILOTS	T/O CC	T/O AO/G	STAFFING GOAL (PILOTS)	STAFFING GOAL (CREW CHIEFS)	UHC	SECTION LEADER	DIVISION LEADER	FLIGHT LEADER	AIR MISSION COMMANDER
MCT 1.3.4.1	**CAT**	Conduct Combat Assault Transport	16	8	5	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	12	70%	8	16	30	25	(19)	27	22	12	6	4	4	4
MCT 3.2.3.1.1	**CAS**	Conduct Close Air Support	16	8	5	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	12	70%	8											
MCT 3.2.3.1.2.3	**SCAR**	Conduct Strike Coordination and Reconnaissance	16	8	5	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	12	70%	8											
MCT 3.2.5.4	**FAC(A)**	Conduct Forward Air Control (Airborne)	18**	9**	6**	MSP,FAC(A)	ANSQ	ANSQ,AG*	ANSQ,AG*	12	70%	8											
MCT 6.2.1.1	**TRAP**	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)	16	8	5	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	12	70%	8											
MCT 6.1.1.11	**ESC**	Conduct Aerial Escort	16	8	5	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	12	70%	8											
MCT 6.2.2	**AE**	Conduct Air Evacuation	16	8	5	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	12	70%	8											
CORE PLUS																							
MCT 1.3.3.3.1	**SEA**	Conduct Aviation Operations From Expeditionary Sea-Based Sites	16	12	8	MSP,CQ	ANSQ,CQ	MSP,CQ	ANSQ,CQ	12	70%	8											
MCT 1.3.4.1.1	**RIE**	Conduct Airborne Rapid Insertion/Extraction	10	5	3	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	12	70%	8											
MCT 4.3.4	**AD**	Conduct Air Delivery	16	8	5	MSP	ANSQ	MSP,ANSQ,AG	ANSQ,AG*	12	70%	8											
MCT 5.3.2.7.3	**TAC(A)**	Conduct Tactical Air Coordination (Airborne) Operations	1	1	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	12	70%	8											
MCT 5.3.2.7.4	**AC2**	Provide an Airborne Command and Control platform for Command Elements	16	8	5	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	12	70%	8											
PARA 1.3			**PARA 1.6**	**PARA 1.7**						**PARA 1.2**	**MET Worksheets**		**PARA 1.6**	**PARA 1.2**					**PARA 1.7**				

Critical MOSs - 7563,6174,6019,6324,6154,6531,6114,6591,6012,6016,6017,6018,7577,6177,7547,7544,6171. P-level 2 or better.

Personnel - P-Level 2 or better.

* AG Qualified in one or more weapons systems, or paired with NSI CC if Under Training (UT).

**Reflects both AH & UH output standards and crews

Squadron(-) 8 Aircraft

HMLA (UH-1Y) Squadron(-) 8 Aircraft

MISSION ESSENTIAL TASK (MET)	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES}	CREWS TRAINED: ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	CREWS TRAINED: BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	CREWS TRAINED: PILOT UHC	CREWS TRAINED: COPILOT	CREWS TRAINED: CC	CREWS TRAINED: AO	AIRCRAFT MAINTENANCE: PAA	AIRCRAFT MAINTENANCE: MC	AIRCRAFT MAINTENANCE: # MC	COLLECTIVE MAX DAILY SORTIE OUTPUT	T/O PILOTS	T/O CC	T/O AO/G	STAFFING GOAL (PILOTS)	STAFFING GOAL (CREW CHIEFS)	UHC	SECTION LEADER	DIVISION LEADER	FLIGHT LEADER	AIR MISSION COMMANDER
MCT 1.3.4.1	CAT	Conduct Combat Assault Transport	12	6	4	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	8	70%	5											
MCT 3.2.3.1.1	CAS	Conduct Close Air Support	12	6	4	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	8	70%	5											
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance	12	6	4	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8	70%	5											
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)	13**	7**	4**	MSP,FAC(A)	ANSQ	ANSQ,AG*	ANSQ,AG*	8	70%	5											
MCT 6.2.1.1	TRAP	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)	12	6	4	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8	70%	5											
MCT 6.1.1.11	ESC	Conduct Aerial Escort	12	6	4	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	8	70%	5											
MCT 6.2.2	AE	Conduct Air Evacuation	12	6	4	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8	70%	5	12	20	17	(12)	18	15	8	4	3	3	3
CORE PLUS																							
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites	12	8	5	MSP,CQ	ANSQ,CQ	MSP,CQ	ANSQ,CQ	8	70%	5											
MCT 1.3.4.1.1	RIE	Conduct Airborne Rapid Insertion/Extraction	6	3	2	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	8	70%	5											
MCT 4.3.4	AD	Conduct Air Delivery	12	6	4	MSP	ANSQ	MSP,ANSQ,AG	ANSQ,AG*	8	70%	5											
MCT 5.3.2.7.3	TAC(A)	Conduct Tactical Air Coordination (Airborne) Operations	1	1	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8	70%	5											
MCT 5.3.2.7.4	AC2	Provide an Airborne Command and Control platform for Command Elements	12	6	4	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	8	70%	5											
PARA 1.3			PARA 1.6	PARA 1.7						PARA 1.2	MET Worksheets		PARA 1.6	PARA 1.2					PARA 1.7				

Critical MOSs - 7563,6174,6019,6324,6154,6531,6114,6591,6012,6016,6017,6018,7577,6177,7547,7544,6171. P-level 2 or better.

Personnel - P-Level 2 or better.

* AG Qualified in one or more weapons systems, or paired with NSI CC if Under Training (UT).

**Reflects both AH & UH output standards and crews

Detachment 4 Aircraft

HMLA (UH-1Y) Detachment 4 Aircraft																								
				CREWS TRAINED						AIRCRAFT MAINTENANCE														
MISSION ESSENTIAL TASK (MET)	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES}	ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	PILOT UHC	COPILOT	CC	AO	PAA	MC	# MC	COLLECTIVE MAX DAILY SORTIE OUTPUT	T/O PILOTS	T/O CC	T/O AO/G	STAFFING GOAL (PILOTS)	STAFFING GOAL (CREW CHIEFS)	UHC	SECTION LEADER	DIVISION LEADER	FLIGHT LEADER	AIR MISSION COMMANDER
MCT 1.3.4.1	CAT	Conduct Combat Assault Transport	4	2	1	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	4	70%	2	4	10	8	(6)	9	7	4	2	1	1	1
MCT 3.2.3.1.1	CAS	Conduct Close Air Support	4	2	1	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	4	70%	2											
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance	4	3	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	4	70%	2											
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)	5**	3**	2**	MSP,FAC(A)	ANSQ	ANSQ,AG*	ANSQ,AG*	4	70%	2											
MCT 6.2.1.1	TRAP	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)	4	2	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	4	70%	2											
MCT 6.1.1.11	ESC	Conduct Aerial Escort	4	2	1	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	4	70%	2											
MCT 6.2.2	AE	Conduct Air Evacuation	4	2	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	4	70%	2											
CORE PLUS																								
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites	4	4	2	MSP,CQ	ANSQ,CQ	MSP,CQ	ANSQ,CQ	4	70%	2											
MCT 1.3.4.1.1	RIE	Conduct Airborne Rapid Insertion/Extraction	4	2	1	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	4	70%	2											
MCT 4.3.4	AD	Conduct Air Delivery	4	2	1	MSP	ANSQ	MSP,ANSQ,AG	ANSQ,AG*	4	70%	2											
MCT 5.3.2.7.3	TAC(A)	Conduct Tactical Air Coordination (Airborne) Operations	1	1	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	4	70%	2											
MCT 5.3.2.7.4	AC2	Provide an Airborne Command and Control platform for Command Elements	4	2	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	4	70%	2											
PARA 1.3			PARA 1.6	PARA 1.7						PARA 1.2	MET Worksheets		PARA 1.6	PARA 1.2					PARA 1.7				
Critical MOSs - 7563,6174,6019,6324,6154,6531,6114,6591,6012,6016,6017,6018,7577,6177,7547,7544,6171. P-level 2 or better.																								
Personnel - P-Level 2 or better.																								
* AG Qualified in one or more weapons systems, or paired with NSI CC if Under Training (UT).																								
**Reflects both AH & UH output standards and crews																								

Detachment 3 Aircraft

HMLA (UH-1Y) Detachment 3 Aircraft

MISSION ESSENTIAL TASK (MET)	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES}	CREWS TRAINED: ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	CREWS TRAINED: BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	CREWS TRAINED: PILOT UHC	CREWS TRAINED: COPILOT	CREWS TRAINED: CC	CREWS TRAINED: AO	AIRCRAFT MAINTENANCE: PAA	AIRCRAFT MAINTENANCE: MC	AIRCRAFT MAINTENANCE: # MC	COLLECTIVE MAX DAILY SORTIE OUTPUT	T/O PILOTS	T/O CC	T/O AO/G	STAFFING GOAL (PILOTS)	STAFFING GOAL (CREW CHIEFS)	UHC	SECTION LEADER	DIVISION LEADER	FLIGHT LEADER	AIR MISSION COMMANDER
MCT 1.3.4.1	CAT	Conduct Combat Assault Transport	4	2	1	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	3	70%	2											
MCT 3.2.3.1.1	CAS	Conduct Close Air Support	4	2	1	MSP	ANSQ	MSP,ANSQ, AG*	ANSQ,AG*	3	70%	2											
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance	4	2	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	3	70%	2											
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)	4**	2**	1**	MSP,FAC(A)	ANSQ	ANSQ,AG*	ANSQ,AG*	3	70%	2											
MCT 6.2.1.1	TRAP	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)	4	2	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	3	70%	2											
MCT 6.1.1.11	ESC	Conduct Aerial Escort	4	2	1	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	3	70%	2											
MCT 6.2.2	AE	Conduct Air Evacuation	4	2	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	3	70%	2	4	7	6	(4)	6	5	3	2	1	1	1
CORE PLUS																							
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites	4	3	2	MSP,CQ	ANSQ,CQ	MSP,CQ	ANSQ,CQ	3	70%	2											
MCT 1.3.4.1.1	RIE	Conduct Airborne Rapid Insertion/Extraction	4	2	1	MSP	ANSQ	MSP,ANSQ,AG*	ANSQ,AG*	3	70%	2											
MCT 4.3.4	AD	Conduct Air Delivery	4	2	1	MSP	ANSQ	MSP,ANSQ,AG	ANSQ,AG*	3	70%	2											
MCT 5.3.2.7.3	TAC(A)	Conduct Tactical Air Coordination (Airborne) Operations	1	1	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	3	70%	2											
MCT 5.3.2.7.4	AC2	Provide an Airborne Command and Control platform for Command Elements	4	2	1	MSP	ANSQ	ANSQ,AG*	ANSQ,AG*	3	70%	2											
PARA 1.3			PARA 1.6	PARA 1.7						PARA 1.2	MET Worksheets		PARA 1.6	PARA 1.2					PARA 1.7				

Critical MOSs - 7563,6174,6019,6324,6154,6531,6114,6591,6012,6016,6017,6018,7577,6177,7547,7544,6171. P-level 2 or better.

Personnel - P-Level 2 or better.

* AG Qualified in one or more weapons systems, or paired with NSI CC if Under Training (UT).

**Reflects both AH & UH output standards and crews

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
PROGRAMS OF INSTRUCTION (POI)	2.2	2-3
PROFICIENCY AND CURRENCY	2.3	2-6
REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS	2.4	2-7
SYLLABUS NOTES	2.5	2-8
CORE INTRODUCTION FRS ACADEMIC PHASE (1000)	2.6	2-11
CORE INTRODUCTION PHASE (1000)	2.7	2-11
CORE ACADEMIC PHASE (2000)	2.8	2-43
CORE PHASE (2000)	2.9	2-43
MISSION ACADEMIC PHASE (3000)	2.10	2-64
MISSION PHASE (3000)	2-11	2-64
CORE PLUS/MISSION PLUS ACADEMIC PHASE (4000)	2.12	2-87
CORE PLUS/MISSION PLUS PHASE (4000)	2.13	2-87
INSTRUCTOR UNDER TRAINING ACADEMIC PHASE (5000)	2.14	2-108
INSTRUCTOR TRAINING PHASE (5000)	2.15	2-108
REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD) ACADEMICS PHASE (6000)	2.16	2-128
REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD) PHASE (6000)	2.17	2-128
MISSION ESSENTIAL TASK (MET) PHASE (7000)	2.18	2-147
AVIATION CAREER PROGRESSION MODEL (8000)	2.19	2-151
SYLLABUS EVALUATION FORMS	2.20	2-152
SYLLABUS MATRICES GENERAL INFORMATION	2.21	2-152
UH-1Y T&R SYLLABUS MATRIX (1000 & 5000 PHASE)……	2.22	2-154
UH-1Y T&R PILOT MATRIX (2000-8000 PHASE)	2.23	2-157
UH-1Y ORDNANCE AND RANGE MATRIX (1000 & 5000 PHASE)	2.24	2-171
UH-1Y ORDNANCE AND RANGE MATRIX (2000 & 8000 PHASE	2.25	2-172

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CHAPTER 2

UH-1Y PILOT (MOS 7563)

2.0 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 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.

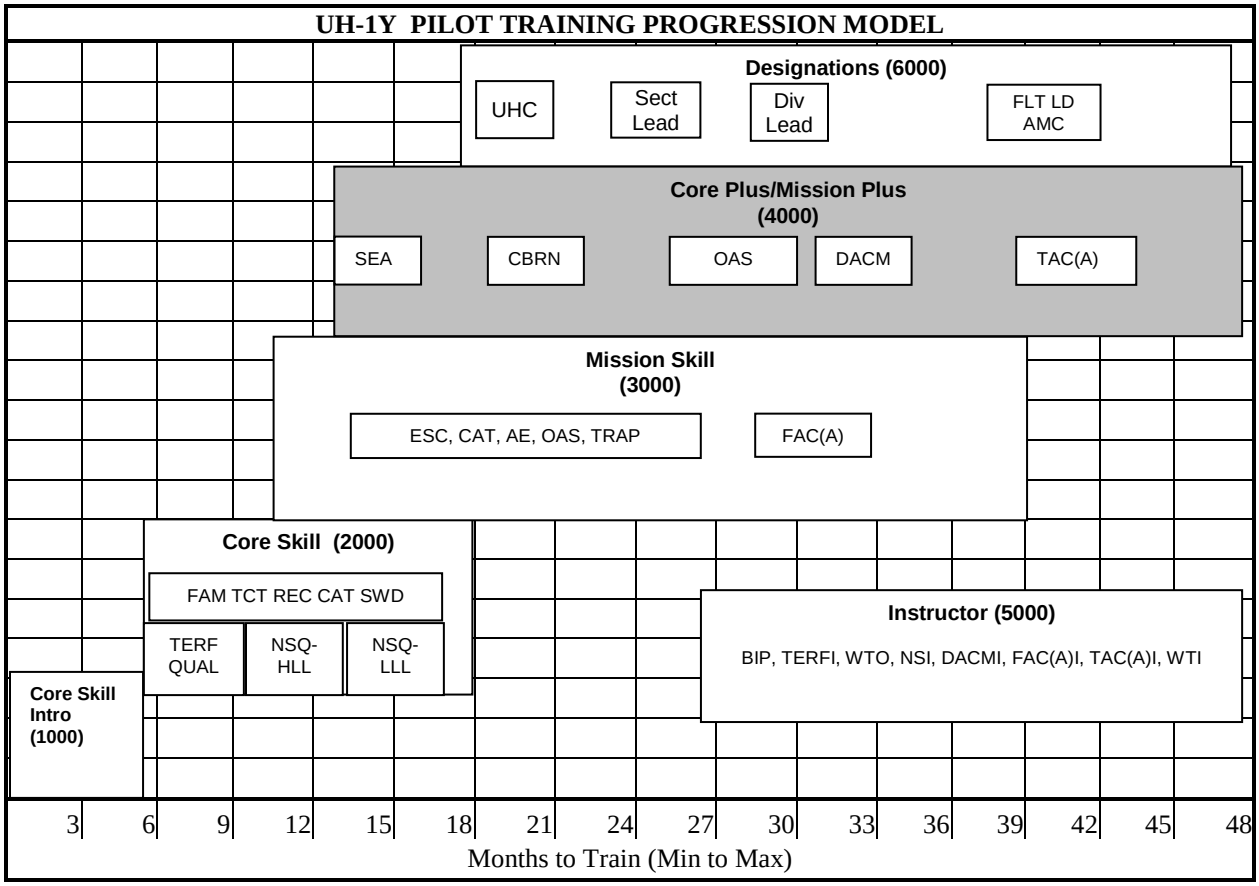


Figure 2-1. UH-1Y Recommended Training Progression Model (months)

2.2 PROGRAMS OF INSTRUCTION (POI). ***Pilot Training Officers shall ensure pilots are placed in the appropriate syllabus (B, R, SC, MR) in M-SHARP, in order to ensure M-SHARP functions properly.*** In accordance with POI updating rules, when all R or SC-coded events are completed, all remaining events in that stage/skill are updated. Any events that have Never Been Attempted (NBA) or are logged as Incomplete are not updated and must be completed. ***Therefore, all Refresher and Series Conversion pilots shall ensure previously flown events are appropriately 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 2.22) to ensure events are converted correctly. Modified syllabi approved by appropriate authority shall be filed in the APR.

2.2.1 Basic (B) POI. The Basic syllabus includes all events and is required for initial training. Transition pilots are also assigned to the Basic POI. At the discretion of the FRS Commanding Officer, U.S. and international exchange pilots, previously qualified in similar type aircraft, may be assigned a SC POI for the Core Introduction (1000) Phase.

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

2.2.2 Series Conversion (SC) POI. The Series Conversion syllabus is provided for personnel converting directly to the UH-1Y from the UH-1N. After performing event conversion in accordance with the T&R syllabus matrix, a previously designated UH-1N pilot in the Series Conversion syllabus shall fly all "SC" coded events to reach their prior designation level. The Series Conversion syllabus is designed for the UH-1N pilot who has not been out of the UH-1N cockpit for longer than 485 days; those pilots shall fly all "SC" coded Core Skill Introduction (1000) events. Series Conversion pilots out of the UH-1N cockpit greater than 485 days shall fly all "SC" coded events in the Core Skill Introduction (1000) syllabus with the addition of the following events: SFAM-1102, FAM-1103, FAM-1108, STCT-1700.

U.S. and international exchange pilots may be eligible for a SC syllabus in the Core Introduction (1000) Phase, at the discretion of the FRS Commanding Officer. The syllabus should be predicated on the experience of the pilot and consider previous qualifications, familiarity with similar type aircraft and language sklls. The syllabus can be extended to include any event from the Basic POI, but at no time shall it be less than the full SC POI.

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. CAT-2404 and CAT-2405 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-HLL may be granted after the completion of CAT-2403. NSQ-LLL may be granted after the completion of NSQ-HLL, CAT-2404, and CAT-2405.

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 Phase syllabus. Additionally, a BIP-5103, SWTO-5201, and WTO-5204 shall be flown if regaining BIP and/or WTO designations. Events that can count toward the 30 flight hour total are any 4000 Phase event and:

REC-2301	ESC-3101	CAT-3205	FACA-3401
CAT-2401	ESC-3102	CAS-3303	FACA-3402
SWD-2610	ESC-3103	SCAR-3305	FACA-3403
SWD-2609	CAT-3200	SCAR-3306	FACA-3404
TERF-2102	CAT-3203	TRAP-3500	
CAT-2405	CAT-3204		

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-5103, WTO-5204, and NSI-5904 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.

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 Introduction Training	USMC UH-1Y FRS
9-17	Core Skill/Mission Skill Training	Tactical Squadron
9-17	Core Plus Skill Training	Tactical Squadron

2.2.3 Modified Refresher/Refresher (MR/R) POI

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:

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.

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.

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.

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.

Upon checkin to the FRS, an MIR-1999 code shall be logged for the R/MR PUI using the date of last flight in their fleet aircraft.

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.

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 2.22), previously designated UH-1N pilots shall complete all R coded events. Events the previously designated pilot did not complete or were added to this T&R manual since they left DIFOP status will not be logged in M-SHARP and must be flown to attain proficiency. ***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 NSQ-LLL (ANSQ) qualified may conduct NS or (NS) Refresher syllabus events under HLL or LLL conditions.

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 exclude any events included in the Modified Refresher syllabus detailed in this manual. 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 Introduction Training	USMC UH-1Y FRS
9-30	Core Skill/Mission Skill Training	Tactical Squadron
9-30	Core Plus Skill Training	Tactical Squadron

2.2.4 Fleet Replacement Squadron and NATOPS/Assistant NATOPS POI

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

2.2.5 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

2.2.6 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

2.2.7 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

2.3 PROFICIENCY & CURRENCY

2.3.1 Event Proficiency. Event proficiency is defined as successful completion of the performance standard as determined by the instructor or evaluator. Event completion is predicated upon demonstrated proficiency. Once completed, it is logged in M-SHARP by entering the appropriate event code. M-SHARP automatically updates the event proficiency date to reflect the completion date.

2.3.2 Skill Proficiency. Proficiency is a measure of achievement of a specific skill. To attain Individual Skill proficiency, an individual must be simultaneously proficient in all events for that Skill. Individuals may be attaining proficiency in some skills while maintaining proficiency in others.

Maintaining Skill Proficiency. Once attained, skill proficiency is maintained by executing those events which have a Proficiency Period (Maintain events). Proficiency Periods establish the maximum time between Event demonstration. Should proficiency be lost in any maintain event, for a specific skill, that skill proficiency is temporarily lost. Skill proficiency can be re-attained by again demonstrating proficiency in the Event(s) that are not proficient. For flying communities, an individual shall complete delinquent events with a proficient instructor, crewman/flight lead as delineated by the T/M/S Syllabus Sponsor (see Chapter 3 of the Program Manual on specific instructor requirements for Low Altitude Flight, Night Systems, ACM, DM, DACM, DCM, FAC(A)).

Loss Of Individual Skill Proficiency. Should an individual lose proficiency in all maintain events in a skill, the individual will be assigned to the Refresher POI for the skill. To regain skill proficiency, the individual must demonstrate proficiency in all R-coded events for the skill.

Loss of Unit Skill Proficiency. If an entire unit loses proficiency in an Event, unit instructors shall regain proficiency by completing the Event with an instructor from a like unit. If not feasible, the instructor shall regain proficiency by completing the Event with another instructor. For flying communities, if a unit has only one instructor and cannot complete the Event with an instructor from another unit, the instructor shall regain proficiency with another aircraft commander or as designated by the commanding officer.

Proficiency Status. Proficiency is a "Yes/No" status by skill assigned to an individual. When an individual attains and maintains Core Skill Proficiency (CSP), Mission Skill Proficiency (MSP), Core Plus Skill Proficiency (CPSP), or Mission Plus Skill Proficiency (MPSP), the individual may count towards CMMR or CMTS.

2.3.3 Skill Currency. Currency is a control measure used to provide an additional margin of safety based on exposure frequency to a particular skill and applies to all MOS's that must comply with NATOPS and CNAF requirements. 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 aircrew individual type mission profiles can be found in Chapter 3 of the T&R Program Manual.

2.4 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 delinquent R-coded syllabus events associated with that qualification.

UH-1Y PILOT INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	**Initial Event Qualification Requirements**
INST	6100, IAW CNAF M-3710.7 and annual qualification letter signed by commanding officer.
NATOPS	6101, IAW CNAF M-3710.7 and annual qualification letter signed by commanding officer.
TERFQ	2100, 2101
NSQ-HLL	2101, 2400, 2401, 2402, 2403
NSQ-LLL	NSQ-HLL, 2802, 2404, 2102, 2405
FAC(A)	3400, 3401, 3402, 3403, 3404, 3405
CQ Day	4603
CQ NVD	4604
CQ Night Unaided	4605
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**
PQM	Successful completion of NATOPS and Instrument checks and CIX-1901
FCP	DESG-6300, FCP-6200, 6201, 6202, 6203, 6204 and IAW UH-1Y NATOPS
UHC	NSQ-LLL, DESG-6300, 6398
SECTION LEAD	DESG-6398, SL-6400, 6401, 6498
DIVISION LEAD	SL-6498, DL-6500, 6501, 6598
FLIGHT LEAD	DL-6598, FL-6698
AMC	DL-6598, AMC-6798
BIP	5100, 5101, 5102, 5103
TERFI	5110
WTO	5200, 5201, 5202, 5203, 5204
CSI	5300
FRSI	5310, 5311, 5312, 5313, 5314, 5315
FLSE*	5920 and IAW Flight Leadership Program Model Manager requirements
FAC(A)I*	5400, 5401, 5402
NSFI*	5600, 5601, 5602 or 5317 (if current NSI)
TAC(A)I*	5700
RW DACMI*	5800, 5802
FW DACMI*	5801, 5803
NSI*	5900, 5901, 5902, 5903, 5904, 5905
WTI*	Graduation from Weapons and Tactics Instructor course
ANI	6101 6105 given by a NATOPS Instructor and 5316 (if current FRSI)
NI	6106 given by a NATOPS Evaluator
NE	6107 given by a NATOPS Evaluator or FRS Commanding Officer
CRMF	6103
CFMI	6104
INSTRUMENT FLIGHT BOARD	Per Squadron Guidance and Governing Documents, 6100
*IAW the MAWTS-1 UH-1 Course Catalog. Certifications for FAC(A)I, TAC(A)I, RW DACMI, FW 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.	
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-6907	Brief and Lead Tracking Code
SOTC-6998	Day Autorotation Tracking Code
SOTC-6999	Night Autorotation Tracking Code

2.5 SYLLABUS NOTES

2.5.1 Academic Training

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.

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:

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.

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.

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.

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

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

NIPR: https://mceits.usmc.mil/sites/mawts1/SitePages/UH-1.aspx

SIPR: https://intelshare.intelink.sgov.gov/sites/mawts1

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.

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.

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

2.5.2 Event Requirements

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.

2.5.3 Event Header

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.

Proficiency Interval. The proficiency Interval, more commonly called “Refly Factor”, 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).

Programs of Instruction. Delineates event requirements for specific syllabi.

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

Code	Environmental Condition
D	Shall be conducted during day.
N	Shall be conducted at night, aided or unaided.
(N)	May be conducted day or night. If at night, aided or unaided.
NS	Shall be conducted at night aided under High Light Level or Low Light Level.
HLL	Shall be conducted at night aided under High Light Level conditions.
LLL	Shall be conducted at night aided under Low Light Level conditions.
(NS)	May be conducted day or night. If at night, aided under HLL or LLL.
(HLL)	May be conducted day or night. If at night, aided under HLL.
(LLL)	May be conducted day or night. If at night, aided under LLL.
N*	Shall be conducted at night unaided.
(N*)	May be conducted day or night. If at night, shall be flown unaided.

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
G	Ground/academic training
GE	Ground Event requiring evaluation

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.

2.5.4 Event Body

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

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.

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.

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.

Practice. The PUI performs the maneuver or procedure that has been previously introduced in order to prepare for Review on a later flight. The IP should coach as required to guide the PUI's practice.

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.

Evaluate. Any flight designed to evaluate aircrew standardization.

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.***

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 TERF-2102~LLL, indicates that ***if*** the event is flown under LLL conditions, TERF-2102 is a required prerequisite.

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

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 CNAFINST, NATOPS, and the Program Manual. When not clearly defined by higher directives, the squadron commanding officer, DSS, or local SOPs may dictate the minimum crew requirements.

2.5.5 Grading Standards

Complete. The PUI has demonstrated sufficient grasp of the concepts and skills to proceed to the next

training evolution or be designated appropriately.

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.

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 RAT 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.

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.

Critera to be graded on every ATF:

Mission Planning/Products
Brief/Debrief
Checklist Use
Communications
Airwork
System Proficiency
Situational Awareness
Headwork
CRM
Emergency Procedures

2.6 CORE INTRODUCTION FRS ACADEMIC PHASE (1000)

Purpose. To develop a Core 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 CIX-1901.

General. 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.

Completion of these academics and flight phase meet the requirements for the PUI to be designated a PQM. Core Introduction academic events are completed by attending the appropriate HMLAT-303 Light Attack University (LAU) stage, IAW the FRS Course Catalog.

CORE INTRODUCTION PHASE	
TRAINING CODES	**COURSEWARE**
ACAD-1000	HMLAT-303 Initial LAU
ACAD-1001	HMLAT-303 Mid Stage LAU
ACAD-1002	HMLAT-303 Final LAU

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.

2.7 CORE INTRODUCTION PHASE (1000)

Purpose. To develop a Core Introduction complete copilot with the airmanship, CRM, systems and procedural knowledge to perform responsibilities as a competent co-pilot in any mission set and as necessary, act as PIC for non-tactical missions. 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 CIX-1901.

General. Completion of this Phase meets the requirements for the PUI to be designated a PQM and NATOPS qualified at the discretion of the commanding officer. A tracking code of DESG-6300 shall be logged**.** The UH-1Y Model Manager shall be responsible for Core Introduction Phase standardization. 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.

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

CORE INTRODUCTION (1000 Phase)		
STAGE	**PARAGRAPH**	**PAGE NUMBER**
Familiarization (FAM)	2.7.1	2-12
Instrument (INST)	2.7.2	2-25
Formation (FORM)	2.7.3	2-28
Terrain Flight (TERF)	2.7.4	2-30
Navigation (NAV)	2.7.5	2-32
Specific Weapons Delivery (SWD)	2.7.6	2-36
Advanced Systems Familiarization (ASF)	2.7.7	2-37
Combat Assault Transport (CAT)	2.7.8	2-39
Core Introduction Check (CIX)	2.7.9	2-41

2.7.1 Familiarization (FAM)

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 FAM Stage.

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.

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.

Ground/Academic Training. ACAD-1000.

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

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

FAM-1100 0.0 * B D GE 1 UH-1Y

Goal. Introduce preflight and postflight familiarization and responsibilities.

Requirements

- Discuss
  - All demonstrate and introduce maneuvers
- Demonstrate
  - OMA/M-SHARP functionality
  - ADB Review
- Introduce
  - Weight and power computations
  - 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/postflight inspection checklist IAW UH-1Y NATOPS.

Prerequisites. 1000

Crew. FRSI/PUI

FAM-1101 0.0 485 B,R,SC,MR D GE 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
All preflight inspections
Postflight inspections
Emergency egress procedures
OMA/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. 1100

Crew. FRSI/PUI

SFAM-1102 1.5 485 B,R,SC,MR D S 1 UH-1Y

Goal. RS – Introduce NATOPS checklists and ground procedures.

Requirements

Discuss

All demonstrate and introduce maneuvers
Subsequent start checklist
Rotor brake start
Auxiliary Power Unit
Warning, caution and advisory system
NATOPS emergencies during start and shutdown
PBA functionality
HOCAS switchology and function

Demonstrate

Basic simulator operation

Introduce

Start checklist
Cross start checklist
Takeoff checklist
Landing 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 load a mission card with radio presets, mission list, editable and non-editable points and one route.

Prerequisites. 1101

Crew. CSI or FRSI/PUI

SFAM-1103 1.5 485 B,R,SC,MR D S 1 UH-1Y

Goal. RS – Introduce familiarization maneuvers.

Requirements

Discuss

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

Introduce

Low work
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
Waveoff procedures

Review

Start checklist
Takeoff checklist
Landing checklist
Shutdown checklist
Emergency shutdown

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 will conduct a normal start from the right seat.

Prerequisites. 1102

Crew. CSI or FRSI/PUI

FAM-1104 2.0 * B D A 1 UH-1Y

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

Requirements

Discuss

All demonstrate and introduce maneuvers
HMSD
Engine emergencies, limitations, servicing, and checklists
Prohibited Maneuvers
Hand and Arm signals
Lost plane procedures

Pressure fueling checklist
Lost comm procedures

Demonstrate
Mission brief

Introduce
Course rules/area fam
Low work
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
Waveoff procedures

Review
Start checklist
Shutdown checklist

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 should conduct a normal start and shutdown from the right seat.

Prerequisites. 1103, 1200, 1500

Crew. ANI/PUI

FAM-1105 2.0 485 B,R,SC,MR D A 1 UH-1Y

Goal. RS – Introduce basic familiarization maneuvers.

Requirements

Discuss
All demonstrate and introduce maneuvers
Fuel & Hydraulic emergencies, limitations, servicing, and checklists
Ditching (power on/off)
Airspeed limitations
RADALT setting considerations
CFIT mitigation with systems

Demonstrate
Mission brief

Introduce
High speed approach and landing
SCAS Failure

Review
Start checklist
Shutdown checklist
Low work
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
Waveoff procedures

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. 1104

Crew. ANI/PUI

SFAM-1106 1.5 * B D S 1 UH-1Y

Goal. RS – Introduce emergency maneuvers.

Requirements
- Discuss
  - All demonstrate and introduce maneuvers
  - DECU Lockout
  - Autorotational characteristics
  - Emergency Equipment
  - Wire Strike Protection
  - Energy attenuating seats
  - Associated NATOPS emergencies, limitations, servicing, and checklists for briefed systems
- Demonstrate
  - 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 a hover
  - Fixed pitch tail rotor malfunctions
  - 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. 1105

Crew. CSI or FRSI/PUI

SFAM-1107 1.5 * B D S 1 UH-1Y

Goal. OS – Introduce emergency procedures and CRM.

Requirements
- Discuss
  - All demonstrate and introduce maneuvers
  - Landing Gear
  - Associated NATOPS emergencies, limitations, servicing, and checklists 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. 1106

Crew. CSI or FRSI/PUI (copilot mandatory and shall be 1103 complete)

FAM-1108 2.0 * B,SC D A 1 UH-1Y

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

Requirements

Discuss

All demonstrate and introduce maneuvers
Drive system and flight control emergencies, limitations, servicing, and checklists
Single engine characteristics and considerations
Flight control positioning on deck
Static/Dynamic rollover
Low, medium and high frequency vibrations

Demonstrate

DECU lockout

Introduce

Mission brief
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies

Review

Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure

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. 1107

Crew. ANI/PUI

FAM-1109 2.0 * B D A 1 UH-1Y

Goal. LS - Review familiarization maneuvers, emergencies and local instrument procedures.

Requirements
Discuss
Fire detection, warning and extinguisher system
Electrical power and fire emergencies, limitations, servicing, and checklists
Review
Mission brief
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies
Local GCA procedures

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.
PUI shall conduct one precision or non-precision approach at homefield.

Prerequisites. 1108, 1202

Crew. FRSI/PUI

SFAM-1110 1.5 485 B,R,SC,MR D S 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.
CRM during emergency procedures
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

PUI shall conduct NATOPS CRM brief. Sortie shall be used to review EPs and CRM while outside the local pattern during basic VFR flight.
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. 1109

Crew. CSI or FRSI/PUI (copilot mandatory and shall be 1107 complete)

FAM-1111 1.5 * B D A 1 UH-1Y

Goal. RS - Review familiarization maneuvers, emergencies and local instrument procedures.

Requirements

Discuss

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

Review

Mission brief
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies
Local GCA procedures

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.
PUI shall conduct one precision or non-precision approach at homefield.

Prerequisites. 1110

Crew. FRSI/PUI

SFAM-1112 1.5 * B,SC D S 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.
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

PUI shall conduct NATOPS CRM brief. Sortie shall be used to review EPs and CRM while outside the local pattern during basic VFR flight.
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. 1111

Crew. CSI or FRSI/PUI (copilot mandatory and shall be 1107 complete)

FAM-1113 2.0 485 B,R,SC,MR D A 1 UH-1Y

Goal. RS - Review emergency procedures and evaluate familiarization maneuvers.

Requirements

Discuss

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

Introduce

DECU lockout
SWD profiles

Review

Mission brief
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies
Local GCA procedures

Performance Standards

PUI shall perform a mission brief.
PUI shall 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.
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 conduct one precision or non-precision approach at homefield.

Prerequisites. 1112

Crew. ANI/PUI

FAM-1114 2.0 485 B,R,SC,MR D A 1 UH-1Y

Goal. OS – Evaluate Pilot Qualified in Model (PQM) responsibilities.

Requirements
Discuss
Responsibilities of the Pilot Qualified in Model IAW CNAF 3710.7
Any aircraft system, limit, EP or MDG procedure
Review
Mission brief
OMA/M-SHARP functionality
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 single ship operations IAW the UH-1Y NATOPS and MDG.
PUI shall demonstrate the ability to safely execute any previously introduced procedure, maneuver or emergency.
If R,SC,MR event, PUI should use available time to review instrument navigation procedures and build annual instrument minimums.

Prerequisites. 1113, 1203, 1400, 1503, 1801

Crew. ANI/PUI

FAM-1115 2.0 485 B,R,SC,MR D A 1 UH-1Y

Goal. OS – Introduce aircraft energy managment.

Requirements
Discuss
All demonstrate and introduce items
Performance charts
Autorotations
Single engine power and flight characteristics
High, hot & heavy operations
E-M Diagram (Ps)
Demonstrate
Autorotational characteristics at altitude
High angle of bank
Collective control interference
Introducc
Power limited (sliding) takeoff
Max power takeoff

Brownout landings
High altitude landings
Review
SWD profiles
DECU lockout

Performance Standards
IP shall demonstrate aircraft energy management as it relates to performance and emergency situations.
PUI shall complete a simulated weight and power for conditions of high, hot and heavy operations, as dictated by IP.
PUI shall have a detailed understanding of demonstrate and introduce maneuvers.
If R,SC,MR event, PUI shall be introduced to and perform TERF maneuvers.
If R,SC,MR event, PUI should use available time to review instrument navigation procedures and build annual instrument minimums.

Prerequisites. 1114

Crew. ANI/PUI

SFAM-1116 1.5 * B,SC NS S 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
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SWD profiles
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions

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. 1113

Crew. CSI or NSFI/PUI

SFAM-1117 1.5 * B NS S 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

Review
Low work
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions

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. 1116

Crew. CSI or NSFI/PUI

FAM-1118 2.0 * B NS A 1 UH-1Y

Goal. RS – Introduce NVD familiarization maneuvers and emergencies 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 searchlight at night
Required equipment and cockpit setup for night flights
NVD scan pattern
NVG Components and operation
NDM preflight/focus procedures
NDM boresight/brightness/declutter

Demonstrate
NVD portion of NATOPS brief

Introduce
Low work
Hover takeoff
No hover takeoff

Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SWD profiles
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies

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. 1117

Crew. NSFI/PUI/CC/AO

FAM-1119 2.0 485 B,R,SC,MR NS A 1 UH-1Y

Goal. RS – Review NVD familiarization maneuvers and emergencies during HLL.

Requirements

Discuss

Automatic Brightness Control
Bright Source Protection
NVD Scene
NVD comfort level
NVD shadowing
RADALT setting considerations

Review

NVD portion of NATOPS brief
Low work
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SWD profiles
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies

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. 1118

Crew. NSFI/PUI/CC/AO

2.7.2 Instruments (INST)

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.

General. SINST-1204 should be flown at the completion of the Core Introduction Phase and serve as the annual instrument evaluation, if annual minimums are met. A 6100 tracking code shall be logged at the completion of SINST-1204 if conducting an annual instrument evaluation.

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

Ground/Academic Training. Instrument CBT/ICW. Instrument Ground School (as applicable).

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

SINST-1200 1.5 * B (N*) S 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. 1101

Crew. CSI or FRSI/PUI

SINST-1201 1.5 * B (N*) S 1 UH-1Y

Goal. OS – Introduce instrument flight navigation procedures.

Requirements

Discuss

All demonstrate and introduce maneuvers
NERP
Navigation System Integration
AFCS in instrument flight
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

Introduce

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

Review

Instrument flight checklist

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. 1200

Crew. CSI or FRSI/PUI

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

Goal. OS – Review basic instrument flight maneuvers in local controlled airspace.

Requirements

Discuss

All demonstrate and introduce maneuvers
Communications system
Windshield wiper system
Anti-ice system
Pitot Heat System
Associated NATOPS emergencies, limitations, servicing, and checklists for briefed systems
VMC to IMC & IMC to VMC transitions
In flight filing procedures
GCA airspace & requirements
NAVAID failures

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 approach
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 complete an accurate weight and power computation for given conditions.

Prerequisites. 1104, 1201

Crew. FRSI/PUI

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

Goal. OS – Review instrument flight navigation procedures.

Requirements
Discuss
All demonstrate and introduce maneuvers
Instrument flight piblications
Airspace classification
Cloud clearance and visibility requirements
Lost communications procedures
DD-175 filing criteria and procedures
Weather briefing requirements
Navigation system integration
Review
Standard Instrument Departures (SIDs)
Airway navigation
TACAN approach
Precision approach (PAR)
Airport Surveillance Radar (ASR)
No-gyro approach
Missed approach
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.
PUI shall complete an accurate weight and power computation for given conditions.
Event shall be flown outside of local airspace.
Event should be flown in conjunction with 1503 (out/in or cross country flight) to the max extent practical.

Prerequisites. 1113, 1202

Crew. FRSI/PUI

SINST-1204 1.5 485 B,R,SC,MR (N) S 1 UH-1Y

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

Requirements
Discuss
Any previously introduced INST stage item
Annual and semi-annual instrument and approach minimums
Review
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 in IMC

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 CNAF 3710.
PUI shall conduct an annual instrument evaluation IAW CNAF M-3710.7 (if applicable).

Prerequisite. 1203

Crew. CSI or FRSI (IFBM as required)/PUI

2.7.3 Formation (FORM)

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.

General. At the completion of this stage, the PUI will be proficient at formation takeoffs and landings, rendezvous, parade, cruise, and all formation maneuvers listed in the UH-1Y NATOPS and MDG. PUI will have introductory knowledge of ASTACSOP section contingencies and tactical formation maneuvers.

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

Ground/Academic Training. ACAD-1001

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

FORM-1300 2.0 * B D A 2 UH-1Y

Goal. OS – Introduce formation flight.

Requirements

Discuss
- All demonstrate and introduce maneuvers
- CRM during FORM flight
- FORM maneuver card
- Cruise turn principles
- ASTACSOP items

Demonstrate
- Section tactical landings
- ASTACSOP RIO
- ASTACSOP lost comm
- ASTACSOP IIMC
- ASTACSOP loss of visual contact

Introduce
- Parade flight
- Parade turns
- Crossovers
- Breakup and rendezvous
- Cruise turns
- Tactical formation maneuvers
- Formation takeoff
- Formation landing
- Wingman awareness
- Formation communication
- Lead change

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.

PUI shall complete an accurate weight and power computation for given conditions.
PUI shall perform all MDG formation maneuvers as lead and wingman.
A minimum of 2 section landings will be accomplished as lead and as wingman.

Prerequisites. 1001, 1115

Crew. FRSI/PUI

FORM-1301 2.0 730 B,R D A 2 UH-1Y

Goal. OS - Introduce section landings.

Requirements
Discuss
All demonstrate and introduce maneuvers
Break (homefield, FARP, ship)
ASTACSOP items
NTTP HA/BP mechanics
IP to LZ timing
Section landings
Cruise turn principles
Wingman awareness
Introduce
HA/BP mechanics
IP to LZ timing
Section tactical landings
ASTACSOP RIO
ASTACSOP lost comm
ASTACSOP IIMC
ASTACSOP loss of visual contact
Review
Parade flight
Cruise flight
Breakup and rendezvous
Tactical formation maneuvers
Wingman awareness
Formation communication
Lead change

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.
PUI shall complete an accurate weight and power computation for given conditions.
PUI shall demonstrate ability to safely hold in cruise formation while confined to HA/BP as wingman.
PUI shall conduct a minimum of 5 section landings as lead and 5 section landings as wingman.

Prerequisites. 1300

Crew. FRSI/PUI

FORM-1302 2.0 485 B,R,MR NS A 2 UH-1Y

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

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

Demonstrate
- Tactical formation maneuvers
- Aircraft lighting configurations

Introduce
- Parade flight
- Parade turns
- Crossovers
- Breakup and rendezvous
- Cruise turns
- Formation takeoff
- Formation landing
- Wingman awareness
- Formation communication
- Lead change
- 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.
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.
A minimum of 2 section landings will be accomplished as lead and as wingman.

Prerequisite. 1300, 1802

Crew. NSI or NSFI/PUI/CC/AO

2.7.4 Terrain Flight (TERF)

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.

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. TERF-1401 should be scheduled as a section in authorized TERF area to increase formation flight proficiency. If weather and/or maintenance does not allow, degradation to MIKE TERF area is authorized to complete the event.

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

Ground/Academic Training. ACAD-1000.

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

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

Goal. OS - Introduce TERF maneuvers, TERF navigation, and external operations.

Requirements

Discuss
- All demonstrate and introduce maneuvers
- Engine failures in TERF environment
- Engine failures with an external load
- IIMC in TERF environment
- Hook/hoist capabilities & limitations
- Aircrew coordination for TERF & externals
- Load jettison
- Loss of tail rotor effectiveness

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
- Proper procedures for external and hoist operations

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 vector overlay of the route, and set up terrain banding.
PUI shall complete an accurate weight and power computation for given conditions.
PUI shall conduct the route brief and navigate an approved TERF route with a minimum of 5 checkpoints.
PUI shall conduct external operations IAW the UH-1Y NATOPS and MDG.

Prerequisites. 1503, 1800

External Syllabus Support. Authorized TERF area, external weight, and HST if available

Crew. FRSI/PUI/CC/AO

TERF-1401 2.0 * B NS A 2 1 UH-1Y & 1 H-1

Goal. OS - Introduce NVD TERF maneuvers and TERF navigation.

Requirements

Discuss
- All demonstrate and introduce maneuvers
- NVD considerations in the TERF environment
- High to low bird swap
- Lost communication procedures
- CFIT mitigation with systems

Demonstrate
- Loss of tail rotor effectiveness

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

Review
- Additional FORM sustainment as required
- Additional FAM sustainment as required
- TERF and NVD portions of the NATOPS brief

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 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.
PUI shall conduct the route brief and navigate an approved TERF route with a minimum of 5 checkpoints.

Prerequisite. 1118, 1302, 1400

External Syllabus Support. Authorized TERF area

Crew. NSI or NSFI/PUI/CC/AO

2.7.5 Navigation (NAV)

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

General. PUI must demonstrate the ability to navigate preplanned routes and identify positions using both charts/maps and mission planning software/moving map display. NAV-1504 should be scheduled as a section to increase formation flight proficiency. If weather and/or maintenance does not allow, degradation to single ship is authorized to complete the event.

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

Ground/Academic Training. ACAD-1000.

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

SNAV-1500 0.0 485 B,R,SC,MR (N) S 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
  - DFD functions
  - 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. 1102

Crew. CSI or FRSI/PUI

SNAV-1501 0.0 * B,SC (N) S 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
Fault Isolation Test (FIT) procedures
Pre-point, Inertial point, heading hold, and geopoint
Auto and enhanced gain
Introduce
NTIS page operation
NTIS Hand Control Unit 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. 1500

Crew. CSI or FRSI/PUI

SNAV-1502 1.5 730 B,R,SC D S 1 UH-1Y

Goal. OS – Introduce flight navigation.

Requirements
Discuss
Checkpoint identification using the NTIS
Planned time of arrival and command ground speed
In-flight fuel calculations
Checkpoint selection
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. 1112, 1500, 1501

Crew. CSI or FRSI/PUI

NAV-1503 2.0 730 B,R D A 1 UH-1Y

Goal. OS – Introduce flight 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
CRM, lookout doctrine and obstacle/hazard avoidance
Route briefing techniques
NAV and NTIS integration
ASTACSOP navigation procedures and Magellan standards
Bingo and joker planning considerations
In-flight fuel calculations/planning

Introduce

DVR functionality

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
NERP use
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.
PUI shall complete an accurate weight and power computation for given conditions.
PUI shall plan and navigate a route of at least 5 checkpoints outside of local airspace.
Event should be flown in conjunction with 1203 (out/in or cross country flight) to the max extent practical.

Prerequisites. 1113, 1502

Crew. FRSI/PUI/CC

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

Goal. OS – Introduce NVD navigation.

Requirements

Discuss

Night navigation considerations
Route briefing techniques
Section CRM

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
Additional FORM sustainment as required
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 of at least 5 checkpoints outside of local airspace.
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. 1118, 1302, 1503

Crew. NSI or NSFI/PUI/CC/AO

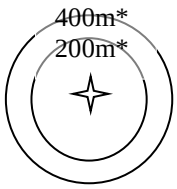
2.7.6 Specific Weapons Delivery (SWD)

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

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, CRM, 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 profilesFocus should be on weapons delivery profiles and ordnance accuracy, not tactical scenarios. DVR 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≤200 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≤200 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. ACAD-1001.

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

SSWD-1600 1.5 485 B,R,SC,MR D S 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

Introduce

Required switchology
Ordnance checklists
LASER system function
WPN page setup
TDC 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. 1001, 1115

Crew. CSI or FRSI/PUI

SWD-1601 1.5 * B D A 1 UH-1Y

Goal. OS - Introduce crew served weapons delivery.

Requirements

Discuss

Weapons preflight
Loading, arming, de-arming, safing and jettison procedures
Switchology
Communications during SWD
Attack profiles
Rapid g-onset
Fence in/out procedures
DDM boresight procedures
Gun limitations
Range regulations
Final Attack Headings
Minimum Safe Distance (MSD)
Risk Estimate Distance (RED)

Demonstrate

Ordnance portion of the NATOPS brief

Introduce

Crew served weapons live fire ordnance training with particular emphasis on standardization, CRM and weapons delivery accuracy

Medium and low altitude simulated unguided rocket delivery
Range safety considerations

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 and a vector overlay of the objective area.
PUI will utilize LASER rangefinder to derive grids and store targets.

Prerequisites. 1300, 1600

Ordnance. Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range

Crew. FRSI/PUI/CC/AO

SWD-1602 1.5 730 B,R,SC D A 1 UH-1Y

Goal. OS – Review weapons systems and introduce unguided rocket delivery.

Requirements

Discuss

All 2.75" rocket warheads/fuzes
Use of DMS/FLIR for target identification and LASER employment
Target fixation
Unguided weapons delivery considerations and weapons delivery ballistics
Alternate sighting procedures
Visual/contact/tally

Introduce

Live fire ordnance training with particular emphasis on standardization, CRM and weapons delivery accuracy

Review

Crew served weapons live fire ordnance training
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 and a vector overlay of the objective area.
PUI shall demonstrate core intro accuracy metric while adhering to all range regulations.

Prerequisites. 1601

Ordnance. (14) 2.75 inch rockets and two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side(600) 7.62mm M240 per side(600) 7.62mm M240 per side]

Range requirement. Live fire LASER safe range

Crew. FRSI/PUI/CC/AO

2.7.7 Advanced Systems Familiarization (ASF)

Purpose. To introduce offensive/defensive electronic and infrared countermeasures, Aircraft Survivability Equipment (ASE), and Advanced Precision Kill Weapon System (APKWS). To review NTIS operation.

General. At the completion of this stage, the PUI will be proficient at setup of all aircraft survivability equipment and be exposed to threat indications and APKWS setup. PUI will be proficient at NTIS HCU functionality and gain proficiency in NTIS operations.

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

Ground/Academic Training. ACAD-1001.

References. Maneuver Description Guide, NATOPS manual, NTTP, NTRP and BSBII Manual.

SASF-1700 1.0 485 B,R,SC,MR D S 1 UH-1Y

Goal. OS - Introduce ASE functionality and APKWS setup.

Discuss
- One hour allotted to discussion items and one hour allotted to systems exposure
- ASE suite operation (NATOPS checklists, visual displays and audio messages for power on/BIT)
- Expendables general purpose
- AAR-47, APR-39, and ALE-47 general purpose
- 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
- System modes of operation
- BIT, maintenance BIT and failure messages
- Dispense switch function
- APKWS DFD switchology
- APKWS HMSD symbology
- APKWS modes of employment

Demonstrate
- RADAR search, acquire, track and launch visual/audio indications
- APKWS modes of employment

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
- CLOS

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

Performance Standards
- Successfully operate (energize and BIT) and troubleshoot APR-39, AAR-47 and ALE-47 systems.
- Observe various threat system indications.
- Observe APKWS modes of employment.

Prerequisites. 1001, 1115

Crew. FRSI (pri) or CSI (alt)/PUI

ASF-1701 2.0 * B D A 1 UH-1Y

Goal. OS – Review 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
- Fault Isolation Test (FIT) procedures
- Pre-point, Inertial point, heading hold, and geopoint
- Auto and enhanced gain

Review
- NTIS page operation

NTIS Hand Control Unit functionality
DVR functionality
Storing a waypoint/target using the NTIS
TDC page setup
FAM/INST/CAT sustainment

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 shall complete an accurate weight and power computation for given conditions.

Prerequisites. 1700

Crew. FRSI/PUI/CC

2.7.8 Combat Assault Transport (CAT)

Purpose. To develop proficiency of confined area operations and tactical approaches.

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.

Ground/Academic Training. ACAD-1000.

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

CAT-1800 1.5 * B D A 1 UH-1Y

Goal. OS - Introduce confined area operations and tactical approaches.

Requirements

Discuss

All demonstrate and introduce maneuvers
Vortex ring state
Pr > Pa
Power computations (AVP vs performance charts)
Power management / HV Diagrams
Single engine power
Landing zone brief
Hover box operations
Tactical approaches and departures
Slope landings
Dynamic rollover
Aircrew coordination with emphasis on crew chief briefs and utilization

Introduce

Confined area takeoffs/landings
Tactical approaches
Slope landings
Hover box operations

Review

Tactical landing profile (RVL)
Waveoff procedures

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. 1113

Crew. FRSI/PUI/CC

CAT-1801 1.5 730 B,R,SC D A 1 UH-1Y

Goal. OS - Review confined area operations and tactical approaches

Requirements

Discuss

All demonstrate and introduce maneuvers
HOGE scan techniques
HIE considerations
High altitude operations and considerations
Brown out/white out landings
Pr > Pa Mishap

Demonstrate

Brownout landings
HIE approach

Introduce

Mountain area landings
Tactical approaches and departures in a low and high threat environment

Review

Confined area takeoffs/landings
Slope landings
Tactical approaches
Waveoff procedures

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. 1800

Crew. FRSI/PUI/CC

CAT-1802 1.5 485 B,R,SC,MR NS A 1 UH-1Y

Goal. OS - Introduce NVD confined area operations and tactical approaches.

Requirements

Discuss

All demonstrate and introduce maneuvers
Use of searchlight
NVD brown out/white out landings
Effects of moisture

Introduce

Confined area takeoffs/landings
Tactical approaches
Slope landings
Hover box operations

Review

Waveoff procedures

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.

Prerequisites. 1118, 1801

Crew. NSI or NSFI/PUI/CC/AO

2.7.9 Core Introduction Check (CIX)

Purpose. To review all areas of instruction and demonstrate proficiency and knowledge of all maneuvers to certify the PUI as PQM, NATOPS qualified and Core Introduction Phase complete. To evaluate PUI's ability to safely act as PIC or designated wingman during nontactical flights.

General. The PUI will demonstrate proficiency through the Core Introduction phase. Upon completion of the evaluation event, the PUI will be designated as PQM IAW UH-1Y NATOPS. CIX-1900/1901 meets the qualifications for the 7513/7563 MOS and will serve as the initial NATOPS evaluation (NTPS-6101). A 6101 tracking code shall be logged at the completion of the SCIX-1900.

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

SCIX-1900 1.5 485 B,R,SC,MR D S 1 UH-1Y

Goal. OS - Conduct a NATOPS evaluation IAW CNAF M-3710.7 and UH-1Y NATOPS.

Requirements

Discuss

NATOPS Brief with emphasis on CRM
Egress procedures
Aircraft emergencies with emphasis on causes, indications and recovery procedures

Review

Any previously introduced item
Aircraft emergencies with emphasis on causes, indications and recovery procedures

Performance Standards

PUI shall conduct all procedures and maneuvers IAW CNAF M-3710.7 and the UH-1Y NATOPS.

Prerequisites. 6002, 6003, all previous Core Introduction Phase events

Crew. ANI/PUI/Co-pilot (1113 complete)

CIX-1901 2.0 485 B,R,SC,MR D A 2 1 UH-1Y & 1 H-1

Goal. OS – Core Introduction Check.

Requirements

Discuss

Responsibilities of the Pilot Qualified in Model (PQM) IAW CNAF M-3710.7
Any previously introduced item
CRM during formation flight
ASTACSOP contingencies during formation flight
Aircraft emergencies during formation flight

Review

Parade flight
Cruise flight
Breakup and rendezvous
Tactical formation maneuvers
Wingman awareness
Formation communication
Section landings

In-flight contingencies

Performance Standards

PUI shall act as PIC and IP shall act as peer-level co-pilot.
Mission profile shall focus on the tasks related to ferry/cross country flights and should incorporate VFR and IFR components.
PUI shall execute abbreviated parade and cruise sequences as wingman and be prepared to execute ASTACSOP in-flight contingencies and/or other emergencies.
PUI shall demonstrate ability to safely hold in cruise formation as wingman.
PUI shall demonstrate ability to safely takeoff and land as a wingman.
A minimum of 2 section landings will be accomplished as wingman.
IP shall conduct jacket review.

Prerequisites. 1204, 1900

Crew. ANI/PUI/CC

MIR-1999 0.0 * R,MR G

Goal. Core Skill Introduction Phase proficiency mirroring code. This code shall be logged upon an individual's assignment to the Refresher or Modified Refresher syllabus at the FRS. The proficiency date shall correspond to the date that the individual completed their last flight in the UH-1Y. Events in which individuals have lost proficiency based on the date entered for this code are required to be re-flown as part of the Refresher or Modified Refresher syllabus.

Coordination. Pilots assigned to the Refresher or Modified Refresher syllabus at the FRS in accordance with Program Manual guidance are required to provide the date on which they last showed proficiency in the aircraft. This date can be pulled from the Aviator's Flight Log Book or MSHARP Aircrew Log Book. The date shall correspond to any flight on which flight time was logged in the UH-1Y.

2.8 CORE ACADEMIC PHASE (2000)

Purpose. To develop a Core Phase 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, CAT, SWD, NSQ-HLL and NSQ-LLL qualified co-pilot. The focus of this training is co-pilot combat proficiency.

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.

Core academic events are listed below.

CORE ACADEMIC PHASE	
TRAINING CODES	**COURSEWARE**
GENERAL REQUIREMENTS	
ACAD-2000	HMLA Radios
TERF	
ACAD-2001	MAWTS-1 NITE Lab Courseware
ACAD-2002	H-1 Aerodynamics
TCT	
ACAD-2021	(S) Evasive Maneuvers
ACAD-2022	(S) Threat Analysis
ACAD-2023	(S) HMLA ASE*
REC	
ACAD-2011	Recognition of Combat Vehicles (ROC-V)**
ACAD-2042	UH-1 FLIR Employment
SWD	
ACAD-2060	UH-1 Ordnance Delivery
ACAD-2061	UH-1 Weapons Systems
ACAD-2062	UH-1 Rockets
ACAD-2063	(S) AGM-114 Hellfire
EXP	
ACAD-2090	HMLA FARP Operations
CORE SKILLS	
ACPM-8200	8200 Series Courseware
ACPM-8310	Forward Arming Refueling Point (FARP) Operations
ACPM-8311	Marine Corps Tactical Fuel Systems
ACPM courseware is available on MCALMS.	
*Indicates classes that should be presented to all pilots annually.	
** ROC-V available at https://www.marinenet.usmc.mil or https://rocv.army.mil.	

2.9 CORE PHASE (2000)

Purpose. To produce a Core Phase proficient co-pilot.

General. Upon completion of this phase, the pilot will be TERF, TCT, REC, CAT, SWD, EXP, NSQ-HLL and NSQ-LLL 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 CAT-2403, meets the requirements for the PUI to be Night Systems Qualified – High Light Level (NSQ-HLL). At the discretion of the squadron commanding officer a letter assigning the PUI as NSQ-HLL shall be placed in the NATOPS jacket and APR.

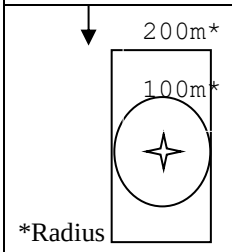
Completion of SFAM-2802, CAT-2404, TERF-2102, and CAT-2405 meets the requirements for the PUI to be Night Systems Qualified – Low Light Level (NSQ-LLL). At the discretion of the squadron commanding officer a letter assigning the PUI as NSQ-LLL shall be placed in the NATOPS jacket and APR.

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

CORE PHASE	
PAR NO.	**STAGE NAME**
2.9.3	Terrain Flight (TERF)
2.9.4	Threat Counter-Tactics (TCT)
2.9.5	Reconnaissance (REC)
2.9.6	Assault Transport (CAT)
2.9.7	Specific Weapons Delivery (SWD)
2.9.8	Familiarization (FAM)
2.9.9	Expeditionary Shore Based (EXP) Operations

Pilots entering the Core Phase shall have completed the Core Skill Introduction Phase.

2.9.1 Ordnance Delivery. For Core 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
	-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.

APKWS- Correct switchology, proper LASER placement, profile IAW UH-1 NTTP direct hit.

TOTs - Initial ordnance shall be delivered within +/- 30 seconds of established TOT.

2.9.2 Navigational Accuracy. At the completion of this phase, the PUI will have demonstrated increased

navigational accuracy and timeliness under low threat conditions. The PUI shall demonstrate the ability to meet the Core Skills combat assault transport 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.

2.9.3 Terrain Flight/Navigation (TERF)

Purpose. To refine proficiency in terrain flight and navigation.

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 B,R D A 1 UH-1Y

Goal. OS - Review TERF maneuvers and navigation.

Requirement

Discuss

- Describe various terrain features
- Effective CRM/TRM during navigation
- Navigation terminology
- Considerations for selection of a power margin
- Moving map navigational system use and operation
- High gross weight handling characteristics
- LTA
- LTE
- Power Settling
- Settling with power
- Obstacle avoidance
- Considerations for TERF profile selection
- Blade walk and rotor disc positioning

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.
PUI shall remain oriented on entire route within 500 meters, 15 degrees of heading and 1 minute of planned route time and 20% of planned fuel.
PUI shall conduct all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTTP.
PUI shall plan and brief aircraft performance data and selected power margin.
PUI shall conduct a minimum of 5 landings to an unimproved landing site.

Prerequisites. 1901, 2002

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 B,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. 2001, 2100

Range Requirement. Authorized TERF route, high bird if required.

Crew. NSI/PUI/CC/AO

TERF-2102	**1.5**	**180**	**B,R,M**	**NS**	**A**	**2**	**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. 2101, 2404

Range Requirement. Authorized TERF area

Crew. NSI/PUI/CC/AO

2.9.4 Threat Counter Tactics (TCT)

Purpose. To introduce EMCON procedures and offensive/defensive electronic and infrared countermeasures, tactics, employment of Aircraft Survivability Equipment (ASE) in a radar/IR environment.

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 * B D S 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. 1901, 2021, 2022, 2023

Crew. WTO/PUI

STCT-2201 1.5 365 B,R,SC,M (NS) S/A 2 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

EMCON procedures and tactical employment

Demonstrate/Introduce

How to plan a route in order to avoid a threat using mission planning software, threat overlays, SAFE-T, and WEZ analysis

Use of aircraft systems to aid in threat avoidance (e.g. Threats, 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. 2200 (2100~AC, 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. WTO(NSI)/PUI (WTO(NSI)/PUI~AC)

2.9.5 Reconnaissance (REC)

Purpose. To develop proficiency in reconnaissance operations.

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.

REC-2300 1.5 * B D 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, Rate Aid, Autotrack 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. 2011, 2001, 2042 (2100~AC)

Range Requirement. Authorized TERF area as required, LASER safe range

External Syllabus Support. Thermally augmented threat vehicles, if available

Crew. WTO/PUI

REC-2301 1.5 180 B,R,SC,M NS A 1 UH-1Y

Goal. OS - Introduce visual reconnaissance procedures (HLL/LLL).

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, to include image optimization and tactical employment of sensor 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. 2101, 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

2.9.6 Combat Assault Transport (CAT)

Purpose. To develop proficiency in section tactical approaches, landings and departures during any light level.

General. The PUI will demonstrate proficiency in tactical landings, tactical approaches and section combat assault transport 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.

CAT-2400 1.5 * B D A 1 UH-1Y

Goal. OS - Introduce section tactical approaches, landings and departures.
Requirements
- Discuss
  - Tactical landing profile
  - Indications of a good approach
  - Landing zone selection criteria
  - LZ brief
  - Landing checklist
  - Inside/outside scan parameters during approach, landing and takeoff
  - Communications during landings and takeoffs
  - Recommended waveoff parameters and required communications
- Demonstrate/Introduce
  - Straight-in approach (IP to LZ) with timing
  - Tactical landing profile
  - Iindividual waveoffs
  - Medium altitude approach and approach entries and departures
- Review
  - Tactical approaches
  - Tactical departures
  - Slope landings

Performance Standards
- IP shall demonstrate an IP to LZ profile to land to a point at an established L-Hour.
- IP shall demonstrate a minimum of one waveoff during the landing stage of a profile.
- PUI shall conduct a minimum of two waveoffs during the landing stage, one of which shall include a transfer of controls.
- A minimum of one landing shall be conducted within 10% of a pre-determined hover power torque
- A minimum of 4 landings shall be accomplished as straight-in profiles with a minimum of 1.5km finals.

Prerequisite. 1901

Crew. BIP/PUI/CC

CAT-2401 1.5 * B NS A 1 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/ considerations for landing scan
  - Standard AFL/EFL communications IAW ASTACSOP
- Demonstrate/Introduce
  - Tactical approaches, landings and departures at night
  - NVD compatible landing zone lighting aids
  - Use of overt / IR searchlight
  - Far/near ITG
  - Sensor usage in zone identification
  - 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

IP shall demonstrate an IP to LZ profile to land to a point at an established L-Hour.
IP shall demonstrate a minimum of one waveoff during the landing stage of a profile.
PUI shall conduct a minimum of two waveoffs during the landing stage, one of which shall include a transfer of controls.
A minimum of one landing shall be conducted within 10% of a pre-determined hover power torque
A minimum of 4 landings shall be accomplished as straight-in profiles with a minimum of 1.5km finals.

Prerequisite. 2400

Crew. NSI/PUI/CC/AO

CAT-2402 1.5 180 B,R D A 2 UH-1Y

Goal. OS - Introduce tactical combat assault transport ingress profiles and landing formations IAW UH-1 NTTP.

Requirements

Discuss

Tactical ingress profiles
Tactical landing formations
Flight landing considerations and constraints
LZ planning and analysis
Methods of insertion/extraction
Use of an ASSAT/ASLT and standard accountability communications within the flight
Flight lifting procedures
Air to air TACAN usage
Power management and planning considerations
Line of deconfliction (LOD) usage
Join-up and rendezvous procedures IAW ANTTP

Introduce

Section tactica approaches, landings and departures
Ingress profiles
Flight and individual waveoffs for single and multiple points
Join-up and rendezvous procedures IAW ANTTP

Review

Straight-in approach (IP to LZ) with timing

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.
A minimum of 2 flight waveoffs shall be conducted, once as lead and once as wingman
IP shall demonstrate at least one multi-axis approach
A minimum of one low to high join-up and one standard holding join-up shall be accomplished.

Prerequisite. 2100, 2400

Crew. BIP/PUI/CC

CAT-2403 1.5 180 B,R,SC,M NS A 2 UH-1Y

Goal. OS - Conduct tactical combat assault transport ingress profiles and landing formations IAW UH-1 NTTP (HLL).

Requirements

Discuss

Previously discussed stage items.
Flight NVD lighting considerations

Review

Previously discussed stage items

Evaluate

PUI's ability to safely conduct tactical ingress profiles, approaches and landings under HLL conditions
PUI's understand of power management and his or her ability to plan and execute tactical landings to a confined area within power margins.

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.
A minimum of 2 flight waveoffs shall be conducted, once as lead and once as wingman
IP shall demonstrate at least one multi-axis approach
A minimum of one low to high join-up and one standard holding join-up shall be accomplished.

Prerequisite. 2101, 2401, 2402

Crew. NSI/PUI/CC/AO

CAT-2404 2.0 * B,SC NS A 1 UH-1Y

Goal. RS - Perform FAM, NAV, and tactical landings in the Low Light Level (LLL) enviroment.

Requirements
Discuss
NVD Route Planning Consideration
Navigational aids preparation (Map/Chart preparation, Mission Card configuration, sensor integration, timing considerations)
Fuel planning
Aircraft external lighting configurations and options
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, 15 degrees of heading and arrive at final checkpoint within 1 minute of assigned time, and within 20% of planned fuel.
Utilize NTIS to aid in identifying checkpoints enroute.
PUI shall not use the GPS for a minimum of 2 legs of the route.

Prerequisites. 2802, 2403

External Syllabus Support. Unlit field or remote landing site free from artificial illumination

Crew. NSI/PUI/CC/AO

CAT-2405 1.5 180 B,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 CAT 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
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.
4 of the landings shall be straight-in approaches with a minimum of 1.5 km final.
A minimum of one waveoff shall be conducted during the landing stage.
PUI shall meet the threshold of landing performance standards for stage
PUI shall achieve at least one L-hour within +/- 30 seconds.

Prerequisite. 2404

External Syllabus Support. Unlit field or remote landing site free from artificial illumination

Crew. NSI/PUI/CC/AO

2.9.7 Specific Weapons Delivery (SWD)

Purpose. To develop proficiency in SWD and weapons system employment.

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 risk management 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 * B D S 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
Weapons checklists
Attack patterns
FRAG patterns

Bore sighting procedures/techniques
Malfunction procedures
Use of ordnance delivery charts
Surface Danger Zones (SDZs)
Flechette rockets and profiles
HMSD symbology

Demonstrate/Introduce
Flechette delivery profile
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, 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 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. 2060, 2061, 2062, 2200

Crew. WTO/PUI

SSWD-2601 1.5 730 B,R,SC D S 1 UH-1Y

Goal. OS – Conduct SWD with APKWS.

Requirements

Discuss
APKWS characteristics
APKWS employment procedures and switchology
APKWS weaponeering considerations
APKWS aircrew coordination
J-LASER terminology

Demonstrate/Introduce
APKWS employment and CRM

Review
Low/medium altitude delivery profiles
HMSD symbology
Sensor employment
LASER designation considerations
Ordnance procedures
Aircrew coordination
Weapon malfunctions/emergencies

Performance Standards

Conduct the arm/dearm and the Penetration/After Firing checklist per UH-1Y NATOPS & TPG.
Conduct APKWS rocket delivery.
Successful employment of APKWS at ranges from 1500-5000 meters with all modes of delivery..
During at least one engagement PUI shall adhere to a TOT +/- 30 seconds.

Prerequisites. 2200, 2300, 2600

Crew. WTO/PUI

SWD-2603 1.5 * B 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. 2100, 2600

Ordnance. (14) 2.75 inch rockets and two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range

Crew. WTO/PUI/CC/AO

SWD-2604 1.5 180 B,R D A 1 UH-1Y

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
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. 2201, 2603

Ordnance. (14) 2.75 inch rockets and two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range

Crew. WTO/PUI/CC/AG

SWD-2605	**1.5**	**180**	**B,R,SC,M**	**D**	**A**	**1**	**UH-1Y**

Goal. OS - To evaluate proficiency at specific weapons delivery.

Requirements

Discuss

Engagement envelopes of 2.75 inch rockets
Weapons mode and switchology errors
CRM and intra cockpit communication during ordnance employment

Review

Ordnance specific CRM
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. 2604

Ordnance. (14) 2.75 inch rockets and two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Raked or scored LASER safe range

Crew. WTO/PUI/CC/AG

SSWD-2606	**1.5**	*****	**B**	**NS**	**S/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

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. 2604

Ordnance. If flown in aircraft: (14) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], IR Pointer

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

Crew. NSI/PUI (NSI/PUI/CC/AG~AC)

SWD-2607 1.5 180 B,R,SC NS A 1 UH-1Y

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
Correlation with aircrew
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. 2101, 2606

Ordnance. (14) 2.75 inch rockets and two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

Crew. NSI/PUI/CC/AG

SSWD-2608 1.5 * B,SC NS S/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. 2607, NSQ-HLL (2102~AC)

Ordnance. If flown in aircraft: (14) 2.75 inch rockets and two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

Crew. NSI/PUI (NSI/PUI/CC/AG~AC)

SWD-2609 1.5 180 B.R.SC.M NS A 1 UH-1Y

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. 2608, 2102

Ordnance. (14) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (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 B,R,M (NS) A/S 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
Reactive employment 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.
Should employ on a target without exact distance cueing.

Prerequisites. SWD-2603 (SWD-2607~NS, SWD-2609~LLL)

Ordnance. (14) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (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 (WTO(NSI)/PUI~SIM)

2.9.8 Familiarization (FAM)

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.

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 1.5 180 B,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
Crew resource mangement

Review

FAM stage maneuvers

Performance Standards

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

Prerequisite. 1901

Crew. BIP(NSI)/PUI/(CC/AO)

Note. For those pilots assigned to the Refresher and Series Conversion POI. If CIX-1901 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 CIX-1901.

SFAM-2801 1.5 90 B,R,SC,M (NS) S 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 complete a minimum of 5 autorotations IAW the UH-1Y NATOPS and MDG.

Prerequisite. 1901

Crew. CSI/PUI or (BIP(NSI)/PUI/(CC/AO)~AC)

SFAM-2802 1.5 * B NS S 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

Review
Internal/external scan and HMSD usage
Low work scan and CRM
Landing profile

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, minimum of 2 shall be unplanned to an unimproved surface.
PUI shall safely conduct NVD failures
PUI shall safely conduct aircraft emergencies IAW NATOPS.
Demonstrate proper knowledge of IIMC procedures IAW ASTACSOP.

Prerequisites. NSQ-HLL

Crew. NSI/PUI

2.9.9 Expeditionary Shore-based Site Operations

Purpose. To introduce day and night flight and ground operations from an expeditionary site.

General. IAW applicable directives, PUI will emphasize proper communication procedures, patterns, and aviation operations in RVL and FARP environments.

Refer to appropriate NATOPS, NTTP, ASTACSOP and Aircraft Refueling NATOPS Manual for FARP operations. An actual FARP, ADGR site is preferred but not required. Squadrons may elect to simulate one of these environments at an outlying field, austere landing zone(s) or other appropriate landing sites.

Expeditionary Operations shall be flown in conjunction with any Core/Mission Phase event once prerequisites are complete.

Aircraft should be configured with an operable NTIS and HMSD.

EXP-2900 1.5 180 B,R,SC,M D A 1 UH-1Y

Goal. OS - Conduct Reduced Visibility Landings (RVL)

Requirements
Discuss
Different types of reduced visibility conditions
Landing Profile and scan procedures for the approach, landing, and takeoff
Mandatory communications
Waveoff parameters and profile
Recommended waveoff parameters and use of HMSD
Common error indentification and scan techniques

Demonstrate/Introduce
Reduced visibility landings
Waveoffs

Review
Tactical Landing Profile
Power Management Principles

Performance Standards
PUI shall conduct a minimum of (5) RVL approaches.

PUI shall conduct a minimum of (5) reduced visibility takeoffs.
PUI shall conduct a minimum of (2) waveoffs.
IP shall demonstrate proper transfer of controls in an RVL.

Prerequisites. 2402

Crew. BIP/PUI/CC

EXP-2901 1.5 180 B,R,SC,M NS A 1 UH-1Y

Goal. OS - Conduct NVD Reduced Visibility Landings (RVL).

Requirements
Discuss
Different types of reduced visibility conditions
Landing Profile and scan procedures for the approach, landing, and takeoff
Mandatory communications
Waveoff parameters and profile
Recommended waveoff parameters and use of HMSD
Common error indentification and scan techniques
Aircraft lighting considerations
Use of IR searchlight in an RVL

Demonstrate/Introduce
NVD Reduced visibility landings
Waveoffs in an RVL
Review
Tactical Landing Profile
Power Management Principles

Performance Standards
PUI shall conduct a minimum of (5) RVL approaches.
PUI shall conduct a minimum of (5) reduced visibility takeoffs.
PUI shall conduct a minimum of (2) waveoffs.
IP shall demonstrate proper transfer of controls in an RVL.

Prerequisites. 2403 (2405~LLL)

Crew. NSI/PUI/CC/AO

EXP-2902 0.0 * B D A 1 UH-1Y

Goal. OS - Conduct day Expeditionary Shore-based Site Operations (FARP).

Requirements
Discuss
FARP types
FARP equipment
FARP procedures and personnel
Landing point markings
Movement within the FARP
Ordnance procedures
FARP emergency procedures
MMT communications/nets
FARP OIC communications/nets
ADGR platforms, equipment and capabilities
Pax and MACO procedures

Introduce
Day FARP operations
Inbound & outbound formations and approaches
Review

Landing procedures to an unprepared surface

Performance Standards
PUI shall conduct a FARP brief.
PUI shall conduct a minimum of one (1) landing and one (1) takeoff.
PUI should conduct refueling.

Prerequisites. 2090, 2100

External Syllabus Support. Actual or simulated FARP

Crew. BIP/PUI/CC

EXP-2903 0.0 180 B,R,M NS A/S* 1 UH-1Y

Goal. OS - Conduct NVD Expeditionary Shore-based Site Operations (FARP).

Requirements
Discuss
Night landing point markings
Aircraft lighting
FARP types
FARP equipment
FARP procedures and personnel
Movement within the FARP
Ordnance procedures
FARP emergency procedures
MMT communications/nets
FARP OIC communications/nets
ADGR platforms, equipment and capabilities
Pax and MACO procedures
Night FARP Midair Mishap (https://portal.marinenet.usmc.mil/libdl.html?f=1483769DAF63)
Demonstrate/Introduce
Night FARP operations
Review
Landing procedures to an unprepared surface

Performance Standards
PUI shall conduct a FARP brief.
PUI shall conduct a minimum of one (1) landing and one (1) takeoff.
PUI should conduct refueling.
PUI shall conduct rendezvous and join-up procedures.

Prerequisites. 2090, 2101 (2404~LLL)

External Syllabus Support. Actual or simulated FARP

Crew. NSI/PUI/CC/AO

2.10 MISSION ACADEMIC PHASE (3000)

Purpose. To develop a Mission Phase 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)].

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.

Mission Skill academic events are listed below.

MISSION ACADEMIC PHASE	
TRAINING CODES	**COURSEWARE**
GENERAL REQUIREMENTS	
ACAD-3000	Intelligence Support for Aviation
ACAD-3001	Problem Framing
ACAD-3002	ROE Planning
ACAD-3003	Execution Checklist
ACAD-3004	Objective Area Planning*
ACAD-3005	Rapid Response Planning
ACAD-3006	(S) Radar Guided Surface to Air Missiles
ACAD-3007	(S) Radar Theory
ACAD-3008	(S) IR SAM threat to RW Aircraft*
ACAD-3009	(S) ADA threat to RW Aircraft*
ACAD-3010	(S) Electronic Warfare
ESC	
ACAD-3011	Assault Support Escort Tactics*
ACAD-3012	H-1 Escort TTPs
CAT	
ACAD-3021	UH-1 Assault Support Planning
ACAD-3022	UH-1 Assault Support Execution
AE	
ACAD-3023	CASEVAC
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
FAC(A)	
ACAD-3040	FAC(A) Ground School
ACAD-3041	JFAC(A) Courseware lectures taught by Squadron FAC(A)I
ACAD-3042	FAC(A) TTPS*
TRAP	
ACAD-3051	(S) TRAP
MISSION SKILL	
ACPM-8300	8300 Series
*Indicates classes that should be presented to all pilots annually.	

2.11 MISSION PHASE (3000)

Purpose. To produce a Mission Phase proficient pilot. Upon completion of the Mission Phase, pilots should be proficient in Mission Essential Tasks.

General. Upon completion of the Mission Phase, pilots may be designated Utility Helicopter Commander (UHC) and Forward Air Controller (Airborne) [FAC(A)].

Completion of the Core Phase and the ESC, CAT, AE, OAS, and TRAP Stages of the Mission 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.

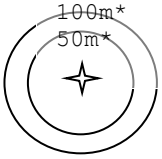
Prior to completion of the Core/Mission Phases, Expeditionary Shore Based (FARP) Operations shall be conducted. EXP-2902 through EXP-2903 shall be logged in conjunction with any Core or Mission Phase event.

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

MISSION PHASE	
PAR NO.	**STAGE NAME**
2.11.1	Escort (ESC)
2.11.2	Combat Assault Transport (CAT)
2.11.3	Casualty Evacuation (AE)
2.11.4	Close Air Support (CAS)
2.11.5	Strike Coordination and Reconnaissance (SCAR)
2.11.6	Forward Air Controller (Airborne) FAC(A)
2.11.7	Tactical Recovery of Aircraft Equipment and Personnel (TRAP)

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 Risk Management (RM) while utilizing the ordnance systems.

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.

APKWS- Correct switchology, proper LASER placement, profile IAW UH-1 NTTP, direct hit.

TOTs - Initial ordnance shall be delivered within +/- 30 seconds of established TOT.

During this Phase, one of the night ordnance events shall employ (4) 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.

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.

During this Phase one of the ordnance events shall employ (4) 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.

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 CAT Stage, prior to UHC (DESG-6398), the PUI shall demonstrate the ability to meet the Mission Skills combat assault transport accuracy metric. PUI shall land within +/- 30 seconds of the assigned L-Hour and within 50 meters of the planned landing point. During RIE/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.

2.11.1 Escort (ESC)

Purpose. To develop proficiency in prescribed airborne and surface escort formations and maneuvers.

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.

SESC-3100 1.5 365 B,R,M D S/A 2 1 UH-1Y & 1 H-1

Goal. OS - Demonstrate and introduce day and night assault support escort mechanics 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 terminology/required communications
- Tilt-rotor considerations
- LZ clearance procedures and communication
- Threat reaction calls and mechanics

Demonstrate/Introduce

- Enroute attached and detached profiles and threat reactions

Attached and detached profiles and threat reactions in an objective area
Objective area flow and communications
Objective area fires integration/deconfliction
LZ coverage patterns and ordnance delivery procedures

Performance Standards
PUI shall exhibit a thorough understanding of escort responsibilities and techniques
PUI shall conduct proper enroute attached and detached escort and threat reactions
PUI shall conduct (2) attached and (2) detached escort profiles and threat reactions in an objective area
PUI shall use correct terminology and techniques for LZ reconnaissance and coverage.

Prerequisite. 3004, 3011, 3012, 2604

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire and LASER safe range, if required

External Syllabus Support. Device operator. If in aircraft, one or more assault support aircraft

Crew. WTO/PUI/CC/AO(AG)

ESC-3101 1.5 * B D A 2 1 UH-1Y & 1 H-1

Goal. OS - Demonstrate and introduce day assault support escort in a low to medium threat environment.

Requirements
Discuss
Escort/assault integration and deconfliction
Fires planning (LZ clearance, supporting arms, DAS to CAS transition, sectors of fire integration)
LZ Reconnaissance/scan techniques
Precision-guided munition usage during escort missions
AMC/AFL/EFL relationship
Integration of Fixed wing assets escort procedures
Waveoff criteria and actions
Demonstrate/Introduce
Assault support escort mission planning
LZ reconnaissance and scan patterns
Objective area fires integration
Review
Attached/detached/combined escort profiles
Enroute attached and detached profiles and threat reactions
Attached and detached profiles and threat reactions in an objective area
Reactive ordnance employment

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 use correct terminology and techniques for LZ clearance and coverage.

Prerequisites. 3011, 3012, 3100

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (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-3102 1.5 365 B,R,M NS A/S* 2 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
Supporting arms coordination
NTIS and IR Pointer usage

Demonstrate/Introduce

Rendezvous procedures with assault support aircraft at night
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

Assault support escort mission planning
LZ reconnaissance and scan patterns
Objective area fires integration
Ordnance delivery procedures with NVDs
Attached/detached/combined escort profiles
Objective area flow and communications

Performance Standards

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.
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.

Prerequisite. 3101, 2403, 2102~LLL, 2607~NS ORD, 2609~LLL ORD

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire and LASER safe range, if required

External Syllabus Support. One or more assault support aircraft

Crew. NSI/PUI/CC/AO(AG)

SESC-3103 1.5 365 B,R (NS) S/A 2 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. 2604 (2403~NS, 2102~LLL, 2607~NS ORD, 2609~LLL ORD, NSQ-HLL~NS)

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. Device operator. If flown in aircraft: one ground/amphibious unit, minimum 3 vehicles.

Crew. WTO(NSI)/PUI/CC/AO(AG) (WTO(NSI)/PUI)

2.11.2 Combat Assault Transport Operations (CAT)

Purpose. To develop procedures and skills to tactically employ the UH-1Y, while conducting a variety of combat assault transport missions, under varying threat conditions.

General. Upon the completion of each CAT Event the pilot will be tactically proficient in the planning, briefing and execution of that particular mission profile. Upon completion of the CAT Stage, the pilot will be Mission Skill proficient for CAT.

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 combat assault transport 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 initially flown CAT-3201 and CAT-3202).

The initial CAT-3201 and CAT-3202 shall be performed with actual ropers. Proficiency may be maintained by conducting RIE profiles with simulated ropers.

Actual ordnance for crew served weapons should be incorporated to the maximum extent practical. The 3204 shall carry and employ live crew-served ordnance ISO tactical execution if flown in the aircraft.

The CAT-3205 (or CAT-3204 if flown in aircraft) initial events requires 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.

GCAT-3200 1.0 365 B,R,SC,M D GE 1 UH-1Y

Goal. OS - Familiarize aircrew with the utility configurations and planning factors on the UH-1Y

Requirements
- Discuss
  - ARAS authorized configurations and restrictions
  - Operations procedures and limitations of the hoist and gantry systems
  - Cabin preparation
  - Passenger and cargo securing procedures
  - CG considerations
  - On/Off drills
  - Mission rehersals
  - PZ operations
  - TFOA avoidance
  - MACO markings
- Demonstrate/Introduce
  - Power management planning
  - Fastrope / rappel ingress, approach, objective area, egress and join-up
  - RIE specific communication
  - Fouled rope / hung roper procedures

Performance Standards
- Aircrew shall conduct configuration familiarization at a minimum with the Gantry, Hoist, ARAS, and Litters.
- Aircrew shall facilitate On/Off Drills for passengers
- Aircrew shall load, secure, and unload cargo
- Aircrew shall load simulated casualties via litters

Prerequisite. 2402, 3021, 3022

Ordnance (Optional). Crew served weapons.

Range Requirement. None

External Syllabus Support. None

Crew. WTO/PUI/CC

CAT-3201 1.0 365 B,R,M D A 1 UH-1Y

Goal. OS - Develop proficiency in tactical fastrope/rappel operations.

Requirements
- Discuss
  - Insertion techniques and planning considerations
  - Aircrew coordination/CRM during HRST operations
  - Emergencies with ropers
  - Fastrope/rappel profiles
  - Specific RIE communication
  - 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
- Demonstrate/Introduce
  - Power management planning
  - Fastrope / rappel ingress, approach, objective area, egress and join-up
  - RIE specific communication

Fouled rope / hung roper procedures

Review

Aircraft rigging/configuration
Discuss Crew Restraint System (CRS) and components
Cabin management
Straight-in approach (IP to LZ) with timing
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. 2402, 3200

Ordnance (Optional). Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

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)

CAT-3202 1.0 365 B,R,M NS A 1 UH-1Y

Goal. OS - Develop proficiency in tactical fastrope/rappel operations at night.

Requirements

Discuss

RIE tactical approaches, landings and departures
Waveoff criteria
Selection of alternate zone for RIE or landing
NVD considerations for RIE operations
Environmental considerations for RIE execution
Cultural lighting considerations

Demonstrate/Introduce

RIE 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. 3201, 2403~NS, NSQ-HLL~NS, NSQ-LLL and 2405~LLL

Ordnance (Optional). Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

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)

SCAT-3203 1.5 365 B,R,M (NS) S/A 2 UH-1Y

Goal. OS - Conduct an insert/extract mission in a medium threat, urban, and contested environment.

Requirements
- Discuss
  - Urban navigation procedures
  - Map preparation/GRG usage
  - Urban night operations
  - Urban threat considerations
  - Ingress/egress profiles in urban terrain
  - Zone identification in an urban environment
  - IP, LZ selection considerations
  - AFL responsibilities and authority
  - Mission criteria (Go, No-Go, LZ Criteria)
  - 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
  - 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
  - LZ and alternate LZ planning
  - Pickup Zone (PZ) planning
  - Actions on contact
  - Contingency planning

Performance Standards
- PUI shall conduct AFL brief.
- PUI shall land within +/- 50m from landing point within +/- 30 seconds of L-hour.

Prerequisite. 2403, 3200, NSQ-HLL~NS, 2403~HLL, 2405~LLL, 2604~ORD

Ordnance (Optional). Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range if flown in aircraft

External Syllabus Support. Embarked troops if flown in aircraft

Crew. NSI)PUI/[NSI/PUI/CC/AO(AG)~AC]

SCAT-3204 1.5 365 B,R,SC,M NS S/A 2 UH-1Y

Goal. OS - Conduct an insert/extract or raid in a medium threat environment incorporating fires.

Requirements
- Discuss
  - Deception planning/execution
  - Aural/visual detection considerations
  - Section illumination procedures
  - Section LZ reconnaissance
- Demonstrate/Introduce
  - Insert/extract
  - Section LZ reconnaissance

Review
- Far/near ITG
- Day/night landing point marking
- ASSAT/ASLT
- Accountability procedures
- Aircraft MACO markings
- Sensor integration
- Wave sequencing
- Illumination support
- 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. 2403, 2405, 3203, NSQ-HLL~NS, NSQ-LLL~LLL, 2604 (2607~NS ORD, 2609~LLL ORD)

Ordnance (Optional). Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range

External Syllabus Support. Embarked troops

Crew. WTO(NSI)/PUI/CC/AO(AG)

CAT-3205 2.0 365 B,R,SC,M NS A/S* 2 UH-1Y

Goal. OS – Tactically employ the UH-1Y in a long range CAT mission in a low to medium threat environment.

Requirements

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
- Far/near ITG
- Contingency planning
- On/off drills
- Post insert actions
- Extract plan
- Raid specific considerations
- Degraded navigation techniques and systems integration
- Map preparation
- Cockpit management
- Use of ground speed for enroute planning
- MINCOM procedures

Terrain analysis

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.
PUI shall conduct the AFL brief

Prerequisites. 3021,3022,3200,3204, NSQ-HLL, NSQ~LLL

Ordnance (Optional). Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Live fire LASER safe range

External Syllabus Support. Embarked troops

Crew. NSI/PUI/CC/AO(AG)

2.11.3 Casualty Evacuation (AE)

Purpose. To develop the ability to perform CASEVAC operations.

General. AE-3206 is a tracking code only and shall be performed in conjunction with any 3000 Phase Event. Upon the completion of the AE 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.

AE-3206 0.0 365 B,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. 2400 (2403~NS, 2405~LLL), 3023, 3200

2.11.4 Close Air Support (CAS)

Purpose. To develop procedures and skills to tactically employ the aircraft while conducting CAS missions under varying threat conditions.

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 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 * B D S 1 UH-1Y

Goal. OS - Introduce RW CAS missions in a rural and urban environments in day, 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. 3030 through 3033, 2201, 2301, 2604

Crew. WTO/PUI

CAS-3301 1.5 * B,SC D A 2 1 UH-1Y & 1 H-1

Goal. OS - Provide RW CAS to ground forces in a day-time, 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. 3300

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. TACP

Crew. WTO/PUI/CC/AG

CAS-3302 1.5 180 B,R,SC,M NS A/S 2 1 UH-1Y & 1 H-1

Goal. OS - To provide RW CAS to ground forces at night in a low 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. 2102, 3301 (2609~LLL)

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. TACP

Crew. NSI/PUI/CC/AG

CAS-3303	**1.5**	**180**	**B,R,M**	**NS**	**A**	**2**	**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

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 shall utilize mission planning software to conduct elevation analysis and line of sight communication considerations.

Prerequisites. 2609, 3302

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. TACP

Crew. NSI/PUI/CC/AG

CAS-3304	**1.5**	**365**	**B,R,M**	**(NS)**	**A/S**	**2**	**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. 3301 (3302~NS, 3303~LLL)

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side(600) 7.62mm M240 per side], (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)

2.11.5 Strike Coordination And Reconnaissance (SCAR)

Purpose. To develop procedures and skills to tactically employ the aircraft while conducting SCAR/AR missions under varying threat conditions.

General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of SCAR/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.

SCAR-3305 1.5 730 B,R,M (NS) A/S 2 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. 3035, 2102, 2201, 2301, 2604 (2607~NS, 2609~LLL)

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets

Crew. WTO(NSI)/PUI/CC/AG

SSCAR-3306 1.5 365 B,R,M (NS) S/A 2 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. 3305

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. FW or RW aircraft

Crew. NSI/PUI (WTO(NSI)/CC/AG~AC)

2.11.8 Forward Air Controller (Airborne) [FAC(A)]

Purpose. To qualify PUI as a FAC(A) in accordance with applicable directives.

General. PUI shall be designated PQM (DESG-6300) to conduct FACA-3400, and UHC (DESG-6398) for all subsequent events. Nonqualified aircrew shall fly FACA-3401 through FACA-3405 with a FAC(A)I.

At the completion of this stage, the PUI should have demonstrated a thorough knowledge of CAS and FAC(A) procedures used to control RW and FW aircraft and supporting arms under varied environmental and threat conditions.

FAC(A) training requirements are listed in the most recent JFAC(A) MOA and the T&R Program Manual, Chapter 3. The JFAC(A) MOA can be found on the MAWTS-1 Webpage at: https://mceits.usmc.mil/sites/mawts1/SitePages/JFAC(A).aspx.

Upon successful completion of this stage and compliance with JFAC(A) MOA certification requirements, the commanding officer may issue the PUI a T&R FAC(A) qualification as well as a JFAC(A) MOA FAC(A) certification.

The JFAC(A) MOA dictates that specific control tasks (i.e. day/night, use of LTD/IR PTR, type of control, etc) be completed for certification. This T&R manual does not dictate on which events every control task requirement must be completed. Squadron operations staff and FAC(A)Is are therefore responsible for ensuring that PUI complete the required number of each control task IAW the current Joint FAC(A) MOA.

For T&R events not integrated with a live TACP, the FAC(A)I may simulate the TACP.

FAC(A)-3404 is annotated as an (NS) sortie. If this event is an initial sortie for the PUI, it SHALL be flown at night. Subsequent flights of this event can be flown day or night.

Two of the controls during the initial POI shall be under contested/highly contested conditions. A "contested/highly contested" control is defined as a control where the target area threat level dictates that the FAC(A) and/or attacking aircraft must use threat counter-tactics, countermeasures, or maintain stand-off prior to the target attack run. The FAC(A) must use a tactical scenario which requires a full 9-line CAS attack brief (IP to target area).

In order to ensure compliance with the JFAC(A) MOA qualification standards, FAC(A)s shall complete a FAC(A) evaluation/assessment (FAC(A)-3405) every 24 months and a standardized ATF shall be written by the supervising FAC(A)I. ***The initial FAC(A) Evaluation (FAC(A)-3405) should be completed and logged in conjunction with the FAC(A)-3404***. 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 control tasks the individual failed to accomplish during the appropriate six-month currency period (reference the current JFAC(A) MOA). Aircrew that are less than 6 months non-current must accomplish these control tasks under the supervision of a qualified FAC(A) while aircrew that are greater than 6 months non-current must accomplish these control tasks under the supervision of a FAC(A)I.

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 IAW the current JFAC(A) MOA.

The FFS/FTD SHALL be operated by a WTO or FAC(A) from the command post (not from a 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.

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.

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

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).

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

FACA-3400 2.0 365 B,R (NS) A/S* 1 UH-1Y

Goal. OS – Introduce indirect fire supporting arms control.

Requirements

Discuss

- CFF parts and elements
- Suppression of Enemy Air Defenses (SEAD)
- LASER call for fire procedures
- Ground Delivered Illumination
- Marine Indirect Fire asset organization
- Capabilities and limitations of indirect fire assets
- Naval Surface Fire Support (NSFS) capabilities, limitations and employment
- Integration of Indirect Fires with CAS Assets in support of the GCE SOM
- Appendix 19 to Annex C – Fire Support
- Fire Support Coordination Measures
- Airspace Control Measures

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 three (3) fire missions, one (1) of which shall be an adjust fire mission, one (1) shall be a SEAD mission.
PUI shall achieve desired effects (destroy, neutralize or suppress) on selected targets.

Prerequisites. 3041, 3042, 6300

Ordnance (Optional).

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) (NSI+FAC(A)/PUI~SIM)

SFACA-3401 1.5 * B,R,M (NS) S/A 2 1 UH-1Y & 1 H-1

Goal. OS – Introduce and instruct control of RW aircraft.

Requirements

Discuss

RW CAS and FAC(A) aircraft capabilities, limitations and employment
FAC(A) Capabilities / FAC(A) Duties and Responsibilities per JFAC(A) MOA
Use and submission of the Joint Tactical Airstrike Request (JTAR)
CAS specific Rules of Engagement, 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, methods of attack and their application to RW CAS assets
Target marking considerations for RW CAS assets
RW FAC(A) Crew coordination
Task shedding/sharing in the FAC(A) environment
FAC(A) game-plan
Section mechanics in support of FAC(A)
JFAC(A) MOA certification and qualification requirements and applicable definitions
JFAC(A) MOA CAS Mission Profile

Introduce

Integration of RW CAS assets into objective area mechanics
RW communication and control procedures.
LASER designation for laser guided weapons

Performance Standards

IP shall demonstrate a FAC(A) Gameplan that supports the event scenario
PUI shall demonstrate basic knowledge of planning, briefing and execution IAW USMC TACPSOP.
PUI shall deliver a minimum of two (2) RW 9-Line CAS attack briefs.

Prerequisites. 3041, 3042, 3043, 6398

Ordnance (Optional). (7) RP 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. 2 RW CAS aircraft with ordnance and ground maneuver unit with TACP (if conducted in aircraft)

Crew. FAC(A)I/PUI/Copilot~SIM/CC/AG

FACA-3402 2.0 * B,R D A/S* 2 1 UH-1Y & 1 H-1

Goal. OS – Introduce control of FW aircraft.

Requirements

Discuss

FW CAS aircraft ordnance capabilities, limitations and employment
Marine and Joint UAS capabilities, limitations and employment
Effects of weather, terrain and threat on FW CAS assets and RW FAC(A)
Types of Terminal Attack Control, methods of attack and their application to FW CAS assets
Airspace Control Order (ACO), Air Tasking Order (ATO) and impact on CAS/FAC(A) planning
Laser guided, sensor guided, coordinate dependant and non-precision weapons deliveries
Target location procedures in support of CAS
Target marking considerations for FW CAS assets
SEAD in support of FW CAS attacks
FAC(A) CRM

Introduce

Integration of FW CAS assets
FW LASER designation for Hellfire setup and execution

RW LASER designation for LST/LGB setup and execution
Objective area mechanics
Communication and control procedures

Review

Task shedding/sharing in the FAC(A) environment
FAC(A) gameplan
Section mechanics in support of FAC(A)

Performance Standards

PUI shall brief a FAC(A) game plan.
PUI shall demonstrate a basic knowledge of FW CAS aircraft planning, preparation and execution.
PUI shall utilize a minimum of two (2) 9-Line CAS attack briefs.

Prerequisites. 3041, 3042, 3043, 6398

Ordnance. (7) RP 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. 2 FW CAS aircraft with ordnance, prefer forward firing or unguided free-fall, ground maneuver unit with TACP

Crew. FAC(A)I/PUI/CC/AG

SFACA-3403 1.5 * B,R NS S/A 2 1 UH-1Y & 1 H-1

Goal. OS – Introduce control of FW/RW aircraft at night in an Urban Enviroment.

Requirements

Discuss

Effects of weather, terrain and threat at night to FW CAS assets and RW FAC(A)
Ground and aviation delivered illumination in support of CAS
Urban terrain considerations
Line of sight considerations for weapons, aircrew, and communications
Laser spot/LGW considerations
Weapon selection in an Urban Environment
ROE/PID
Collateral Damage Estimation (CDE)
Gridded Reference Graphic (GRG)
Urban threat considerations
AC-130 integration and Call For Fire
Night FAC(A) coordination within the flight and intracockpit

Introduce.

FAC(A) GRG usage
FAC(A) control at night
FAC(A) control in the Urban Environment

Review

FW CAS aircraft sensor capabilities, limitations and employment
FW aircraft ordnance capabilities, limitations and employment
Marine and Joint UAS capabilities, limitations and employment
Types of Terminal Attack Control, methods of attack and their application to CAS assets
Laser guided, sensor guided, coordinate dependant and non-precision weapons deliveries
Target marking considerations
FAC(A) crew coordination
Task shedding/sharing in the FAC(A) environment
Integration of FW and RW CAS assets
Objective area mechanics
Communication and control procedures
SEAD in support of CAS attacks

Performance Standards

PUI shall brief a FAC(A) gameplan.
PUI shall demonstrate a basic knowledge of FW/RW CAS aircraft planning, preparation, execution and night considerations.
PUI shall conduct a minimum of four (4) FW controls and (4) RW controls.
PUI shall conduct one coordinated attack that integrates FW and RW fires.
PUI shall utilize a minimum of (2) 9-Line CAS attack briefs.

Prerequisites. 3041, 3042, 6398

Ordnance. (7) RP 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. 2 FW and 2 RW CAS aircraft with LASER guided, sensor guided or coordinate dependant ordnance and ground maneuver unit with TACP.

Crew. FAC(A)I/PUI/CC/AG

FACA-3404 1.5 365 B,R,SC,M (NS) A/S* 2 1 UH-1Y & 1 H-1

Goal. OS – Review FAC(A) and the use of supporting arms and their integration in support of the GCE SOM.

Requirements

Discuss

Fire Support planning documents (Appendix 19, target list worksheet, scheduling worksheet)
Target acquisition via aided or unaided vision or remote observer
Integration of air and surface fires in support of the Ground Scheme of Maneuver
Weaponeering process for RW, FW and UAS ordnance and weapon to target match
Integration of digital systems (VMF, Link-16, etc…)
MISREP and BDA assessment

Review

Discussion items from previous FAC(A) flights
Integration of multiple fire support assets (FW, RW, UAS, IDF)
Objective area mechanics
Communication and control procedures

Performance Standards

PUI shall brief a FAC(A) game plan that supports the GCE SOM.
PUI shall demonstrate sound knowledge of FW and RW CAS aircraft planning, preparation, and execution.
PUI shall integrate and conduct FAC(A) with multiple assets in support of the GCE SOM during a dynamic scenario.
PUI shall utilize a minimum of two (2) 9-Line CAS attack briefs.

Prerequisites. 3400, 3401, 3402, 3403, 6398

Ordnance. (7) RP 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available.

External Syllabus Support. 2 FW CAS aircraft with ordnance, 1 indirect fire support asset or 1 section of RW aircraft with ordnance (separate from flight), ground maneuver unit with TACP

Crew. FAC(A)I/PUI/CC/AG

SFACA-3405 1.5 730 B,R,M I (NS) S/A 2 1 UH-1Y & 1 H-1

Goal. OS – FAC(A) Evaluation – Emphasis shall be placed on the use of all available supporting arms and their

integration in support of the GCE SOM.

Requirements

Discuss

JFAC(A) MOA currency requirements
Any JMT listed in the FAC(A) MOA JMTL

Review

Discussion items from previous FAC(A) flights
Integration of multiple fire support assets (FW, RW, UAS, IDF)
Objective area mechanics
Communication and control procedures

Performance Standards

PUI shall brief a FAC(A) game plan that supports the GCE SOM.
PUI shall demonstrate sound knowledge of FW and RW CAS aircraft planning, preparation, and execution.
PUI shall integrate and conduct FAC(A) with multiple assets in support of the GCE SOM during a dynamic scenario.

Prerequisites. 3400, 3403, 6398

Ordnance. (7) RP 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available.

External Syllabus Support. 2 FW CAS aircraft with ordnance, 1 indirect fire support asset or 1 section of RW aircraft with ordnance (separate from flight), ground maneuver unit with TACP

Crew. FAC(A)I/PUI/CC/AG

2.11.9 Tactical Recovery of Aircraft and Personnel (TRAP)

Purpose. To develop procedures and skills to tactically employ the aircraft while conducting TRAP missions under varying threat conditions.

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-3500	**1.5**	**365**	**B,R,M**	**(NS)**	**A/S**	**2**	**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 RFL/RV portion of the RMC 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, if serving as RFL.
PUI shall properly employ escort techniques and patterns for the assigned mission, if serving as RFL.
PUI shall integrate fire support assets in the objective area, if serving as RFL.
PUI shall use the correct terminology and techniques for LZ clearance and coverage.

Prerequisites. 3051, 2102, 3100, (2604~ORD, 3101~NS), 3200

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (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)

2.12 CORE PLUS/MISSION PLUS ACADEMIC PHASE (4000)

Purpose. To develop a Core Plus Skill complete pilot. These academics facilitate understanding of higher threat operations in the UH-1Y and MAGTF/Joint level functions to ensure individuals possess the requisite knowledge to execute large scale integrated mission Events, unique mission tasking, Events having a low probability of execution in combat, are theater specific, and/or are relatively high-threat Events.

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.

Core Plus/Mission Plus Academic Phase events are listed below.

CORE PLUS/MISSION PLUS ACADEMIC PHASE	
TRAINING CODES	**COURSEWARE**
RIE/CAT/AD	
ACAD-4012	High Altitude Operations/Power Management
DACM	
ACAD-4030	UH-1 Air-to-Air Considerations
ACAD-4031	DACM Training
ACAD-4032	DACM Tactical Gameplan
ACAD-4033	(S) RW Threat to the MAGTF
ACAD-4034	(S) Attack Helo Threat to RW A/C
ACAD-4035	(S) FW Threat to the MAGTF
ACAD-4036	(S) FW Threat to RW A/C
TAC(A)	
ACAD-4050	TACC
ACAD-4051	TAC(A) TTPs
SEA	
ACAD-4060	Intro to Shipboard Operations
ACAD-4061	(S) HMLA Sea-Based Operations
ACAD-4062	(S) VBSS
*Indicates classes that should be presented to all pilots annually.	

2.13 CORE PLUS/MISSION PLUS PHASE (4000)

Purpose. To certify the PUI in large scale integrated mission Events having unique mission tasking, a low probability of execution in combat, are theater specific, and/or are relatively high-threat Events.

General. Upon completion of each individual Stage, the pilot will be considered Core Plus/Mission Plus proficient in that stage.

Completion of DACM-4301, DACM-4302 and DACM-4303 meets the requirements for the PUI to be RWDACM qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as RWDACM qualified shall be placed in the NATOPS jacket and APR.

Completion of DACM-4304 and DACM-4305 meets the requirements for the PUI to be FWDACM qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as FWDACM qualified shall be placed in the NATOPS jacket and APR.

Completion of the TAC(A) Stage meets the requirements for the PUI to be TAC(A) qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as TAC(A) qualified shall be placed in the NATOPS jacket and APR.

Completion of the CQ stage meets the requirements for the PUI to be CQ qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as CQ qualified shall be placed in the NATOPS jacket and APR.

Stages. The following stages are included in the Core Plus/Mission Plus Phase of training.

CORE PLUS/MISSION PLUS PHASE	
PAR NO.	**STAGE NAME**
2.13.1	Airborne Rapid Insertion/Extraction (RIE)
2.13.2	Combat Assault Transport (CAT)
2.13.3	Aerial Delivery (AD)
2.13.4	Airborne Command and Control (AC2)
2.13.5	Escort (ESC)
2.13.6	Close Air Support (CAS)
2.13.7	Strike Coordination and Reconnaissance (SCAR)
2.13.8	Rotary Wing Defensive Air Combat Maneuvering (RWDACM)
2.13.9	Fixed Wing Defensive Air Combat Maneuvering (FWDACM)
2.13.10	Chemical, Biological, Radiological and Nuclear Warfare (CBRN)
2.13.11	Tactical Air Coordinator (Airborne) TAC(A)
2.13.12	Carrier Qualified (CQ)
2.13.13	Electronic Warfare (EW)

Ordnance Delivery. At the completion of this Phase, the PUI will have demonstrated increased accuracy during ordnance delivery and proper use of the NTIS under medium to high threat conditions with mixed ordnance loads. For the Core Plus/Mission Plus Phase, the PUI shall meet the ordnance metrics outlined for the Mission Phase (See Paragraph 2.16). VTR debrief should be used to the maximum extent possible. Emphasize CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

Navigational Accuracy. At the completion of this Phase, the PUI will have demonstrated increased navigational accuracy and timeliness during assault support operations, under medium to high threat conditions. For the Core Plus Phase, the PUI shall meet the ordnance metrics outlined for the Mission Phase. See Paragraph 2.16. IP shall use MPS or aircraft systems to asses landing point accuracy.

2.13.1 Airborne Rapid Insertion/Extraction (RIE)

Purpose. To develop the ability to perform specialized combat assault transport missions utilizing rapid insertion/extraction techniques and equipment.

General. Upon completion of each core plus event, the pilot will be considered capable of performing that particular mission.

Aircraft should be configured with appropriate HIE equipment, an operable NTIS, crew served weapons, LTD/LRF, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

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

Ground/Academic Training. IAW the MAWTS-1 Course Catalog.

RIE-4100 1.0 * B (NS) A 1 UH-1Y

Goal. OS - Introduce techniques for paradrop operations.

Requirements
Discuss
Aircraft rigging specific to paradrops
Insertion techniques
Aircrew coordination
Emergencies

Performance Standards
Perform paradrop maneuvers IAW the UH-1Y NATIP/NTTP and appropriate HIE Manual.
PUI shall conduct paradrops with at least two jumpers

Prerequisites. 2400 (2403~NS, 2405~LLL)

Range Requirement. Drop Zone or authorized paraops area.

External Syllabus Support. Jump Master and two jumpers (Jump Master may be one of the jumpers)

Crew. BIP(NSI)/PUI/CC/(AO)

RIE-4101 1.5 730 B,M,R D A 1 UH-1Y

Goal. OS - Introduce techniques for daytime water insertion.

Requirements
Discuss
Aircraft rigging specific to water insertion
Insertion and extraction techniques
Aircrew coordination
Emergencies

Performance Standards
Perform Tactical maneuvers IAW the UH-1Y NATIP/NTTP and appropriate HIE Manual.
PUI shall insert at least two swimmers.

Prerequisites. 2100, 2400

Range Requirement. Water drop zone or authorized helocast area

External Syllabus Support. Helocast Master and two swimmers (Helocast Master may be one of the swimmers)

Crew. BIP/PUI/CC

RIE-4102 1.5 365 B,R,M NS A 1 UH-1Y

Goal. OS - Introduce techniques for night water insertion.

Requirements
Discuss
Aircraft rigging specific to water insertion
Insertion and extraction techniques
Night illusions over water
Aircrew coordination
Emergencies

Performance Standards
Perform Tactical maneuvers IAW the UH-1Y NATIP/NTTP and appropriate HIE Manual.
PUI shall insert at least two swimmers.

Prerequisites. 4101, NS~2403,LLL~2405

Range Requirement. Water drop zone or authorized helocast area

External Syllabus Support. Helocast Master and two swimmers (Helocast Master may be one of the swimmers)

Crew. NSI/PUI/CC/AO

RIE-4103 1.5 365 B,R,M (NS) A 1 UH-1Y

Goal. OS - Introduce techniques for insertion/extraction using the Special Personnel Insertion/Extraction (SPIE) rig or Jacob's Ladder

Requirements
Discuss
Aircraft rigging specific to SPIE

Insertion and extraction techniques
Aircrew coordination
Emergencies

Introduce
SPIE flight profiles

Performance Standards
Perform Tactical maneuvers IAW UH-1Y NATIP/NTTP and appropriate HIE Manual.
Complete three evolutions consisting of an extract, transition to flight, and insert.

Prerequisite. 2400, NS~2403,LLL~2405

Range Requirement. Drop zone/landing zone or authorized SPIE area

External Syllabus Support. HRST Master and two ropers

Crew. BIP(NSI)/PUI/CC(AO)

RIE-4104 1.5 365 B,R,SC,M (NS) A 1 UH-1Y

Goal. OS - Introduce techniques for hoist operations to include emergency hoist procedures and rapid insertion/extraction methods.

Requirements

Discuss
Windline procedure pattern
Hoist set-up and operation
Hoist capabilities and limitations
Rescue devices (double rescue hook, rescue strop, Stokes litter, SKEDCO, forest penetrator/rescue seat)
Rapid insert/extraction methods with hoist
Hoist flight profile
Aircrew coordination
Hoist operations briefing guide
Trail line utilization IAW NTTP 3-50.1
Belay line utilization during live hoist IAW NTTP 3-50.1
Engine failures
Tail rotor emergencies
Settling with power
Hoist emergencies

Demonstrate/Introduce
Proper procedures and techniques for hoist drop-off and pickup

Performance Standards
Conduct flight and hoist procedures IAW the UH-1Y NATIP/NTTP/NATOPS, NTTP 3-50.1, and local directives.
Complete three iterations of hoist procedures (drop-off and pickup).
Perform windline procedure patterns IAW UH-1Y NATIP/NATOPS.

Prerequisites. 2100, 2400, NS~2403,LLL~2405

External Syllabus Support. Appropriate external weight

Crew. BIP(NSI)/PUI/CC (AO)

2.13.2 Combat Assault Transport (CAT)

Purpose. To refine proficiency combat assault transport missions.

General. At the completion of this stage, the PUI will have demonstrated the ability to plan brief and integrate multiple assets in the execution of CAT missions under varied environmental and higher threat conditions.

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.

SCAT-4105 1.5 * B D S/A 1 UH-1Y

Goal. OS - Introduce Mountain Area Training

Requirements
- Discuss
  - High altitude operations
  - Loss of tail rotor effectiveness
  - Turbulence
  - Orographic lifting
  - Downdrafts
  - DTED
  - Cloud formation and movement
  - Rapid onset of IMC conditions
  - IIMC procedures with regard to terrain
  - Mountain area enroute techniques
  - Terrain crawl
  - Wind finding techniques
- Demonstrate/Introduce
  - 45 degree ridgeline crossing
  - Inadvertent IMC egress procedures
  - Terrain crawl
  - Wind finding techniques
  - Pinnacle approach
  - Approach to a saddle
  - Approach to a ridgeline
  - Approach to a bowl

Performance Standards
- Perform 5 mountain area landings in mountainous terrain above 5,000ft DA or in mountainous terrain with simulated representative power limitations.
- Perform 2 simulated fastrope or rappel approaches in a mountain environment.
- Perform a minimum of one (1) 45 degree ridgeline crossing.

Prerequisite. 2400, 4012

Crew. WTO/PUI (TERFI/PUI/CC/AO~AC)

CAT-4106 2.0 365 B,R,M (NS) A 1 UH-1Y

Goal. OS - Review Mountain Area Training.

Requirements
- Discuss
  - High altitude operations
  - Loss of tail rotor effectiveness
  - Turbulence
  - Orographic lifting
  - Downdrafts
  - Mountain area enroute techniques
  - DTED
  - Cloud formation and movement
  - Rapid onset of IMC conditions
  - IIMC procedures with regard to terrain
- Review
  - 45 degree ridgeline crossing
  - Inadvertent IMC egress procedures

Terrain crawl
Wind finding techniques
Pinnacle approach
Approach to a saddle
Approach to a ridgeline
Approach to a bowl

Performance Standards

Perform 5 mountain area landings in mountainous terrain above 5,000ft DA or in mountainous terrain with simulated representative power limitations.
Perform 2 simulated fastrope or rappel approaches in a mountain environment.
Perform a minimum of one (1) 45 degree ridgeline crossing.

Prerequisite. 2100, 4105, (2101~NS, 2403~NS, 2404~LLL)

Crew. WTO(NSI)/PUI/CC/(AO)

CAT-4107 1.5 * B (NS) A 1 UH-1Y

Goal. OS - Introduce techniques for sniper operations.

Requirements

Discuss

Sniper operations
Planning and employment considerations
A/C rigging
Profiles
Sniper briefing considerations/guide
Communication flow
Control of fires
Clearance authority
Fires integration
Sniper template
Weapons selection

Demonstrate/Introduce

Sniper Profiles
Communication
Aircraft Rigging
Attack profiles

Review

Actions on contact
Contingency planning
Power management planning
ROE
Contingencies in urban environment
GRG usage
Accountability procedures

Performance Standards

PUI shall conduct mission planning, sniper coordination and utility brief, to include aerial sniper briefing guide.
PUI shall conduct a minimum of three simulated attacks, each with a different profile.

Prerequisites. 2400, 2600, (NSQ-HLL~NS, NSQ-LLL~LLL)

Range Requirement. Live fire range, if required

External Syllabus Support. Sniper personnel with or without ordnance

Crew. WTO(NSI)/PUI/CC/AO

SCAT-4108 1.5 730 B,R,M (NS) S/A 2 UH-1Y

Goal. OS – Refine combat assault transport operations in an integrated, high threat environment.

Requirements

Discuss

Mission criteria (Go, No-Go, LZ Criteria)
Prohibitive interference
EMCON
Ingress/Egress profiles for high-threat
Weapons conditions
Deception/Feint Planning
Contingency planning
Sectors of fire, door gun integration
Air to air considerations
EW Aircraft and capabilities

Demonstrate/Introduce

Air assault in a high threat environment
Route planning in a high threat environment
EW Capabilities

Review

Primary/alternate LZ selection
Insertion/extraction methods
Power management, fuel planning, route selection
Line of deconfliction
Waveoff criteria
Terrain Clutter vs Terrain Masking

Performance Standards

PUI shall plan, brief and lead an combat assault transport flight in a high threat environment with emphasis on detailed route planning and objective area integration.
Integrate all available supporting assets. Develop and execute a fire support plan that supports the initial and follow on assault wave(s).
Correctly react to 1 or more simulated en route threats to the assault flight IAW ASTACSOP.
PUI will land within +/- 50m from landing point within +/- 30 seconds of L-hour.

Prerequisites. 6498

Ordnance. Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire range with at least one emitter

External Syllabus Support. 2 or more escort assets. EW aircraft (may be simulated)

Crew. WTI/PUI/CC/AO(AG)

2.13.3 Air Delivery (AD)

Purpose. To refine procedures and skills to tactically employ the UH-1Y while conducting aerial delivery.

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.

Initial logging of the SAD-4110 must be completed in the night environment. Subsequent logging of the code for currency may be completed day or night.

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

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

AD-4109 1.0 730 B,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. 2100

External Syllabus Support. Helicopter Support Team (HST) and cargo

Crew. BIP/PUI/CC/AO

SAD-4110 1.5 365 B,R,M (NS) S/A 2 UH-1Y

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. 6498

Ordnance (Optional). Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side]

Range Requirement. Optional. Live fire range.

External Syllabus Support. If flown in aircraft: HST

Crew. NSI/PUI/Co-pilot (NSI/PUI/CC/AO(AG)~AC)

Note: Initial logging of the SAD-4110 must be completed in the night environment. Subsequent logging of the code for currency may be completed day or night.

2.13.4 Airborne Command and Control (AC2)

Purpose. To develop the ability to perform Airborne Command and Control missions.

General. Upon the completion of the AC2 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.

AC2-4111 1.5 730 B,R,M (NS) A/S 1 UH-1Y

Goal. OS - Tactically employ the UH-1Y during an airborne 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. 2400, (NSQ~HLL, NSQ-LLL~LLL)

Crew. WTO(NSI)/PUI/CC/AO

2.13.5 Escort (ESC)

Purpose. To refine proficiency in escort missions.

General. At the completion of this stage, the PUI will have demonstrated the ability to plan brief and integrate multiple assets in the execution of ESC missions under varied environmental and higher threat conditions.

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.

ESC-4200 1.5 730 B,R,SC,M (NS) A/S 2 1 UH-1Y & 1 H-1

Goal. OS - Refine armed escort responsibilities during combat assault transport operations in a medium to high threat environment.

Requirements
Discuss
LZ clearance procedures and communication
Threat reaction and immediate action procedures
Capabilities/employment of HELLFIRE during escort
APKWS switchology and employment techniques
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 plan, brief and lead an armed escort flight in a medium to high threat environment.
PUI shall correctly react to one (1) or more simulated enroute threats to the assault flight IAW ASTACSOP.
PUI shall develop and execute a fire support plan during the initial assault wave.
PUI shall integrate fire support assets in objective area.
PUI shall use correct terminology and techniques for LZ clearance and coverage.

Prerequisites. 6498

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. LASER safe live fire range with thermally significant targets, if available

External Syllabus Support. 2 or more assault support aircraft

Crew. WTI/PUI/CC/AG

2.13.6 Close Air Support (CAS)

Purpose. To refine proficiency in Close Air Support missions.

General. At the completion of this Stage, the PUI will have demonstrated the ability to plan, brief and execute a CAS mission and deliver accurate and timely fires, under varied environmental and higher threat conditions.

Actual fixed wing aircraft, TACP, and indirect fire 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.

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.

CAS-4201 1.5 730 B,R,SC,M (NS) A/S 2 1 UH-1Y & 1 H-1

Goal. OS – Conduct CAS in a medium to high threat environment.

Requirements

Discuss

- Aircraft flight profiles
- Weapon selection
- MAGTF EW capabilities and limitations
- RADAR Terrain Mask Analysis
- Preemptive expendables use
- Assault support escort considerations
- SEAD/DEAD employment
- GCE SOM integration
- Fires Synchronization Meeting/Combined Arms Rehearsal
- FAC(A) gameplan in a high threat environment

Review

- J-LASER terminology
- IR pointer usage
- Friendly marking techniques/procedures
- Identification of friendly/enemy positions
- Objective area timing

Performance Standards

- PUI shall plan, brief and lead a CAS mission in a medium to high threat environment.
- PUI shall receive, coordinate and execute a minimum of four (4) CAS missions utilizing 5-line or 9-line attack briefs.
- PUI shall execute a detailed fire support plan with ground force maneuver.
- PUI shall conduct a minimum of two (2) non-permissive RW CAS missions utilizing CAS missions briefs.
- PUI shall conduct all missions utilizing CAS procedures and communication.
- 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.
- IP shall validate IDF accuracy and procedures using VTR.

Prerequisites. 6498

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

External Syllabus Support. JTAC with appropriate marking devices (if available), suitable urban environment or

MOUT facility

Crew. WTI/PUI/CC/AG (WTI/PUI~SIM)

2.13.7 Strike Coordination and Reconnaissance (SCAR)

Purpose. To refine proficiency conduct in Strike Coordination and Reconnaissance missions.

General. At the completion of this Stage, the PUI will have demonstrated the ability to plan, brief and integrate multiple assets and fires in the execution of AR missions under varied environmental and higher threat conditions.

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.

SSCAR-4202 1.5 730 B,R,SC,M (NS) S/A 2 1 UH-1Y & 1 H-1

Goal. OS - Conduct a Strike Coordination and Reconnaissance (SCAR) mission in a medium to high threat environment.

Requirements

Discuss

- Organic MAGTF EW capabilities and limitations
- Suppression of Enemy Air Defense (SEAD)
- Destruction of Enemy Air Defense (DEAD)
- Collateral Damage Estimation (CDE)
- Positive Identification (PID)
- Theater Air Control System (TACS)
- Target Location Error (TLE)
- Target list, High payoff Target Priority List

Review

- Targeting process
- Joint Surveillance and Target Attack RADAR System (JSTARS)
- ROE/PID considerations
- JMEMs/JWS
- Weapon to target match
- IFREP/MISREP procedures

Performance Standards

PUI shall plan, brief and lead a SCAR mission in a medium to high threat environment.
PUI shall properly employ all ASE IAW UH-1 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 weapons to target match.
IP shall validate, using the VTR, an effective engagement of a point target.
PUI shall consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. 6498

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range

External Syllabus Support. 2 OAS aircraft

Crew. WTI/PUI (WTI/PUI/CC/AG~AC)

2.13.8 Rotary Wing Defensive Air Combat Maneuvering (RWDACM)

Purpose. To demonstrate and introduce RWDACM and to qualify the PUI as RWDACM complete.

General. At the completion of this Stage, the pilot will be proficient in the conduct of the principles of RWDACM and have a thorough knowledge of weapons employment, aircraft control, and threat tactics of RW adversaries.

Aircraft should be configured with an operable NTIS, operable HMSD, VTR, APR-39, and ALE-47.

Crew Requirements. As listed at the end of each Event. All participants must be TERF qualified.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

DACM-4301 1.0 * B,SC D A 1 UH-1Y

Goal. OS - Introduce 1 v 1 RWDACM.

Requirements

Discuss

Energy maneuverability (EM)
Specific excess power (P_s)
EM & P_s tactical considerations
High and low yo-yo
Yo-yo counter tactics
Weapons employment rules of thumb
Range estimation techniques
Line number setups
DACM training rules
Control zone maneuvering
Crew coordination considerations
Aircraft control
DACM flight leadership

Introduce

Aircraft capabilities/limitations
Adversary aircraft capabilities/limitations
Weapons envelopes of adversary RW aircraft

Performance Standards

PUI shall conduct one complete line number sequence (from both friendly and adversary roles).
PUI shall maintain aircraft control within NATOPS limitations.
PUI shall execute proper reactions to RW threat attacks.

Prerequisites. 2101, 2201, 2300, 2600, 4030, 4031, 4032

Ordnance. (30) flares, TCTS pod (as required)

External Syllabus Support. One adversary helicopter and appropriate air-to-air training area.

Crew. RW DACMI/PUI/CC/AO

DACM-4302 1.0 485 B,R,M D A 2 1 UH-1Y & 1 H-1

Goal. OS - Introduce 2 v 1 helicopter DACM maneuvering.

Requirements

Discuss

Weapons employment rules of thumb
Range estimation techniques
Line number setups and communication
DACM training rules
Crew coordination considerations

Aircraft control characteristics
DACM Flight leadership considerations
Section tactics and gameplan
Roles and responsibilities of free and engaged aircraft
Control zone maneuvering and the weave

Review

Adversary aircraft capabilities/limitations
Weapons envelopes of adversary RW aircraft
Energy maneuverability (EM)
Specific excess power (P_s)
EM & P_s tactical considerations

Performance Standards

PUI shall conduct one (1) complete line number sequence (from both tactical lead and tactical wingman positions).
PUI shall maintain aircraft control within NATOPS limitations.
PUI shall execute proper reactions to RW threat attacks.

Prerequisite. 4301

Ordnance. (30) flares, TCTS pod (as required)

External Syllabus Support. Two adversary helicopter and appropriate air-to-air training area

Crew. RW DACMI/PUI/CC/AO

DACM-4303 2.0 * B D A 2 1 UH-1Y & 1 H-1

Goal. OS - Tactical RWDACM.

Requirements

Discuss

Crew coordination considerations
Aircraft control characteristics
DACM flight leadership considerations
Section tactics and gameplan
Roles and responsibilities of free and engaged aircraft
Control zone maneuvering and the weave

Review

Energy maneuverability (EM)
Specific excess power (P_s)
EM & P_s tactical considerations
High and low yo-yo
Yo-yo counter tactics
Weapons employment rules of thumb
Range estimation techniques
Line number setups
DACM training rules
Control zone maneuvering
Crew coordination considerations
Aircraft control
DACM flight leadership

Performance Standards

PUI shall maintain aircraft control within NATOPS limitations.
PUI shall execute proper reactions to RW threat attacks.

Prerequisite. 3013, 4030, 4031, 4032, 4033, 4034, 4302

Ordnance. (60) flares and TCTS pod (as required)

External Syllabus Support. Adversary helicopter(s) and appropriate air-to-air training area

Crew. RW DACMI/PUI/CC/AO

2.13.9 Fixed-Wing Defensive Air Combat Tactics (FWDACM)

Purpose. To demonstrate and introduce FWDACM and to qualify the PUI as FWDACM complete.

General. At the completion of this stage, the PUI will be proficient in the conduct of FWDACM and have a thorough knowledge of weapons employment, aircraft control and threat tactics of FW adversaries.

Aircraft should be configured with an operable NTIS, operable HMSD, VTR, APR-39, and ALE-47.

Crew Requirements. As listed at the end of each Event. All participants must be TERF qualified.

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

DACM-4304 1.0 * B,R,M D A 1 UH-1Y

Goal. OS - Perform 1 v 1 FWDACM maneuvering.

Requirements

Discuss

- FW capabilities/limitations
- Weapon envelopes and tactics of adversary FW aircraft
- Tactical advantages derived from P_s/EM charts
- FW threat counter-tactics
- FW air-to-air weapons considerations
- Range estimation
- Lead requirements
- RADAR/fire control capabilities
- Intercept terminology
- Visual Combat Air Patrol (VISCAP) considerations
- DACM training rules
- FW DACM line number set-up and execution

Introduce

- FW capabilities/limitations
- Weapons envelopes of adversary FW aircraft
- 1 v 1 maneuvers against a FW aircraft

Performance Standards

PUI shall conduct a minimum of one (1) line number sequence.
PUI shall execute proper reactions to FW threat attacks.

Prerequisites. 2101, 2201, 2300, 2600, 4030, 4031, 4332

Ordnance. (30) flares, TCTS pod (as required)

External Syllabus Support. One FW adversary and appropriate air-to-air training area

Crew. FW DACMI/PUI/CC/AO

DACM-4305 1.0 485 B,R,M D A 2 1 UH-1Y & 1 H-1

Goal. OS - Perform 2 v 2 DACM against FW adversaries.

Requirements

Discuss

- FW capabilities/limitations
- FW threat counter-tactics
- P_s/EM of threat/friendly aircraft
- FW DACM training rules
- 2 v 2 FW DACM line number set-up

Demonstrate/Introduce

- RW section gameplan

RW v FW weapons employment
Aircraft/section control
Section awareness and communication
DACM flight leadership

Performance Standards
PUI shall conduct a minimum of one (1) line number sequence as lead and wingman.
PUI shall execute proper reactions to FW threat attacks.

Prerequisite. 4030 through 4032, 4035, 4036, 4304

Ordnance. (30) flares, TCTS pod (as required)

External Syllabus Support. Two FW adversary and appropriate air-to-air training area

Crew. FW DACMI/PUI/CC/AO

2.13.10 Chemical, Biological, Radiological and Nuclear Warfare (CBRN)

Purpose. To introduce the pilot to operations while wearing the aviator's CBR protective mask.

General. This Event is designed to expand the capabilities of the aircrew in CBR operations.

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

Ground/Academic Training. Review appropriate section of UH-1Y NTRP for information on the aviator's CBR protective mask prior to flight. The pilot will complete protective mask familiarization lecture and aircraft egress with mask.

SCRBN-4400 1.0 1095 B,R,M D/NS S/A 1 UH-1Y

Goal. OS – CBR protective mask introduction.

Requirements
Discuss
Advantages & disadvantages of CBR protective mask
CBR Protective Mask components and operation
Psychological effects
Operating in a CBRN environment
Emergency procedures while using the CBR
Emergency egress
MOPP conditions
NVD considerations
Battery failure
Demonstrate/Introduce
Wear of the CBR protective mask while conducting FAM maneuvers

Performance Standards
PUI shall perform all maneuvers IAW UH-1Y MDG and NATOPS.
PUI shall complete 5 auto-rotations IAW the UH-1Y MDG and NATOPS.

Prerequisites. 2800 (2100~AC 2101~NS AC, 2404~LLL AC)

Crew. NSI/PUI (NSI/PUI/CC/AO~AC)

2.13.11 Tactical Air Coordinator Airborne Operations [TAC(A)]

Purpose. To introduce and refine TAC(A) procedures.

General. At the completion of this Stage, the PUI will demonstrate proficiency in the coordination of attack aircraft and multiple terminal controllers. At the completion of this stage, the PUI may be TAC(A) qualified, in writing, by the commanding officer.

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. Per the MAWTS-1 Course Catalog.

TACA-4500 2.0 730 B,R,M (NS) A 1 UH-1Y

Goal. OS - Conduct TAC(A) procedures with multiple terminal controllers.

Requirements

Discuss

TAC(A) procedures
Delegated Authority from Mission Commander (MC)
Asset/Weapon-to-target match
EEI, PIR, CCIR, FFIR
Airspace management
MCA vs TAC(A) airspace
SPEED (Systems Planning Engineering Evaluation Device)analysis
CRM

Demonstrate/Introduce

TAC(A) procedures
TACP/CAS asset coordination
DASC/MACCS coordination

Performance Standards

Perform coordination of attack aircraft and multiple terminal controllers.
Receive attack briefings from the FAC/FAC(A) and assign appropriate CAS aircraft.
Be able to accurately copy immediate JTAR, coordinate timely CAS in response to immediate request, and to pass CAS aircraft BDA via the C^3 system.
Coordinate target mark and control with the FAC/FAC(A).
Manage assigned airspace and provide command and control system with essential elements of information (EEIs).
IAW UH-1 NTTP.

Prerequisite. 4050, 4051, 6498, FAC(A) qualified

Range Requirement. Range with tactical targets.

External Syllabus Support. MACCS (may be simulated), at least two CAS elements and 2 terminal controllers.

Crew. TAC(A)I(NSI)/PUI/CC(AO)

2.13.12 Sea-Based Expeditionary Operations (SEA)

Purpose. To introduce day and night flight operations from a carrier deck or air capable ship.

General. IAW applicable directives, PUI will emphasize proper communication procedures, patterns, and aviation operations in the shipboard environment. Refer to appropriate NATOPS and appropriate shipboard NATOPS Manuals for carrier operations. PUI shall complete the FCLP stage prior to commencing this stage.

Initial Night Systems Carrier Qualification training shall be accomplished under High Light Level conditions. Requalification and proficiency training may be accomplished under any light level condition. PUI shall conduct at least one (1) precision and one (1) non-precision approach to an air capable ship before stage completion.

Once complete in each stage the pilot may be Day CQ, or Night CQ or NVD CQ (as appropriate) in writing 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.

SSEA-4600 1.5 * B D/NS/N* S/A 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.

Prerequisites. 2800, 4060, 4061

Crew. NSI/PUI

SEA-4601 1.0 365 B,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. 4600

External Syllabus Support. FCLP pad

Crew. BIP/PUI/CC

SEA-4602 1.0 365 B,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. 4601

External Syllabus Support. FCLP pad with overt and NVD deck lighting

Crew. NSI/PUI/CC/AO

SEA-4603 1.0 365 B,R,SC D A 1 UH-1Y

Goal. OS - Conduct day shipboard landing qualification.

Requirements
Discuss
Day shipboard patterns
Sight picture and landings to a ship’s deck

Demonstrate/Introduce
Day shipboard operations
Lost communication procedure in a shipboard environment
Review
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
Rotor brake start procedures
HERO conditions and ordnance operations
Shipboard airspace

Performance Standards
PUI should execute a rotor brake start, if able.
PUI shall conduct a minimum of five (5) day shipboard landings per the UH-1Y NATOPS and shipboard NATOPS manuals.
PUI should conduct one (1) precision and one (1) non-precision approach, if available.
PUI should conduct shipboard refueling, if available.

Prerequisites. 4601

External Syllabus Support. Landing platform afloat

Crew. BIP/PUI/CC

SEA-4604 1.0 365 B,R,SC,M NS A 1 UH-1Y

Goal. OS – Conduct NVD shipboard landing qualification.

Requirements
Discuss
Night NVD pattern
Sight picture and night landings to a ship's deck

Demonstrate/Introduce
NVD shipboard operations
Review
Instrument scan considerations
Night shipboard specific crew coordination
Shipboard lighting considerations
NVD failures and emergency procedures
Spatial disorientation and vertigo
Shipboard instrument procedures
Shipboard communication procedures
Shipboard helicopter director visual signals

Performance Standards
PUI shall conduct a minimum of five (5) NVD shipboard landings per the UH-1Y NATOPS and shipboard NATOPS manuals.
PUI should conduct one lost comm. marshalling procedure, if available
PUI should conduct one (1) precision and one (1) non-precision approach, if available.
PUI should conduct shipboard refueling, if available.

Prerequisites. 4602,2403,4603

External Syllabus Support. Landing platform afloat

Crew. NSI/PUI/CC/AO

SEA-4605 1.0 365 B,R,SC N* A 1 UH-1Y

Goal. OS – Conduct night unaided shipboard landing qualification.

Requirements
Discuss
Shipboard lighting
Wind limitations
Demonstrate/Introduce
Night unaided shipboard operations
Review
Shipboard lighting considerations
Shipboard instrument procedures
Delta, Alpha, and Charlie patterns

Shipboard helicopter director visual signals

Performance Standards
PUI shall conduct a minimum of five (5) unaided shipboard landings per the UH-1Y NATOPS and shipboard NATOPS manuals.
PUI should conduct one (1) precision and one (1) non-precision approach, if available.

Prerequisites. 4602, 4603

External Syllabus Support. Landing platform afloat.

Crew. NSI/PUI/CC/AO

2.13.13 Electronic Warfare (EW)

Purpose. To introduce electronic warfare operations with emphasis on utilization of the Intrepid Tiger 2 (IT2) pod.

General. IAW applicable directives, PUI will demonstrate familiarity with pilot responsibilities and actions during the conduct of EW missions.

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

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

EW-4700 0.0 730 B,R,M (NS) GE 1 UH-1Y

Goal. OS – Introduce planning and execution of electronic warfare with the Intrepid Tiger pod.

Requirements
Discuss
Security classification of system components
Mission planning procedures
Radio Batallion coordination
Preflight procedures
System operation
Safety considerations
Safety interlocks
CRM
Modes and mission types
Flight profiles
Zeroize procedures

Performance Standards
Demonstrate proper planning of EW missions
Demonstrate how to execute EW missions

Prerequisites. 6398

External Syllabus Support. Intrepid Tiger pod, ground stations, and RadBn support personnel

Crew. WTO/PUI

2.14 INSTRUCTOR UNDER TRAINING ACADEMIC PHASE (5000)

Purpose. To develop standardized Instructor Pilots (IPs). These academics review and emphasize procedural-based knowledge, standardized instruction, systems knowledge/nomenclature, and training management to ensure individuals possess the requisite knowledge and ability to teach flight skills.

General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each stage of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 UH-1 Course Catalog. The academic courseware is a requirement. 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

Instructor Under Training academic events are listed below.

INSTRUCTOR UNDER TRAINING ACADEMIC PHASE	
TRAINING CODES	**COURSEWARE**
GENERAL REQUIREMENTS	
No Lectures	
BIP	
ACAD-5001	Training Management
ACAD-5002	Coach or Umpire
ACAD-5003	Student Trends
ACAD-5004	Briefing/Debriefing
ACAD-5005	How to Wrtite an ATF
ACAD-5006	Instructional STAN
ACAD-5007	How to Give a Quality X
ACAD-5008	How to Build a Scenario
FAC(A)I	
ACAD-5040	FAC(A)I Presentation
ACAD-5041	FAC(A)I Chalk Talk
FRSI	
ACAD-5060	Fleet Replacement Squadron Instructor Course (FRSIC)
ACAD-5061	Familiarization Stage Standardization Lecture
ACAD-5062	Instrument Stage Standardization Lecture
ACAD-5063	Formation Flight Stage Standardization Lecture
ACAD-5064	TERF Stage Standardization Lecture
ACAD-5065	Navigation Stage Standardization Lecture
ACAD-5066	Specific Weapons Delivery Stage Standardization Lecture
DACM-I	
ACAD-5080	DACM RW Presentation
ACAD-5081	DACM FW Presentation
NSI	
ACAD-5090	NSI Presentation
* Indicates classes that should be presented to all pilots annually.	

2.15 INSTRUCTOR TRAINING PHASE (5000)

Purpose. To develop standardized Instructor Pilots (IPs) with the ability to teach flight skills requisite to qualification as a Core Plus/Mission Skills qualified pilot.

General. Upon completion of this phase of training the IUT may be designated a BIP, TERFI, WTO, CSI, FRSI, FAC(A)I, TAC(A)I, DACM(I), NSFI, NSI and FLSE.

Completion of the BIP Stage and DESG-6498 meets the requirements for the PUI to be designated a BIP. At the discretion of the squadron commanding officer a letter designating the IUT as a BIP shall be placed in the NATOPS jacket and APR. Section leader designation is required prior to BIP designation.

Completion of the TERFI Stage meets the requirements for the PUI to be designated a TERFI. At the discretion of the squadron commanding officer a letter designating the IUT as a TERFI shall be placed in the NATOPS jacket and APR.

Completion of the WTO Stage and refly of the SWD-2605, meeting instructor under training accuracy metric, completes the requirements for the IUT to be designated a WTO. At the discretion of the squadron commanding officer a letter designating the IUT as a WTO shall be placed in the NATOPS jacket and APR.

Completion of the CSI stage meets the requirements for the IUT to be designated a CSI. At the discretion of the group commanding officer, a letter designating the IUT as a CSI shall be distributed to squadrons DoSS and operations departments. A copy shall be maintained by the MATSS representative to track CSI currency and refly requirements.

Completion of the FRSI stage meets the requirements for the IUT to be designated a FRSI. At the discretion of the FRS commanding officer a letter designating the IUT as a FRSI shall be placed in the NATOPS jacket and APR.

Refer to the MAWTS-1 UH-1 Course Catalog for FAC(A)I, TAC(A)I, DACMI, NSFI, NSI and FLSE requirements.

Prior to the completion of each Stage of training, the IUT will be required to present a class from an applicable MAWTS-1 ASP lecture or HMLAT-303 courseware. Emphasis will be placed on error analysis, error correction, instructional techniques, and briefing and debriefing procedures.

Stages. The following Stages are included in the Instructor Phase of training.

INSTRUCTOR PHASE	
PAR NO.	**STAGE NAME**
2.15.1	Basic Instructor Pilot (BIP)
2.15.2	Terrain Flight Instructor (TERFI)
2.15.3	Weapons Training Officer (WTO)
2.15.4	Contract Simulator Instructor (CSI)
2.15.5	Fleet Replacement Squadron Instructor (FRSI)
2.15.6	Forward Air Controller Airborne Instructor [FAC(A)I]
2.15.7	Night Systems Familiarization Instructor (NSFI)
2.15.8	Tactical Air Coordinator (Airborne) [TAC(A)I]
2.15.9	Defensive Air Combat Maneuvering Instructor (DACMI)
2.15.10	Night Systems Instructor (NSI)
2.15.11	Flight Lead Standardization Evaluator (FLSE)

Ordnance Delivery. For ordnance accuracy metrics, refer to paragraph 2.16.

Navigational Accuracy. At the completion of this phase, the PUI will have demonstrated increased navigational accuracy and timeliness during combat assault transport operations, under all threat conditions. For the Instructor Training Phase, the PUI shall meet the ordnance metrics outlined for the Mission Phase. See Paragraph 2.16. IP shall use MPS or aircraft systems to asses landing point accuracy.

2.15.1 Basic Instructor Pilot (BIP)

Purpose. To qualify the IUT to instruct basic FAM, INST, FORM, CAT, FCLP, and CQ.

General. To instruct CQ, IUT must meet currency requirements outlined in CNAF M-3710.7.

Aircraft should be equipped with an operable HMSD.

Crew Requirements. As listed at the end of each Event. With an appropriately qualified crew and at the discretion of the squadron commanding officer, the Instructor Pilot may evaluate the Instructor Under Training from the jump-seat, during BIP events. Co-pilots are required for all simulator events.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

SBIP-5100 1.5 * B,R,SC D S 1 UH-1Y

Goal. OS - Simulator control – Introduce simulator iOS control functions and capabilities and instruct FAM/EPs.

Requirements

Discuss

Learning objectives
Performance standards
M-SHARP simulator logging
Basic simulator functions (motion, communication, etc.)
HMSD integration & boresighting procedures
Simulator MAF submission
Instructor Techniques
Common PUI mistakes
FAM Stage maneuvers IAW UH-1Y MDG and NATOPS
Cockpit indications of all emergencies

Demonstrate/Introduce

Environment/weather conditions
Weapons/ASE configuration
Systems/Weapons malfunctions
Threat indication incorporation and capabilities
Friendly system incorporation and capabilities
Instrument/approach functions
Shipboard configuration and functions

Performance Standards

IUT shall demonstrate the ability to operate the simulator iOS.
IUT shall demonstrate the ability to manipulate environmental conditions.
IUT shall demonstrate the ability to manipulate and operate simulator weapons and ASE.
IUT shall demonstrate the ability to manipulate and operate simulator emergencies and malfunctions.
IUT shall demonstrate the ability to manipulate and operate simulator ship moving models.
IUT shall demonstrate the ability to manipulate and operate external load moving models.
IUT shall demonstrate the abilily to instruct FAM maneuvers.
IUT shall demonstrate the ability to instruct EPs.
Utilizing a co-pilot, IUT shall demonstrate the ability to analyze and instruct proper responses & CRM during aircraft emergency procedures.
IUT shall complete three (3) autorotations IAW the UH-1Y NATOPS and MDG.

Prerequisites. 6398,5001,5002,5003,5004,5005,5006,5007,5008

External Syllabus Support. Device operator

Crew. WTO/IUT

SBIP-5101 1.5 * B D S 1 UH-1Y

Goal. OS - Instruct all instrutment maneuvers and CQ procedures with emphasis on standardization IAW the UH-1Y NATOPS, MDG and LHA/LHD NATOPS.

Requirements

Discuss

Instructor techniques
CRM skills and behaviors
ORM management as an instructor
Human factor errors
Instructional techniques
Common PUI mistakes
FCLP and CQ procedures
Applicable instrument publications
Instrument flight checklist
Instrument flight procedures
Instructional techniques
Common PUI mistakes and CRM during instrument flight
Vertigo

Review
IFR flight planning and enroute procedures
Shipboard operations

Performance Standards
IUT shall conduct a minimum of two (2) day CQ landings per the UH-1Y NATOPS and shipboard NATOPS manuals.
Utilizing a co-pilot, IUT shall demonstrate the ability to analyze and instruct proper CRM and instrument and CQ maneuvers emphasizing error analysis.
IP will act as PUI. IP will provide the IUT with an actual or notional instrument flight plan developed with intentional errors. IUT will correctly identify all errors in a flight plan provided by the IP.
IUT will satisfactorily demonstrate the ability to execute, analyze and correct all standard instrument maneuvers under actual or simulated IFR conditions.
IUT shall ensure that the PUI maintains established BAW parameters.
IUT shall conduct a minimum of three (3) instrument approaches (1 precision, 2 non-precision).

Prerequisites. 5100

External Syllabus Support. Device operator

Crew. WTO+IFBM/IUT (WTO+IFBM/IUT(CC/AO))

SBIP-5102 1.5 * B D S/A 1 UH-1Y

Goal. OS - IUT will demonstrate the ability to instruct confined area landings, reduced visibility landings, and RIE profiles.

Requirements
Discuss
Instructor briefing and debriefing techniques
Error detection and correction techniques
Aviation Training Jacket (ATJ) requirements and organization
NATOPS Jacket requirements and organization
Tactical Landing procedures
RVL profiles
Common profile errors
Fastrope
Rappelling
Hoist operations
Review
Straight-in profile
RVL profile
Time and distance landing standards
IP-to-LZ considerations

Performance Standards
The IP shall act as the PUI.
IUT shall be able to identify and correct abnormal parameters performed by the IP/PUI.
IUT shall demonstrate loss of visual contact and the subsequent rendezvous and join-up
IUT shall satisfactorily demonstrate the ability to recognize, analyze and correct all errors through demonstration or verbal commands.
IUT 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. IUT shall land within +/- 30 seconds of L-HR and +/- 50 meters from the zone.
IUT shall conduct a minimum of two (2) Reduced Visibility Landings.
IUT shall demonstrate a fastrope or rappel profile.

Prerequisite. 5101

External Syllabus Support. Device operator

Crew. WTO/IUT/Co-pilot

BIP-5103 2.0 * B,R,SC D A 2 1 UH-1Y & 1 H-1

Goal. OS - IUT will demonstrate the ability to instruct formation flight during enroute portions of flight. IUT will demonstrate the ability to instruct section tactical landings/CAT and accurately identify and correct PUI BAW errors, tendencies and procedural errors during FAM maneuvers.

Requirements

Discuss
- Instructor briefing and debriefing techniques
- Parade and tactical formations
- Formation take-off and landings
- TacForm maneuvers
- Error detection and correction techniques
- Fastrope
- Rappelling

Review
- Visual signals
- Lead change
- Inadvertent IMC
- Loss of visual contact
- Section takeoff
- Straight-in profiles
- RVL profile
- Time and distance landing standards
- IP-to-LZ considerations
- Waveoffs

Performance Standards

The IUT shall brief and lead the flight.
The IP shall act as the PUI.
The IUT shall demonstrate formation stage maneuvers with emphasis on instructional technique, accurate maneuver description, formation signals and parade/tactical formation maneuvering.
IUT shall be able to identify and correct abnormal parameters performed by the IP/PUI.
IUT shall demonstrate loss of visual contact and the subsequent rendezvous and join-up
IUT shall satisfactorily demonstrate the ability to recognize, analyze and correct all errors through demonstration or verbal commands.
IUT 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. IUT shall land within +/- 30 seconds of L-HR and +/- 50 meters from the zone.
IUT shall conduct a minimum of two (2) Reduced Visibility Landings.
IUT shall demonstrate a fastrope or rappel profile.

Prerequisite. 5102

Crew. WTO/IUT/CC/AO

2.15.2 Terrain Flight Instructor (TERFI)

Purpose. To qualify the IUT as a TERF instructor.

General. IUT shall be BIP Stage complete prior to beginning TERFI training. IUT will demonstrate the ability to utilize mission planning software and appropriate Tactical navigation systems.

Aircraft should be equipped with an operable NTIS and operable HMSD.

Crew Requirements. As listed at the end of each Event. With an appropriately qualified crew and at the discretion of the squadron commanding officer, the Instructor Pilot may evaluate the Instructor Under Training from the jump-seat, during TERFI events. A Co-pilot is required for the simulator event.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

TERFI-5110 2.0 * B,R,SC D A 1 UH-1Y

Goal. OS - Instruct TERF navigation, maneuvers, profiles and procedures.

Requirements

Discuss

Crew coordination
Comfort level
Common PUI mistakes
Map preparation
Low altitude emergencies
Single engine operation
TERF navigation techniques and procedures
CRM in TERF environment
Comfort level
Terrain flight illusions and hazards

Review

All TERF maneuvers
Tactical decisions to fly TERF
Threat considerations that influence TERF profiles
Boundary features including lateral limits and intermediate checkpoints
EGI navigation functions

Performance Standards

IUT shall plan, brief and lead the flight.
IUT shall navigate in low level, contour and NOE profiles, a route consisting of five (5) checkpoints, utilizing a 1:50,000 scale map remaining oriented within 200 meters, 15 degrees of heading, and arriving at the final checkpoint within +/- 30 seconds of the planned time.
IUT shall not use the GPS, moving map or overlays for a minimum of 2 legs of the route.
IUT shall fly from the seat opposite of that flown during STERF-5110.
Emphasis will be on tactical use of terrain to navigate to a specific objective area, masking and unmasking profiles.
IUT shall conduct all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTTP.

Prerequisites. 5103

External Syllabus support. Authorized TERF area

Crew. WTO/IUT/Co-pilot (WTO/IUT/CC/AO)

2.15.3 Weapons Training Officer (WTO)

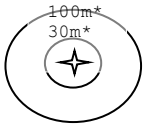
Purpose. To qualify the IUT as a WTO.

General. IUT shall be TERFI stage complete prior to beginning WTO training. The WTO is qualified to instruct all phases of flight except those requiring FAC(A)I, TAC(A)I, NSFI, NSI, DACMI, or WTI qualifications. As such, the WTO shall demonstrate a sound knowledge of all aircraft weapons systems, threat systems and current tactics, techniques and procedures.

At the completion of this stage, the PUI will have demonstrated increased accuracy and the ability to instruct during ordnance delivery and proper use of the NTIS under all threat conditions with mixed ordnance loads. SWD should be conducted on raked/scored ranges whenever possible. VTR debrief should be used to the maximum extent possible. Emphasize CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

IPs shall evaluate ordnance effectiveness based on the following accuracy metrics. Initial ordnance shall be delivered within +/- 30 seconds of established TOT.

INSTRUCTOR UNDER TRAINING	UNGUIDED ROCKET STANDARD	GUN STANDARD	PURPOSE

 *Radius	-In correct profile per NTTP -No miss greater than 100 meters -CE90≤30 meters** -(1) rocket per pass 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 capacity to instruct Specific Weapons Delivery

** CE90 example: SWD-2603 requires (7) 2.75" rockets. CE90≤30 meters requires that 90% of the delivered rockets impact within 30 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.

APKWS- Correct switchology, proper LASER placement, profile IAW UH-1 NTTP direct hit.

TOTs - Initial ordnance shall be delivered within +/- 30 seconds of established TOT.

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).

During this stage, the intent is for the IUT to act as the IP. The IUT is expected to coordinate the event with operations, develop a tactical scenario where appropriate, and act as the instructor. The IP (or designated co-pilot) shall plan, brief and execute the event with the exception of the SWTO-5200.

The S-TEN scenario and models for the SWTO-5200 event should leverage a locally-developed (squadron or MATSS to the maximum extent practical) and maintained common simulator file that provides the necessary framework for meeting event learning objectives. The focus of the 1.5 hour simulator sortie should be on instructing the prescribed mission profiles, not on the building of event framework in the simulator.

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

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

SWTO-5200 1.5 * B,R,SC D S 1 UH-1Y

Goal. OS - Tactical simulator control – Review iOS control functions and capabilities. Introduce scenario development linked evolution operations, and TEn/CPOS/NECC functions.

Requirements

Discuss

Advanced simulation scenario development (METT-TSL)
Simulator set-up and linked evolution operations
Linked simulator operations and troubleshooting
Instructor briefing and debriefing techniques

Demonstrate/Introduce.

TEn+ employment (CPOS/NECC employment if facilities available)

Review

Environment/weather conditions
Weapons/ASE configuration
Systems/Weapons malfunctions
Threat systems incorporation and capabilities

Friendly system incorporation and capabilities
Instrument/approach functions
Shipboard configuration and functions

Performance Standards

IUT shall build, save, load, and execute a low to medium threat tactical scenario from the control position.
IUT shall manipulate TEn map view and De-Clutter options.
IUT shall manipulate and operate ground fixed, ground mover, airborne players, and IADS.
IUT shall manipulate and operate aerial and convoy formations.
IUT shall build, save, load, and employ a Pre-Planned Flight (PPF) for ground and air players.
IUT shall manipulate and operate off-board laser designators.
IUT shall manipulate and operate battlefield effects, including smoke, ordnance impacts, and player damage.
IUT shall manipulate and operate the Group tool for constructive players.
IUT shall manipulate and operate the Air-to-Ground scoring tool.

Prerequisites. 5100, 5110

External Syllabus Support. Device operator

Crew. NSI/IUT

SWTO-5201 1.5 * B,R,SC D S 1 UH-1Y

Goal. OS - Demonstrate/Introduce the ability to instruct UH-1Y daytime mission profiles and review all UH-1Y systems (weapons, ASE, navigation, sensors).

Requirements

Discuss

UH-1Y Sensor components, operation, and malfunctions with emphasis on the setup, optimization and employment of the sensor system in all acquisition modes
UH-1Y navigation system, with emphasis placed on setup and operation for target engagement
TRM/CRM and instructor techniques
Weapons systems malfunctions and switchology errors
Common PUI delivery errors and error analysis
Weapons delivery and error analysis
Knowledge and instructional techniques in all weapons training areas
Crew coordination and comfort level

Review

All weapons systems components, operation and employment (e.g. APKWS, flechette, crew-served) weapons systems components, operation and employment
Ordnance delivery from low and medium altitude
Combat Assault Transport planning and cockpit management
Buddy lase procedures
FARP Procedures
Rendezvous and join up
Instructional Techniques

Performance Standards

The IUT shall plan a training evolution that is designed to be conducted in stations. At a minimum, the stations shall include instruction in the following regimes: FCLPs, reduced visibility landings, landing to a point utilizing a pre-planned IP, FARP procedures, rendezvous and joinup procedures, SWD profiles for guided and unguided ordnance, threat reaction and ASE recognition, and autorotations.
The IUT shall plan and brief the evolution by stage with the IP acting as a student in both planning and execution. Emphasis should be placed on instructing the prescribed regimes for a new pilot for each stage of the scenario and the ability to recongnize and correct errors.
IUT shall identify and correct ordnance systems malfunctions and switchology problems.
IUT shall emphasize CRM during weapons delivery and weapons troubleshooting.
IUT shall demonstrate the ability to instruct landings in a RVL profile/environment.
IUT shall manage training priorities and time allotted for each station during execution and demonstrate the ability to maximize training utilizing available features of the simulator.

Prerequisites. 5200, 5110

External Syllabus Support. Device operator

Crew. NSI/IUT

SWTO-5202 1.5 * B,R,SC D S/A 1 UH-1Y

Goal. OS - Introduce instruction and scenario development of an OAS mission.

Requirements

Discuss

Advanced simulation scenario development(METT-TSL)
Instructor techniques
OAS/Weapons delivery profile instruction
Instructor briefing and debriefing techniques

Review

TEN+ Employment
Environment/weather conditions
Weapons/ASE configuration
Systems/weapons malfunctions
Threat systems incorporation and capabilities
Friendly system incorporation and capabilities

Performance Standards

IUT shall develop a low to medium threat tactical OAS scenario including a MSEL sheet and instruct the conduct of the OAS mission, to include weapons delivery profiles, from either seat. The IUT will plan to execute a minimum of three (3) 9-line attack briefs, and a minimum of one (1) 5-line attack brief.
The IP or an additional copilot will act as the PUI, at the discretion of the IP. Either the IP or the additional copilot will be responsible for briefing the flight, with the IUT providing debrief.
IUT shall utilize simulator functions to maximize instruction and emphasize learning points in the time allotted.

Prerequisites. 5201

Ordnance**.** (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available

Crew. NSI/IUT/Co-pilot

WTO-5203 1.5 * B D A 2 1 UH-1Y & 1 H-1

Goal. OS - Demonstrate the ability to instruct a tactical event with emphasis on Combat Assault Transport (CAT).

Requirements

Demonstrate

Standardized CAT planning and briefing
CRM and instructor techniques during CAT missions
Range procedures for local ranges

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

Knowledge and instructional techniques in all CAT training areas including the following:
How to build a scenario
How to give a quality X
Briefing and debriefing procedures
Instructing vs evaluating
Crew coordination and comfort level

Performance Standards

The IUT will develop a tactical scenario. The IP shall conduct the planning and briefing of the tactical scenario. The IUT shall act as the instructor throughout the planning, briefing and execution of the tactical scenario.
The IUT shall ensure that all ordnance is delivered IAW published range regulations and squadron SOPs.
The IUT shall aid and instruct the IP or copilot during mission planning.
The IUT shall properly identify and correct navigation and timing errors initiated by the IP working towards instructor under training accuracy metric.

Prerequisites. 5202

Ordnance (Optional). Two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. LASER safe live fire range with thermally significant targets, if available

Crew. NSI/IUT/CC/AG

WTO-5204 1.5 * B,R,SC D A 2 1 UH-1Y & 1 H-1

Goal. OS - Demonstrate the ability to instruct a tactical event in the aircraft with emphasis on OAS, weapons delivery techniques and tactics standardization.

Requirements

Demonstrate

Standardized attack terminology and communication
CRM and instructor techniques during tactical missions and ordnance delivery
Range procedures for local ranges

Review

All weapons systems components, operation, and employment
Common attack pattern erros and misconceptions
Terrain flight ordnance delivery techniques
Instructional techniques with emphasis on systems malfunctions/failures and ordnance delivery corrections
Knowledge and instructional techniques in all weapons training areas including the following:
How to build a scenario
How to give a quality X
Briefing and debriefing procedures
Instructing vs evaluating
Crew coordination and comfort level

Performance Standards

The IUT will develop a tactical scenario. The IP shall conduct the planning and briefing of the tactical scenario. The IUT shall act as the instructor throughout the planning, briefing and execution of the tactical scenario.
The IUT shall ensure that all ordnance is delivered IAW published range regulations and squadron SOPs.
The IUT shall properly identify and correct weapons switchology/delivery errors initiated by the IP working towards instructor under training accuracy metric.
For Series Conversion, this will be the last T&R Event flown when converting a WTO or NSI. This event will be flown at night under the evaluation of a current NSI when being used to regain NSI certification from an SC syllabus. At the completion of the SC syllabus culminating with this event under all the performance standards listed above, the converting pilot can regain NSI and TAC(A)I provided they meet the currency and prerequisites established in the MAWTS-1 UH-1 Course Catalog.

Prerequisites. 5202

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. LASER safe live fire range with thermally significant targets, if available

Crew. NSI/IUT/CC/AG

2.15.4 Contract Simulator Instructor (CSI)

Purpose. To develop qualified Contract Simulator Instructors (CSIs) using a standardized instructor program. This syllabus is designed to prepare CSIs to instruct Core Introduction Phase events in the simulator.

General. CSIs will complete all events in the simulator. Events may be conducted from the simulator command position (CP) or the designated UH-1Y crew position at the discretion of the IP.

In order to receive initial designation, CSIs shall complete requirements of applicable civilian contracts and a syllabus agreed upon by the Model Manager and Site Manager. The syllabus should be commensurate with experience in model, previous designations and currency of the proposed CSI and should include a comprehensive review of the Core Introduction Phase simulator events that will be instructed. In accordance with applicable contracts and CNAF M-3710.7, CSIs shall complete an annual standardization certification with the T/M/S NATOPS Evaluator to ensure compliance and adequate standardization.

Crew Requirements. As listed at the end of each event and IAW assigned syllabus.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog and assigned syllabus. .

Contract Simulator Instructor (CSI) Overview

SCSI-5300	**1.5**	**365**	**B,M**	**D**	**S**	**1**	**UH-1Y**

Goal. OS – Core Introduction Phase standardization.

Requirements

Discuss

RAC trends and syllabus standardization

Review

Any Core Introduction Phase item

Performance Standards

IUT shall demonstrate the ability to instruct Core Introduction Phase events IAW applicable contracts and publications.

Prerequisite. Candidate CSI

Crew. NE/IUT

2.15.5 Fleet Replacement Squadron Instructor (FRSI)

Purpose. To certify the IUT as a Fleet Replacement Squadron Instructor capable of instructing Core Introduction Phase events. To familiarize IUT with local area operations, techniques and procedures. Emphasis will be placed on instructor proficiency, training standardization, and aircraft recovery from various regimes.

General. IUT must have been designated WTO prior to beginning FRSI training. In the event of an IUT in need of a refresher syllabus, IUT must be designated PQM prior to beginning FRSI training. Refresher IUT must be designated WTO prior to FRSI designation.

A 2801 tracking code shall be logged at the completion of the SFRSI-5310.

FRSI-5316 is an event for ANI standardization and is not required to be designated an FRSI. A 6101 tracking code shall be logged at the completion of the event if conditions are met for annual NATOPS check.

FRSI-5317 is the only event required for NSFI designation if IUT is a designated and current NSI. Designation as NSFI after the completion of FRSI-5316 is IAW the MAWTS-1 Course Catalog and is at the discretion of the Commanding Officer. NSFI designation for any other IUT requires completion of the 5600 stage events IAW the MAWTS-1 Course Catalog.

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

Ground/Academic Training. IAW HMLAT-303 FRS Course Catalog.

Fleet Replacement Squadron Instructor (FRSI)

SFRSI-5310 1.5 * B D S 1 UH-1Y

Goal. LS – Emergency procedures review.

Requirements

Discuss

RAC tendencies on CRM/ET sims
Any NATOPS EP, system, limit or MDG procedure

Review

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

Performance Standards

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

Prerequisites. 5202

Crew. CSI or ANI/IUT

FRSI-5311 2.0 * B D A 1 UH-1Y

Goal. LS – Review familiarization maneuvers and instrument procedures.

Requirements

Discuss

Mission brief
FAM/INST event techniques, standardization and operating areas
FAM/INST stage RAC tendencies and risk mitigation
Any FAM/INST discussion item, maneuver or procedure
Local course rules and GCA procedures

Review
Course rules/area fam
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies
Local GCA procedures

Performance Standards
IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.
IUT shall gain proficiency and knowledge of local area operations and procedures.

Prerequisites. 5310

Crew. ANI/IUT/CC

FRSI-5312 2.0 * B D A 1 UH-1Y

Goal. LS – Review familiarization maneuvers and navigation procedures.

Requirements
Discuss
Mission brief
FAM/NAV event techniques, standardization and operating areas
FAM/NAV stage RAC tendencies and risk mitigation
Any FAM/NAV discussion item, maneuver or procedure
Review
Course rules/area fam
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies
Local area operations, techniques and procedures

Performance Standards
IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.
IUT shall gain proficiency and knowledge of local area operations and procedures.

Prerequisites. 5310

Crew. ANI/IUT/CC

FRSI-5313 2.0 * B D A 1 UH-1Y

Goal. LS – Review familiarization maneuvers, TERF and CAT.

Requirements

Discuss

Mission brief
FAM/TERF/CAT event techniques, standardization and operating areas
FAM/TERF/CAT stage RAC tendencies and risk mitigation
Any FAM/TERF/CAT discussion item, maneuver or procedure

Review

Course rules/area fam
Hover takeoff
No hover takeoff
Tactical landing profile (RVL)
Precision (steep) approach profile
Hover landing
No hover landing
Sliding landing
High speed approach and landing
Waveoff procedures
SCAS Failure
Single engine failures
Fixed pitch tail rotor malfunctions
High altitude emergencies
TERF maneuvers
Brownout landings
HIE approach
Confined area takeoffs/landings
Tactical approaches
Mountain area landings

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS and MDG.
IUT shall gain proficiency and knowledge of local area operations and procedures.

Prerequisites. 5310

Crew. ANI/IUT/CC/AO

FRSI-5314 2.0 * B,R D A 2 UH-1Y

Goal. LS – Review formation flight and tactical formation flight maneuvering.

Requirements

Discuss

FORM event techniques, standardization and operating areas
FORM stage RAC tendencies and risk mitigation
Any FORM stage discussion item, maneuver or procedure

Review

ASTACSOP loss of visual contact
ASTACSOP IIMC
ASTACSOP RIO
Parade flight
Cruise flight
Breakup and rendezvous
Tactical formation maneuvers
Wingman awareness
Formation communication
Lead change
Section tactical landings

FAM sustainment as required

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS, MDG, ASTACSOP and NTTP.
IUT should perform all maneuvers as lead and wingman.

Prerequisites. 5311, 5312, 5313

Crew. ANI/IUT/CC

FRSI-5315 2.0 * B,R D A 1 UH-1Y

Goal. LS – Review weapons systems operation.

Requirements

Discuss

SWD event techniques, standardization and operating areas
SWD stage RAC tendencies and risk mitigation
Any SWD stage discussion item, maneuver or procedure

Review

Rocket delivery
Crew served weapons delivery
Weapons emergencies
Ordnance communication procedures
Ordnance checklists
Range operations and regulations

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all SWD stage procedures, and checklists IAW the UH-1Y NATOPS, MDG, ASTACSOP and NTTP.
IUT shall brief and lead the flight and conduct crew brief. Crew brief shall give special attention to switchology and weapons release authority.
Conduct of the flight should be based on IUT's currency and proficiency in weapons systems.

Prerequisites. 5311, 5312, 5313

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirements. Live fire LASER safe range

Crew. ANI/IUT/CC/AG

SFRSI-5316 1.5 * B,R D S 1 UH-1Y

Goal. LS - Conduct an Assistant NATOPS Instructor (ANI) standardization check.

Requirements

Discuss

ANI required events
Energy management flight techniques
Standardization during initial FAM stage events
Sandardization during end of stage events
NATOPS Brief with emphasis on CRM
Egress procedures

Review

All FAM stage maneuvers and procedures
Aircraft emergencies with emphasis on causes, indications and recovery procedures

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all Core Introduction Phase

procedures and checklists IAW the UH-1Y NATOPS, MDG, ASTACSOP and NTTP.

Prerequisite. Designated FRSI (6002, 6003 if applicable)

Crew. NE/IUT

FRSI-5317 2.0 * B,R NS A 1 UH-1Y

Goal. LS – Review NVD familiarization, CAT and TERF maneuvers.

Requirements
Discuss
NVD event techniques, standardization and operating areas
RAC NVD tendencies and risk mitigation
Any NVD event discussion item, maneuver or procedure
Review
NVD portion of NATOPS brief
NVD FAM stage maneuvers
NVD CAT stage maneuvers
NVD TERF stage maneuvers
Local area operations, techniques and procedures

Performance Standards
IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the UH-1Y NATOPS, MDG and MAWTS-1 NVD Manual.
IUT shall demonstrate a high level of proficiency in all maneuvers before completing this event.
IUT shall gain proficiency and knowledge of local area operations and procedures.

Prerequisites. 5905, 5311, 5312, 5313 (Current NSI)

Crew. NSI/IUT/CC/AO

2.15.6 Forward Air Controller (Airborne) Instructor FAC(A)I

Purpose. To certify the IUT as a FAC(A)I capable of conducting ground and airborne instruction of FAC(A) missions. Emphasize the ability to coordinate simultaneous FW and RW CAS, surface fires (direct and indirect), while working with a TACP and operating within the MACCS.

General. IUT shall be FAC(A) qualified IAW NAVMC 3500.20 and current/proficient per the JFAC(A) MOA. IUT shall be designated an NSI prior to beginning the FAC(A)I syllabus. ***IUT shall have logged a year's worth of FAC(A) controls after being designated a FAC(A) prior to beginning the FAC(A)I syllabus.***

Aircraft should be configured with an operable NTIS, HMSD, LDRS, VTR and IR pointer (night events).

Crew Requirements. IAW MAWTS-1 UH-1 Course Catalog.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

SFACA-5400 1.5 * B (NS) S/A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the FAC(A)I POI.

Ordnance. (7) 2.75 inch RP rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

FACA-5401 1.5 * B (NS) A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the FAC(A)I POI.

Ordnance. (7) 2.75 inch RP rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side, (60) chaff/flares

FACA-5402 1.5 * B,R I (NS) A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the FAC(A)I POI.

Ordnance. (7) 2.75 inch RP rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

2.15.7 Night Systems Familiarization Instructor (NSFI)

Purpose. To certify the IUT as an NSFI capable of safely conducting ground and airborne instruction of Night Vision Device (NVD) flight during the Core Introduction Phase.

General. IUT will be Night Systems Qualified (NSQ-HLL) and TERFI prior to beginning training.

Crew Requirements. IAW MAWTS-1 UH-1 Course Catalog.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

NSFI-5600	**2.0**	*****	**B**	**NS**	**A**	**1**	**UH-1Y**

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSFI POI.

NSFI-5601	**2.0**	*****	**B**	**NS**	**A**	**2**	**1 UH-1Y & 1 H-1**

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSFI POI.

NSFI-5602	**2.0**	*****	**B,R**	**NS**	**A**	**1**	**UH-1Y**

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSFI POI.

2.15.8 Tactical Air Coordinator (Airborne) (TAC(A)I)

Purpose. To certify the IUT as an TAC(A)I capable of safely conducting ground and airborne instruction of TAC(A) missions.

General. IUT will be designated a FAC(A) Instructor and TAC(A) qualified prior to beginning training.

Aircraft should be configured with an operable NTIS, HMSD, LDRS, VTR and IR pointer (night event).

Crew Requirements. IAW MAWTS-1 UH-1 Course Catalog.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

TACAI-5700	**2.0**	*****	**B,R**	**I (NS)**	**A**	**1**	**UH-1Y**

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the TAC(A)I POI.

2.15.10 Defensive Air Combat Maneuvering Instructor (DACMI)

Purpose. To certify the IUT as a Rotary Wing Defensive Air Combat Maneuvering Instructor (RW DACMI) and Fixed Wing Defensive Air Combat Maneuvering Instructor (FW DACMI) capable of safely conducting ground and airborne instruction of the UH-1 air-to air flight syllabus.

General. IUT will be RW DACM qualified and designated WTO prior to beginning RW DACMI training. IUT will be FW DACM qualified and designated WTO prior to beginning FW DACMI training.

Upon completion of DACMI-5800 and DACMI-5802, the IUT may be designated a RW DACMI, capable of instructing RW DACM T&R Events and the RW DACMI IUT syllabus (DACMI-5800).

Upon completion of DACMI-5801 and DACMI-5803, the IUT may be designated a FW DACMI, capable of instructing FW DACM T&R Events and the FW DACMI IUT syllabus (DACMI-5801).

Aircraft should be configured with an operable NTIS, HMSD, APR-39, ALE-47 and expendables.

Crew Requirements. IAW MAWTS-1 UH-1 Course Catalog.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

DACMI-5800 2.0 * B D A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the DACMI POI.

Ordnance. (60) flares and TCTS pod (optional)

DACMI-5801 2.0 * B I D A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the DACMI POI.

Ordnance. (60) flares and TCTS pod (optional)

DACMI-5802 2.0 * B,R D A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the DACMI POI.

Ordnance. (60) flares and TCTS pod (optional)

DACMI-5803 2.0 * B,R I D A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the DACMI POI.

Ordnance. (60) flares and TCTS pod (optional)

2.15.10 Night Systems Instructor (NSI)

Purpose. To certify the IUT as an NSI capable of safely conducting ground and airborne instruction of the UH-1Y Night Vision Device (NVD) flight syllabus.

General. IUT will be Night Systems Qualified- Low Light Level (NSQ-HLL) and designated WTO prior to beginning training.

Aircraft should be configured with an operable NTIS, HMSD, LDRS, VTR, APR-39, ALE-47 and crew served mounted IR pointers.

Crew Requirements. IAW MAWTS-1 UH-1 Course Catalog.

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

SNSI-5900 1.5 * B NS S/A 1 UH-1Y

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSI POI.

NSI-5901 2.0 * B NS A 1 UH-1Y

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSI POI.

NSI-5902 2.0 * B NS A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSI POI.

Ordnance. (14) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with thermally significant targets, if available.

SNSI-5903 1.5 * B NS S/A 1 UH-1Y

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSI POI.

Ordnance. If flown in aircraft, (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. If flown in aircraft, live fire LASER safe range with thermally significant targets, if available.

NSI-5904 2.0 * B,R NS A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSI POI.

Ordnance. If flown in aircraft, (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. If flown in aircraft, live fire LASER safe range with thermally significant targets, if available.

NSI-5905 2.0 * B,R I NS A 2 1 UH-1Y & 1 H-1

Requirement. Reference the MAWTS-1 UH-1 Course Catalog for the NSI POI.

Ordnance. If flown in aircraft, (14) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (3000) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. If flown in aircraft, live fire LASER safe range with thermally significant targets, if available.

2.15.11 Flight Leadership Standardization Evaluator (FLSE)

Purpose. To certify and designate the pilot as a FLSE.

General. FLSEs ensure flight leadership standardization across all squadrons. The FLSE shall conduct a standardized evaluation of a prospective flight leader's ability to safely and effectively perform the duties as a flight lead. Prospective FLSEs shall complete the POI listed below. Upon completion of the POI, the squadron commanding officer will nominate the prospective FLSE to the MAG commanding officer for approval and designation. FLSE-5920 is not required for Weapons and Tactics Instructor Course (WTI) graduates that do not require Refresher training. Designated FLSEs are required to complete annual standardization training with the Program Coordinator. Refer to NAVMC 3500.14 and the UH-1 MAWTS-1 Course Catalog.

Re-designation. FLSE re-designation criteria for aircrew that do not require Core Introduction Refresher training is at the discretion of the MAG CO. For aircrew who require Core Introduction Refresher training, the minimum re-designation requirement for FLSE positions is successful completion of the R-coded T&R FLSE POI.

Crew requirements. Shall be determined by the Wing FLSE Program Coordinator or the FLSE Model Manager.

Academic/Ground Training. IAW MAWTS-1 UH-1 Course Catalog.

FLSE-5920 2.0 * B,R (NS) A 2 1 UH-1Y & 1 H-1

Goal. OS - To certify the IUT to be designated a FLSE.

Requirement. IAW MAWTS-1 UH-1 Course Catalog.

Performance Standard. IAW MAWTS-1 UH-1 Course Catalog.

Prerequisite. 5905, 6598 (Designated DL and NSI)

External Syllabus Support. Program Coordinator.

FLSE-5921 0.0 365 B,R,SC,M (N) G

Goal. Complete annual FLSE training with the Program Coordinator.

Requirement. Annual training with the FLSE Program Coordinator.

Performance Standard. Successful completion of the annual FLSE training.

Prerequisite. 5920

External Syllabus Support. Program Coordinator

2.16 REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD) ACADEMICS PHASE (6000)

Purpose. To develop standardized flight leadership skills and knowledge. These academics review and emphasize procedural based knowledge, systems knowledge/nomenclature, and advanced Joint/MAGTF topics to ensure individuals possess the requisite knowledge and ability to command their aircraft and lead flights.

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.

Flight leadership academic events are listed below.

REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS ACADEMIC PHASE	
TRAINING CODES	**COURSEWARE**
INST/NATOPS	
No Lectures	
FCP	
No Lectures	
PQM	
ACPM-8200	8200 Courseware
UHC	
ACPM-8300	8300 Courseware
SECTION LEADER	
ACAD-6040	Intel Prep of the Battlespace
ACAD-6041	(S) MAGTF Targeting and Fire Support Planning*
ACAD-6042	JTAC-Aircrew Integration
AIR MISSION COMMANDER	
ACAD-6071	Air Mission Commander
*Indicates classes that should be presented to all pilots annually.	

2.17 REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD) PHASE (6000)

Purpose. To outline the requirements for qualifications, designations and flight leadership.

General. Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS and APR before that qualification/designation can be utilized.

Completion of the INST-6100 sortie meets the requirements for the PUI to be instrument qualified. At the discretion of the squadron commanding officer a letter designating the PUI as Instrument qualified shall be placed in the NATOPS jacket and APR.

Completion of the NTPS-6101 sortie meets the requirements for the PUI to be NATOPS qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as NATOPS qualified shall be placed in the NATOPS jacket and APR.

Completion of FCF stage meets the requirements for the PUI to be eligible for the FCP designation. At the discretion of the squadron commanding officer a letter designating the PUI as an FCP shall be placed in the NATOPS jacket and APR.

Completion of the Core Phase and the Mission Phase meets the requirements for the PUI to be eligible for the UHC designation. Upon completion of the DESG-6398 event 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 Section Lead Stage SL-6498 meets the requirements for the PUI to be eligible for the Section Lead designation. At the discretion of the squadron commanding officer a letter designating the PUI as Section Lead shall be placed in the NATOPS jacket and APR.

Completion of the Division Lead Stage DL-6598 stage meets the requirements for the PUI to be eligible for the Division Lead designation. At the discretion of the squadron commanding officer a letter designating the PUI as Division Lead shall be placed in the NATOPS jacket and APR.

Completion of the FL-6698 sortie meets the requirements for the PUI to be eligible for the Flight Lead designation. At the discretion of the squadron commanding officer a letter designating the PUI as Flight Lead shall be placed in the NATOPS jacket and APR.

Completion of the AMC-6798 sortie meets the requirements for the PUI to be eligible for the AMC designation. At the discretion of the squadron commanding officer a letter designating the PUI as AMC shall be placed in the NATOPS jacket and APR.

The following stages are included in the Requirements, Qualifications and Designation (RQD) phase.

	REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS PHASE
PAR NO.	**STAGE NAME**
2.17.1	Instrument Rating (INST)
2.17.2	NATOPS Qualification (NATOPS)
2.17.3	Crew Resource Management Training (CRM)
2.17.4	Functional Check Pilot (FCP)
2.17.5	Pilot Qualified in Model (PQM)
2.17.6	Utility Helicopter Commander (UHC)
2.17.7	Section Leader (SL)
2.17.8	Division Leader (DL)
2.17.9	Flight Leader (FL)
2.17.10	Air Mission Commander (AMC)
2.17.11	Specific Operations Tracking Codes (SOTC)

Ordnance Delivery. At the completion of applicable stages, the PUI will have demonstrated increased accuracy during ordnance delivery and proper use of the NTIS under varied threat conditions with mixed ordnance loads. For the UHC, SL, DL and FL stages, the PUI shall meet the ordnance metrics outlined for the Mission Skills Phase. See Paragraph 2.16. DVR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

Navigational Accuracy. At the completion of applicable stages, the PUI will have demonstrated increased navigational accuracy and timeliness during assault support operations, under varied threat conditions. For the UHC, SL, DL and FL stages, the PUI shall meet the ordnance metrics outlined for the Mission Phase. See Paragraph 2.16. IP shall use MPS or aircraft systems to asses landing point accuracy.

2.17.1 Instrument Rating (INST)

Purpose. To certify the PUI as instrument rated.

General. The instrument rating is an annual requirement. The PUI shall log annual instrument minimum requirements prior to event IAW CNAF M-3710. A designated instrument Instructor, who is a member of the Instrument Flight Board (IFB), shall evaluate INST-6100.

Aircraft shall be configured with an operable NAVAID/TACAN.

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

Ground/Academic Training. IAW CNAF M-3710.7.

INST-6000 8.0 365 B,R,SC,M G IGS

Goal. Attend an TYCOM approved instrument ground school per CNAF M-3710.7.

Performance Standards. Achieve a grade of qualified IAW CNAF M-3710.7.

INST-6001 1.0 365 B,R,SC,M G IGS EXAM

Goal. To evaluate the airman's knowledge of instrument flight and procedures.

Performance Standards. Achieve a grade of qualified IAW CNAF M-3710.7.

INST-6100 1.5 365 B,R,SC,M I (N*) A/S 1 UH-1Y

Goal. OS - Conduct an annual instrument check.

Requirement. Successfully conduct the check IAW the NATOPS, MDG, CNAF M-3710.7 and Instrument Flight Manual (IFM).

Performance Standards. IAW the NATOPS, MDG, CNAF M-3710.7 and Instrument Flight Manual (IFM).

Prerequisite. 6000, 6001 and IAW CNAF M-3710.7

Crew. BIP+IFBM/PUI

2.17.2 NATOPS Qualification

Purpose. To certify the PUI as NATOPS qualified in the UH-1Y.

General. The NATOPS qualification is an annual requirement. A designated NATOPS Evaluator/Instructor/Assistant NATOPS Instructor shall evaluate NTPS-6101.

To the greatest extent possible, an EP review (FAM-2801) will be conducted in the same month as the annual NATOPS check (NTPS-6101). The annual CRM evaluation (CRM-6102) should be completed in conjunction with the annual NATOPS check, when possible.

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

Ground/Academic Training. IAW NATOPS.

NTPS-6002 1.0 365 B,R,SC,M D G Open Book Eval

Goal. To evaluate airman's knowledge of normal/emergency procedures, systems and aircraft limitations.

Performance Standards. Achieve a grade of qualified IAW NATOPS.

NTPS-6003 2.0 365 B,R,SC,M D G Closed Book Eval

Goal. To evaluate airman's knowledge of normal/emergency procedures, systems and aircraft limitations.

Performance Standards. Achieve a grade of qualified IAW NATOPS.

NTPS-6004 1.0 365 B,R,SC,M D G Oral NATOPS Eval

Goal. To evaluate airman's knowledge of normal/emergency procedures, systems and aircraft limitations.

Performance Standards. Achieve a grade of qualified IAW NATOPS.

NTPS-6101 1.5 365 B,R,SC,M I (N) A/S 1 UH-1Y

Goal. OS - Conduct an annual NATOPS check

Requirement. Successfully conduct the evaluation IAW CNAF M-3710.7 and NATOPS

Performance Standards. IAW CNAF M-3710.7 and NATOPS

Prerequisites. Grade of qualified on 6002, 6003, 6004

Crew. NI or ANI /PUI

Performance Standards. IAW CNAF M-3710.7 and NATOPS

NTPS-6105 0.0 365 B,R,SC,M I NS GE 1 ANI STAN

Goal. To obtain designation as an Assistant NATOPS Instructor (ANI).

Performance Standards. IAW CNAF M-3710.7. Completion of this event meets the requirements to be eligible for the ANI designation. At the discretion of the commanding officer a letter designating the IUT as ANI shall be placed in the NATOPS jacket.

Prerequisites. 6002, 6003, 6004 (BIP+CRMF)

Crew. NI/IUT

NTPS-6106 0.0 365 B,R,SC,M I NS GE 1 NI STAN

Goal. To obtain designation as a NATOPS Instructor (NI).

Performance Standards. IAW CNAF M-3710.7. Completion of this event meets the requirements to be eligible for the NI designation. At the discretion of the commanding officer a letter designating the IUT as NI shall be placed in the NATOPS jacket.

Prerequisites. 6002, 6003, 6004 (BIP+CRMF)

Crew. NE/IUT

NTPS-6107 0.0 365 B,R,SC,M I NS GE 1 NE STAN

Goal. To obtain designation as a NATOPS Evaluator (NE).

Performance Standards. IAW CNAF M-3710.7. Completion of this event meets the requirements to be eligible for the NE designation. At the discretion of the commanding officer a letter designating the IUT as NE shall be placed in the NATOPS jacket.

Prerequisites. 6002, 6003, 6004 (FRSI+CRMI)

Crew. FRS Commaning Officer or NE/IUT

2.17.3 Annual Crew Resource Management (CRM) Evaluation

Purpose. Conduct annual CRM ground training and flight evaluation.

General. Completion of this stage meets the requirements for the annual CRM flight evaluation and ground training.

The CRM-6102 event may be logged in conjunction with any operational or training flight. However, it should be completed in conjunction with the annual NATOPS check, when possible.

CRM training and flight evaluations shall be logged in the individual NATOPS Flight Personnel Training/Qualification Jacket in section II, part C on enclosure (4). In addition to Section II part C entries, CRM flight evaluation shall be commented on in the remarks section of the NATOPS evaluation form when the flight is flown in conjunction with NTPS-6101. Additionally annual CRM flight evaluations shall be documented in the individual aircrew logbooks.

Crew Requirements. CRMF (CRMF Designated NSI)

Ground/Academic Training. IAW CNAFINST 1542.7 series.

CRM-6005 1.0 365 B,R,SC,M G CRM Ground

Goal. Receive annual CRM training.

Requirement. IAW CNAFINST 1542.7 series receive instruction in CRM history, Seven Critical Skills, CNAFINST 1542.7 series and a T/M specific case study or scenario.

CRM-6102 0.0 365 B,R,SC,M (N) A/S 1 UH-1Y

Goal. OS - Conduct an annual Crew Resource Management evaluation.

Requirement. Successfully conduct the evaluation IAW CNAF M-3710.7 and NATOPS. The evaluation should be conducted in conjunction with the annual NATOPS evaluation flight, when possible.

Performance Standards. IAW CNAF M-3710.7 and NATOPS

CRM-6103 0.0 * B,R,SC G CRMF

Goal. To obtain designation as a Crew Resource Management Facilitator (CRMF).

Requirement. Complete the requirements specified per CNAFINST 1542.7. Completion of this event meets the requirements to be eligible for the CRMF designation. At the discretion of the commanding officer a letter designating the PUI as CRMF shall be placed in the NATOPS jacket and APR.

Performance Standards. IAW CNAFINST 1542.7 series.

CRM-6104 0.0 * B I G CRMI

Goal. To obtain designation as a Crew Resource Management Instructor (CRMI).

Requirement. Complete the requirements specified per CNAFINST 1542.7. Completion of this event meets the requirements to be eligible for the CRMI designation. At the discretion of the commanding officer a letter designating the PUI as CRMI shall be placed in the NATOPS jacket and APR.

Performance Standards. IAW CNAFINST 1542.7 series.

2.17.4 Functional Check Flight Pilot (FCP)

Purpose. To introduce, and develop proficiency in, and evaluate FCF procedures.

General. PUI shall demonstrate an understanding of, and proficiency in, the maintenance procedures involved in FCFs. PUI shall also demonstrate a detailed knowledge of aircraft systems and administrative maintenance procedures. Upon completion of FCP-6204 and with the AMO's recommendation, and at the discretion of the squadron commanding officer, a letter designating the PUI as a FCP shall be placed in the NATOPS jacket and APR.

Aircraft may be FMC or PMC.

PUI shall be a PQM prior to FCP-6204.

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

Ground/Academic Training. Selected reading material from CNAFINST 4790, UH-1Y NATOPS, SOPs, and MIMs as designated by each squadron commanding officer. PUI must also complete a locally generated FCP open and closed-book exams.

FCP-6006 1.0 * B,R D G FCP Open Book

Goal. Successful completion of the FCP open-book exam.

FCP-6007 1.0 * B,R D G FCP Closed Book

Goal. Successful completion of the FCP closed-book exam.

SFCP-6200 1.5 * B,R,SC D S 1 UH-1Y

Goal. OS – Demonstrate FCF procedures.

Requirements

Discuss

ODO brief procedures
FCF paperwork process
ADB contents
Crew requirements/authorized crewmembers
Weather requirements
Testing areas
QA brief
FCF profiles
The proper completion of M-SHARP/NALCOMIS/OOMA paperwork following FCFs
Emergency procedures during FCFs
Structural vs. access panels
Functional ground turn requirements
The importance of proper pre-flights and post-flights

Demonstrate

All items in the FCF Checklist
If conducted in an aircraft, demonstrate IMD-HUMS procedures for main/tail rotor track & balance and vibration diagnostics

Performance Standards

IAW NATOPS, CNAFINST 4790, and local SOPs.
PUI shall demonstrate familiarity with systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.

Prerequisites. 6300, 6006, successful completion of FCP open book and readings

Crew. BIP+FCP/PUI/(CC)

SFCP-6201 1.5 * B D S/A 1 UH-1Y

Goal. RS – Introduce FCF procedures.

Requirements

Discuss

Hydraulic samples
Safe for flight items
Engine rigging and trim adjustments
DECU, HMU, and ODV operation
Overspeed protection
Ground/hover, in-flight, and maximum power assurance/checks
Torque repeatability
WOG initialization
N_R droop check
Control motion transducer check

Introduce

All items in the FCF checklist
If conducted in an aircraft, introduce IMD-HUMS procedures for main/tail rotor track & balance and vibration diagnostics

In-flight procedures

Performance Standards
IAW NATOPS, CNAFINST 4790, and local SOPs.
PUI shall demonstrate familiarity with systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.

Prerequisite. 6200

Crew. BIP+FCP/PUI/CC

FCP-6202 1.5 * B D A 1 UH-1Y

Goal. OS - Introduce main and tail rotor track & balance and vibration diagnostics.

Requirements
Discuss
IMD-HUMS procedures for main and tail rotor track & balance
Ground/in-flight vibration diagnostics
Crew swap function
Ground and flight regimes for rotor track and balance and vibration diagnostics
Methods for obtaining & making corrections
Use of optical tracker
Autorotation RPM
Demonstrate/Introduce
Main and tail rotor track & balance and vibration diagnostics

Performance Standards
IAW NATOPS, CNAFINST 4790, and local SOPs.
PUI shall demonstrate familiarity with systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.
IAW NATOPS, PUI shall demonstrate knowledge and comprehension of main and tail rotor track and balance/vibanal procedures. PUI must also observe track and balance/vibanal equipment installation and preflight, post-flight results, and subsequent adjustments.

Prerequisites. 6201

Crew. BIP+FCP/PUI/CC

SFCP-6203 1.5 365 B,R,SC,M D S/A 1 UH-1Y

Goal. RS – Review FCF procedures.

Requirements
Discuss
AMU Ground Station software
Use of IMD-HUMS for viewing systems indications
Shipboard FCF procedures
MESM
Hydraulic samples, functional check flight (FCF) vs. functional ground turn (FGT) procedures and requirements, daily and turnaround inspections
Review
All FCF procedures
Completion of track & balance and vibration diagnostics may be simulated

Performance Standards
IAW NATOPS, CNAFINST 4790, and local SOPs.
PUI shall demonstrate knowledge of systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.

Prerequisites. 6202

Crew. BIP+FCP/PUI/(CC)

FCP-6204 1.5 * B,R,SC D A 1 UH-1Y

Goal. RS – Conduct FCP Evaluation.

Requirements
Discuss
Any FCF procedure, regulation, SOP, or aircraft system
Evaluate
PUI on brief, FCF, and debrief procedures

Performance Standards
PUI shall conduct an "A" profile FCF. Completion of track & balance and vibration diagnostics may be simulated.
IAW NATOPS, CNAFINST 4790, and local SOPs.
PUI shall demonstrate familiarity with systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.

Prerequisites. 6007, 6203

Crew. BIP+FCP/PUI/CC

2.17.5 Pilot Qualified in Model (PQM)

Purpose. Tracking code for PQM.

General. Completion of the Core Introduction Phase meets the requirements for the PUI to be PQM. Upon completion of the CIX-1901, and the designation by the squadron commanding officer, a letter assigning the PUI as PQM shall be placed in the NATOPS jacket, APR and a proficiency code of DESG-6300 shall be logged.

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

Ground/Academic Training. As outlined in Core Introduction Phase.

DESG-6300 1.5 * B,R I (N) A 1 UH-1Y

Goal. OS - Qualify the PUI as PQM.

Requirement. Completion of the Core Introduction Phase.

Prerequisite. 8200, 1901

2.17.6 Utility Helicopter Commander (UHC)

Purpose. To qualify the PUI as a Utility Helicopter Commander (UHC).

General. Completion of the Core Phase and the Mission Phase [with the exception of FAC(A)] meet the requirements for the PUI to be eligible for the UHC designation. Upon completion of the DESG-6398 event and a 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 a UHC shall be placed in the NATOPS jacket and APR.

The UHC evaluation shall be conducted as a separate flight as a wingman The DESG-6398 shall be logged in conjunction with a previously flown Mission Skill Phase sortie for the evaluation flight.

Aircraft should be configured with an operable NTIS, crew served weapons, LTD/LRF, HMSD, DVR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

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

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

DESG-6398 1.5 * B,R,SC I (NS) A 2 1 UH-1Y & 1 H-1

Goal. OS – To qualify the PUI as a Utility Helicopter Commander (UHC).

Requirements

Discuss

All aircraft ordnance and ASE systems

Review

Ordnance pre-flight checks
All ordnance emergencies
SWD and ordnance delivery profiles
Knowledge of local range regulations
SOPs for ordnance delivery

Performance Standards

PUI shall conduct cockpit debrief, with focus on weapons considerations.
PUI shall demonstrate knowledge of local range regulations and SOPs for ordnance delivery.
PUI shall demonstrate successful employment of crew served weapons at ranges 300-2000 meters and 2.75 inch rockets at ranges from 500-1200 meters, exhibiting proper impact detection and adjustment, while attaining Mission Skills accuracy standards.
PUI shall exhibit a thorough understanding of all weapons systems and safely employ ordnance systems IAW UH-1Y NTTP/NTRP/NATOPS.
PUI shall conduct cockpit debrief, assessing weapons switchology and accuracy using videotape review.
For Series Conversion this event may be flown in conjunction with the last 3000 SC event as the completion of the 2000 and 3000 Series Conversion. The event must include night tactical landings to an unimproved location in addition to the performance standards listed above. Upon completion of this Event during the Series Conversion syllabus, all flight leadership and FAC(A) qualifications will convert.

Prerequisites. 8300, 6300, Core Phase and Mission Phase complete.

Ordnance. (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares
Range Requirement. Live fire LASER safe range

Crew. WTO(NSI)/PUI/CC/AG

2.17.7 Section Leader

Purpose. To prepare and evaluate a prospective section lead's ability to plan, brief, lead and debrief a section.

General. PUI shall conduct the following day and night workup sorties in order to develop the prospective section lead's flight leadership. At the discretion of the commanding officer, cross-cockpit instruction is authorized. SL-6498 shall be evaluated by a designated MAG Flight Lead Stan Evaluator (FLSE) from a different command within the MAG.

The IP will use the sortie requirement criteria to determine whether the PUI completed the sortie. The PUI will use the performance standards to debrief the flight. Completion of the SL syllabus meets the requirements for designation as a Section Leader. At the discretion of the squadron commanding officer, a letter designating the pilot as Section Leader shall be placed in the NATOPS jacket and APR.

In order to complete the Section Leader stage, two of the three flights shall be conducted with ordnance. One of the ordnance flights shall be conducted during the day and one shall be conducted at night. Consideration should be given to making the Section Lead check (SL-6498) an ordnance event.

At least one event shall be an assault support mission and at least one event shall be an OAS or escort mission. The assault support mission will have a preplanned L-HR and associated IP to LZ timing.

At least one of the events shall be conducted with 2 UH-1Ys and at least one of the events shall be a mixed section.

PUI shall have a minimum of 50 hours as a designated UHC and three flights in wingman position as a designated UHC prior to the completion of the 6498. Additionally, during the 50 hour prerequisite period, the PUI shall brief and lead a minimum of 2 sections, prior to beginning the section lead syllabus (SOTC-6907). A maximum of one brief and lead event can be conducted in the simulator using the Tactical Environment Network and at least one networked, man-in-the-loop simulator.

PUI shall be evaluated on ordnance delivery utilizing Core Skill Plus ordnance accuracy standards, paragraph 2.16 and navigational accuracy metrics utilizing Core Plus/Mission Plus Skills navigational accuracy standards, paragraph 2.16.

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.

SL-6400 1.5 * B D A 2 1 UH-1Y & 1 H-1

Goal. OS – Tactically employ a section in a low to medium threat environment during the conduct of a day OAS, escort or assault support mission. Emphasize safety, route planning, CRM critical skills, flight member responsibilities, threat counter-tactics, ASTACSOP, fuel management and communications.

Requirements

Plan, brief, lead and debrief a day OAS, escort, or assault support mission
Develop a plan that supports the ground SOM and commander's intent of the supported unit
Plan and brief section mechanics (objective area maneuver)
Plan and brief section threat reactions
Plan and brief rendezvous and join-up per ASTACSOP/NTTP and tactical situation
Brief penetration/de-penetration/offensive checklist procedures
Use all available planning tools to plan and brief route considerations, sensor acquisition, and target engagement
Conduct a minimum of one section take-off and one section landing
Maneuver section using appropriate formations and signals
Conduct a rendezvous and join-up
Demonstrate applicable threat counter-tactics
Locate, plot and effectively engage target(s) with the appropriate assets (if applicable)
Direct attacks against target(s)
Control section during en route and objective area operations
Delegate tasks within flight and cockpit
Conduct the debrief, covering pertinent section specifics and learning points

Performance Standards

PUI shall brief IAW ASTACSOP/NTTP.
PUI shall maintain situational awareness of wingman and mutual support during en route portion of flight and in the objective area.

PUI shall effectively control the section throughout the flight.
PUI shall locate targets in a timely manner.
PUI shall engage target(s) using TTPs appropriate for the scenario.
PUI shall minimize threat exposure and use appropriate threat counter-tactics.
PUI shall use TRANSEC/COMSEC for all communications.
PUI shall adhere to local course rules and comply with applicable range regulations.
PUI shall debrief lessons learned and accurately analyze effectiveness of TTPs.

Prerequisites. 6398, 6907. Minimum of 50 hours as designated UHC and three flights in wingman position as a designated UHC. Additionally, during the 50 hour prerequisite period the PUI shall brief and lead a minimum of 2 sections (6907).

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with appropriate LZ.

External Syllabus Support. One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)

Crew. NSI/PUI/CC/AO(AG)

SL-6401 1.5 * B NS A 2 1 UH-1Y & 1 H-1

Goal. OS – Tactically employ a section in a medium to high threat environment during the conduct of a night OAS, escort or assault support mission. Emphasize safety, range regulations, night formation considerations, sensor acquisition and hand-off, night rendezvous and join-up procedures, aircraft lighting, section IIMC procedures and wingman awareness.

Requirements

Plan, brief, lead and debrief a night OAS, escort, or assault support mission
Develop a plan that supports the ground SOM and commander's intent of the supported unit
Plan and brief section mechanics (objective area maneuver)
Plan and brief landing plan and fire support plan
Plan and brief section threat reactions
Use all available planning tools to plan and brief night considerations including illumination, shadowing, sensor effectiveness, and target acquisition/engagement/avoidance.
Brief appropriate FAA and Tactical lighting configurations
Conduct a minimum of one night section take-off and one night section landing
Maneuver section using formations and tactics appropriate for ambient illumination
Demonstrate applicable threat counter-tactics
Locate, plot, and effectively engage target(s) with appropriate assets (if applicable)
Control section during en route and objective area operations
Delegate tasks within flight and cockpit
Conduct the debrief, covering pertinent section specifics and learning points

Performance Standards

PUI shall brief IAW ASTACSOP/NTTP.
PUI shall maintain situational awareness of wingman and mutual support during en route portion of flight and in the objective area.
PUI shall effectively control the section throughout the flight.
PUI shall locate targets in a timely manner.
PUI shall engage target(s) using TTPs appropriate for the scenario.
PUI shall minimize threat exposure and use appropriate threat counter-tactics.
PUI shall use TRANSEC/COMSEC for all communications.
PUI shall adhere to local course rules and comply with applicable range regulations.

PUI shall debrief lessons learned and accurately analyze effectiveness of TTPs.

Prerequisites. 6398, 6907

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with appropriate LZ and thermally significant targets, if available

External Syllabus Support. One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)

Crew. NSI/PUI/CC/AO(AG)

SL-6498 2.0 * B,R (NS) A 2 1 UH-1Y & 1 H-1

Goal. OS – Tactically employ a section in a low to medium threat environment during the conduct of a day or night OAS, escort, or assault support mission. Emphasis shall be placed on safety, range regulations, mission planning, weapons effects/SDZs, PGM employment, identification of targets and friendly personnel, FARP operations, LZ operations, ASTACSOP and wingman awareness.

Requirements

Plan, brief, lead and debrief a day OAS, escort, or assault support mission
Develop a plan that supports the ground SOM and commander's intent of the supported unit
Plan and brief section mechanics (objective area maneuver)
Plan and brief section threat reactions
Plan and brief rendezvous and join-up per ASTACSOP/NTTP and tactical situation
Brief penetration/de-penetration/offensive checklist procedures
Use all available planning tools to plan and brief route considerations, sensor acquisition, and target engagement
Conduct a minimum of one section take-off and one section landing Maneuver section using appropriate formations and signals
Conduct a rendezvous and join-up
Demonstrate applicable threat counter-tactics
Locate, plot and effectively engage target(s) with the appropriate assets (if applicable)
Direct attacks against target(s)
Control section during en route and objective area operations
Delegate tasks within flight and cockpit
Conduct the debrief, covering pertinent section specifics and learning points

Performance Standards

PUI shall brief IAW ASTACSOP/NTTP.
PUI shall maintain situational awareness of wingman and mutual support during en route portion of flight and in the objective area.
PUI shall effectively control the section throughout the flight.
PUI shall locate targets in a timely manner.
PUI shall engage target(s) using TTPs appropriate for the scenario.
PUI shall minimize threat exposure and use appropriate threat counter-tactics.
PUI shall use TRANSEC/COMSEC for all communications.
PUI shall adhere to local course rules and comply with applicable range regulations.
PUI shall debrief lessons learned and accurately analyze effectiveness of TTPs.

Prerequisite. 8600, 6400, 6401.

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with appropriate LZ

External Syllabus Support. One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)

Crew. FLSE/PUI/CC/AO(AG)

2.17.8 Division Leader (DL)

Purpose. To prepare and evaluate a prospective division lead's ability to plan, brief, lead and debrief a division.

General. PUI shall conduct the following day and night workup sorties in order to develop the prospective division lead's flight leadership. At the discretion of the commanding officer cross-cockpit instruction and mixed divisions are authorized.

The IP will use the sortie requirement criteria to determine whether the PUI completed the sortie. The PUI will use the performance standards to debrief the flight. Completion of the DL syllabus meets the requirements for designation as a Division Leader. At the discretion of the squadron commanding officer, a letter designating the pilot as Division Leader shall be placed in the NATOPS jacket and APR.

In order to complete the Division Leader stage, two of the three flights shall be conducted with ordnance. One of the ordnance flights shall be conducted during the day and one shall be conducted at night. Consideration should be given to making the Division Lead check (DL-6598) an ordnance event.

At least one Event shall be an assault support mission and at least one Event shall be an OAS or escort mission. The assault support mission will have a preplanned L-HR and associated IP to LZ timing.

At least one of the Events should be conducted with 3+ UH-1Ys. During the conduct of all OAS/ESC missions, at least one attack shall be conducted as a division.

PUI shall have led three flights as a designated Section Leader (SL) prior to beginning the Division Lead syllabus. PUI shall also have a minimum of: 600 total hours, 200 rotary wing hours, and 50 hours in model.

PUI shall be evaluated on ordnance delivery utilizing Core Skill Plus ordnance accuracy standards, paragraph 2.16, and navigational accuracy metrics utilizing Core Plus/Mission Plus Skills navigational accuracy standards, paragraph 2.16.

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.

DL-6500 1.5 * B D A 3+ 1 UH-1Y & 2+ H-1

Goal. OS - Tactically employ a division in a low to medium threat environment during the conduct of a day OAS, escort or assault support mission. Emphasize route planning, flight member responsibilities, division formations and maneuvering, threat counter-tactics, ASTACSOP, division attacks and communication.

Requirements

Plan, brief, lead and debrief a day OAS, escort, or assault support mission
Develop a plan that supports the ground SOM and commander's intent of the supported unit
Plan and brief division mechanics (objective area maneuver)
Plan and brief division threat reactions
Plan and brief rendezvous and join-up per ASTACSOP/NTTP and tactical situation

Brief penetration/de-penetration/offensive checklist procedures
Use all available planning tools to plan and brief route considerations, sensor acquisition, and target engagement
Conduct division take-off/landing, scatter plan/rendezvous, and lost communication procedures
Maneuver division using appropriate formations and signals
Conduct a rendezvous and join-up
Demonstrate applicable threat counter-tactics
Locate, plot and effectively engage target(s) with the appropriate assets (if applicable)
Direct attacks against target(s)
Control division during en route and objective area operations
Delegate tasks within flight and cockpit
Conduct the debrief, covering pertinent division specifics and learning points

Performance Standards

PUI shall brief IAW ASTACSOP/NTTP.
PUI shall maintain situational awareness of wingmen and mutual support during en route portion of flight and in the objective area.
PUI shall effectively control the division throughout the flight.
PUI shall locate targets in a timely manner.
PUI shall engage target(s) using TTPs appropriate for the scenario.
PUI shall minimize threat exposure and use appropriate threat counter-tactics.
PUI shall use TRANSEC/COMSEC for all communications.
PUI shall adhere to local course rules and comply with applicable range regulations.
PUI shall debrief lessons learned and accurately analyze effectiveness of TTPs.

Prerequisites. 6498, Lead a minimum of three flights as a designated Section Lead. Minimum of: 600 total hours, 200 rotary wing hours, and 50 hours in model.

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares
Range Requirement. Live fire LASER safe range with appropriate LZ

External Syllabus Support. One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)

Crew. NSI+DL/PUI/CC/AO(AG).

DL-6501	**1.5**	*****	**B**	**NS**	**A**	**3+**	**1 UH-1Y & 2+ H-1**

Goal. OS - Tactically employ a division of in a medium to high threat environment during the conduct of a night OAS, escort mission or assault support mission. Emphasize night formation considerations, sensor acquisition, flight member responsibilities, division lighting, ASTACSOP, division attacks, PGM employment and communication.

Requirements

Plan, brief, lead and debrief a night OAS, escort, or assault support mission
Develop a plan that supports the ground SOM and commander's intent of the supported unit
Plan and brief division mechanics (objective area maneuver)
Plan and brief landing plan and fire support plan
Plan and brief division threat reactions
Use all available planning tools to plan and brief night considerations including illumination, shadowing, sensor effectiveness, and target acquisition/engagement/avoidance.
Brief appropriate FAA and Tactical lighting configurations
Conduct a minimum of one night division take-off and one night division landing
Maneuver division using formations and tactics appropriate for ambient illumination
Demonstrate applicable threat counter-tactics

Locate, plot, and effectively engage target(s) with appropriate assets (if applicable)
Control division during en route and objective area operations
Delegate tasks within flight and cockpit
Conduct the debrief, covering pertinent division specifics and learning points

Performance Standards

PUI shall brief IAW ASTACSOP/NTTP.
PUI shall maintain situational awareness of wingmen and mutual support during en route portion of flight and in the objective area.
PUI shall effectively control the division throughout the flight.
PUI shall locate targets in a timely manner.
PUI shall engage target(s) using TTPs appropriate for the scenario.
PUI shall minimize threat exposure and use appropriate threat counter-tactics.
PUI shall use TRANSEC/COMSEC for all communications.
PUI shall adhere to local course rules and comply with applicable range regulations.
PUI shall debrief lessons learned and accurately analyze effectiveness of TTPs.

Prerequisite. 6498, Lead a minimum of three flights as a designated Section Lead. Minimum of: 600 total hours, 200 rotary wing hours, and 50 hours in model.

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with appropriate LZ and thermally significant targets, if available

External Syllabus Support. One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)

Crew. NSI+DL/PUI/CC/AO(AG)

DL-6598 2.0 * B (NS) A 3+ 1 UH-1Y & 2+ H-1

Goal. OS - Tactically employ a division in a low to medium threat environment during the conduct of a day or night OAS, escort or assault support mission. Emphasize range regulations/ procedures, control of fires, power available/maneuvering considerations, objective area mechanics, flight member responsibilities, arm/penetration/de-arm procedures, division attacks and communication.

Requirements

Plan, brief, lead and debrief a day OAS, escort, or assault support mission
Develop a plan that supports the ground SOM and commander's intent of the supported unit
Plan and brief division mechanics (objective area maneuver)
Plan and brief division threat reactions
Plan and brief rendezvous and join-up per ASTACSOP/NTTP and tactical situation
Brief penetration/de-penetration/offensive checklist procedures
Use all available planning tools to plan and brief route considerations, sensor acquisition, and target engagement
Conduct division take-off/landing, scatter plan/rendezvous, and lost communication procedures
Maneuver division using appropriate formations and signals
Conduct a rendezvous and join-up
Demonstrate applicable threat counter-tactics
Locate, plot and effectively engage target(s) with the appropriate assets (if applicable)
Direct attacks against target(s)
Control division during en route and objective area operations
Delegate tasks within flight and cockpit
Conduct the debrief, covering pertinent division specifics and learning points

Performance Standards

PUI shall brief IAW ASTACSOP/NTTP.
PUI shall maintain situational awareness of wingmen and mutual support during en route portion of flight and in the objective area.
PUI shall effectively control the division throughout the flight.
PUI shall locate targets in a timely manner.
PUI shall engage target(s) using TTPs appropriate for the scenario.
PUI shall minimize threat exposure and use appropriate threat counter-tactics.
PUI shall use TRANSEC/COMSEC for all communications.
PUI shall adhere to local course rules and comply with applicable range regulations.
PUI shall debrief lessons learned and accurately analyze effectiveness of TTPs.
exposure and performs appropriate threat counter-tactics.

Prerequisite. 8600, 6500, 6501

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range with appropriate LZ

External Syllabus Support. One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)

Crew. FLSE/PUI/CC/AO(AG)

2.17.9 Flight Leader (FL)

Purpose. To prepare and evaluate a prospective flight lead's ability to plan, brief, lead and debrief a flight.

General. PUI shall conduct the following day/night sortie in order to develop and evaluate the prospective flight lead's flight leadership. At the discretion of the commanding officer cross-cockpit instruction is authorized.

The IP will use the sortie requirement criterion to determine whether the PUI completed the sortie. The PUI will use the performance standards to debrief the flight. Completion of the Flight Leader syllabus meets the requirements for designation as Flight Leader. At the discretion of the squadron commanding officer, a letter designating the pilot as flight leader shall be placed in the NATOPS jacket and APR.

PUI shall have led three flights as a designated Division Leader. PUI shall also have a minimum of 750 total flight hours.

The flight lead event should be an OAS, escort or assault support Event.

PUI shall be evaluated on ordnance delivery utilizing Core Skill Plus ordnance accuracy standards, paragraph 2.16, and navigational accuracy metrics utilizing Core Plus/Mission Plus Skills navigational accuracy standards, paragraph 2.16.

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.

FL-6698	**2.0**	*****	**B,R**	**(NS)**	**A**	**5+**	**1 UH-1Y & 4+ H-1**

Goal. OS - Tactically employ a flight in a low to medium threat environment during the conduct of a day or night OAS, escort or assault support mission. Emphasize ASTACSOP, flight/element integration, routing, objective area mechanics, flight member responsibilities, attack patterns and communication.

Requirements

Plan, brief, lead and debrief a day OAS, escort, or assault support mission
Develop a plan that supports the ground SOM and commander's intent of the supported unit
Plan and brief flight mechanics (objective area maneuver)
Plan and brief flight threat reactions
Plan and brief rendezvous and join-up per ASTACSOP/NTTP and tactical situation
Brief penetration/de-penetration/offensive checklist procedures
Use all available planning tools to plan and brief route considerations, sensor acquisition, and target engagement
Conduct flight take-off/landing, scatter plan/rendezvous, and lost communication procedures
Maneuver flight using appropriate formations and signals
Conduct a rendezvous and join-up
Demonstrate applicable threat counter-tactics
Locate, plot and effectively engage target(s) with the appropriate assets (if applicable)
Direct attacks against target(s)
Control flight during en route and objective area operations
Delegate tasks within flight and cockpit
Conduct the debrief, covering pertinent flight specifics and learning points

Performance Standards

PUI shall brief IAW ASTACSOP/NTTP.
PUI shall maintain situational awareness of wingmen and mutual support during en route portion of flight and in the objective area.
PUI shall effectively control the flight throughout the mission.
PUI shall locate targets in a timely manner.
PUI shall engage target(s) using TTPs appropriate for the scenario.
PUI shall minimize threat exposure and use appropriate threat counter-tactics.
PUI shall use TRANSEC/COMSEC for all communications.
PUI shall adhere to local course rules and comply with applicable range regulations.
PUI shall debrief lessons learned and accurately analyze effectiveness of TTPs.

Prerequisites. 6060, 6061, 8600, 6598, PUI shall have lead three flights as a designated Division Leader. PUI shall also have a minimum of 750 total flight hours.

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares
Range Requirement. Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available

External Syllabus Support. One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)

Crew. FLSE/PUI/CC/AG

2.17.10 Air Mission Commander (AMC)

Purpose. To prepare and evaluate a prospective air mission commander's ability to plan, brief, and command an air component of an assault support or OAS mission.

General. AMC is designated in recognition of experience, demonstrated flight leadership ability and judgment. Work-up for this phase shall consist of completion of the division leader syllabus. Completion of the AMC-6798 meets the requirements for the PUI to be designated an AMC. At the discretion of the squadron commanding officer, a letter designating the PUI as an AMC shall be placed in the NATOPS jacket, APR and AMC-6798 shall be

logged. Due to the limitations of M-SHARP, the AMC code is a 'Ground Evaluted" event. Instructors will ensure that the appropriate AMC flight time will be logged on a NAVFLIR, if flown in the aircraft or simulator. However, the instructor shall ensure a Ground Event is logged with the AMC-6798 code.

Crew Requirements. The AMC-6798 evaluation must be evaluated by a an AMC. There is no requirement for the PUI to conduct aircrew duties during the evaluation.

Ground/Academic Training. The PUI shall demonstrate mastery of OAS, assault support operations, MACCS and MAGTF integration.

AMC-6798 0.0 * B,R (NS) GE ANY TMS OR COC

Goal. OS - Conduct a day or night Air Mission Commander (AMC) check utilizing a MCTL-based mission and a tactical scenario.

Requirements

Plan, brief, lead, and debrief a multi-element, multi-T/M/S tactical mission in any threat environment utilizing at a minimum, one assault element and one RW or FW escort element.

The AMCUI shall be evaluated on his/her ability to integrate the six functions of Marine Aviation and shall lead the mission from an airborne platform or COC (as appropriate).

Discuss

- Problem framing and METT-TSL
- Marine Corps Planning Process (MCPP)/Rapid Response Planning Process (R2P2)
- COA development and task delegation
- Six functions of Marine Aviation
- Aviation Ground Support (AGS) capabilities
- MACCS agencies, functions, and employment
- Threat planning considerations for multiple T/M/S aircraft
- GCE support considerations
- Objective area planning considerations
- Fire Support Coordination Measures (FSCMs)
- Fire support/supporting arms considerations and integration (e.g. indirect fires, CAS)
- RW and FW escort considerations and escort tactics
- Assault support considerations and tactics
- Contingency planning
- Immediate tasking
- Go vs. No-Go criteria
- Event vs. time driven mission execution
- Chain of responsibility and delegation of authority
- C&C platform considerations and Mission Control Area(MCA) selection
- Secure vs. active communications
- EMCON and radio procedures
- Information flow requirements
- Execution checklist utilization

Review

- Tactical mission planning and briefing
- Command and control during a tactical mission

Performance Standards

The AMCUI shall conduct problem framing IAW MCWP 5-1.

The AMCUI shall delegate mission tasks to the most advantageous asset/flight, Ensure coordination and supervision of key personnel during planning.

The AMCUI shall develop a plan that integrates the six functions of Marine Aviation and AGS.

The AMCUI shall develop a plan that fully supports the GCE scheme of maneuver and Essential Fire Support Tasks (EFSTs).

The AMCUI conduct an AMC brief IAW NTTP series publications.

The AMCUI maintain SA on mission progress/execution.

The AMCUI maximize C&C platform capabilities.

The AMCUI demonstrate proper decision making and task delegation in response to immediate missions and/or contingencies.
The AMCUI demonstrate proper understanding and utilization of C4I to facilitate information flow and execution, RW and/or FW escort, secure and active communications, FSCM utilization and supporting arms, and contingency planning and execution.
The AMCUI possess the Tactical and operational knowledge required of an AMC.

Prerequisites. 6070, 6071, 6072, 6598

Ordnance (Optional). (7) 2.75 inch rockets, two crew-served weapons [(600) .50 Cal GAU-21 per side, (1500) 7.62mm GAU-17 per side, or (600) 7.62mm M240 per side], (60) chaff/flares

Range Requirement. Live fire LASER safe range, as required

External Syllabus Support. GCE, MACCS agencies, AGS assets, multiple T/M/S RW and/or FW assets as required, and any other support required based on the Tactical scenario (HST, threat emitter/simulator)

Crew. AMC+FLSE/PUI

2.17.11 Specific Operations Tracking Codes (6900)

Purpose. To provide a vehicle for Tracking Codes associated with specific operations. All codes will be logged (i.e. specialty weapons employment) in conjunction with the appropriately flown sortie.

General. Each pilot assigned to a squadron should complete at least one (1) of each applicable SOTC code during their first fleet tour.

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

SOTC-6900 * B NS A 1 UH-1Y

Goal. OS – Track proficiency in shooting the 2.75 inch Illumination rocket (M-257/M-278)

Requirement. Shoot one (1) 2.75 inch illumination rocket

Ordnance. (1) 2.75 inch illumination rocket

Crew. NSI/PUI/CC/AG

SOTC-6901 * B (NS) A 1 UH-1Y

Goal. OS – Track proficiency in shooting the 2.75 inch guided rocket (APKWS)

Requirement. Shoot one (1) 2.75 inch guided rocket

Ordnance. (1) 2.75 inch guided rocket

Crew. WTO(NSI)/PUI CC/AG

SOTC-6902 * B (NS) A 1 UH-1Y

Goal. OS – Track proficiency in shooting the 2.75 inch flechette rocket

Requirement. Shoot one (1) 2.75 inch flechette rocket

Ordnance. (1) 2.75 inch flechette rocket

Crew. WTO(NSI)/PUI/CC/AG

SOTC-6907 * B (NS) A 2 1 UH-1Y & 1 H-1

Goal. OS – Track Section Leader Brief and Lead Requirements

Requirement. Conduct Section Leader Brief and Lead

Ordnance. As required

Crew. UHC/PUI/CC/AG

SOTC-6998 * B D A 1 UH-1Y

Goal. OS – Day autorotation tracking code.

Requirement. Conduct one daytime autorotation.

Ordnance. As required

Crew. BIP/PUI or PQM/PQM

SOTC-6999 * B NS A 1 UH-1Y

Goal. OS – NS autorotation tracking code.

Requirement. Conduct one NS autorotation.

Ordnance. As required

Crew. BIP/PUI or PQM/PQM

2.18 MISSION ESSENTIAL TASK (MET) PHASE (7000)

Purpose. To assess CMMR representative crews during the execution of the unit's specified METs in order to ensure standardization and combat readiness.

To fulfill the requirements of a Marine Corps Combat Readiness Evaluation (MCCRE) as specified in MCO 3501.1E, Marine Corps Combat Readiness Evaluation.

Prerequisite. Aircrew assessed during this phase shall meet the requirements of a Force Generation Order. The crews should be comprised of deploying personnel to the maximum extent practical.

Admin Notes. The proficiency period for conducting elements of the 7000 phase are:

No less than once every 2 years for active components
No less than once every 5 years for reserve components

Units not scheduled to be assessed at a service level training venue (i.e. ITX, MTNEX, TALONEX) shall conduct elements of the 7000 level phase as a minimum requirement for a unit to deploy.

The MAW Flight Leadership Standardization and Evaluation (FLSE) cadre is the resource used to assess Type/ Model/ Series units for MET capability in accordance with the MCCRE Order. The units assessor will be designated at the Wing level of the unit to be assessed.

Events in this Phase normally require a Force Generation Order prior to commencing the 7000 Stage. Once a unit deploys, is removed from the Force Generation Order, or completes the required 7000-Stage, 7000 Phase currency no longer needs to be maintained. Multiple Events may be accomplished during the same sortie. Results of the MCCRE assessment shall be formatted per Appendix D, 3500.14E and submitted to CG, MCCDC (via AMHS message attachment to CG TECOM MTESD) no later than 45 days after MCCRE completion.

Due to an HMLA's unique composition and multiple T/M/S within a squadron, common METs may be marked as T&R complete regardless of the composition of the element that is evaluated. For example, if a section

of AH-1s are evaluated conducting CAS, the MET-7002 code may be logged for both the AH-1 and UH-1 in MSHARP and reported as complete for the squadron.

Stages. The following stages are included in the Mission Essential Task (MET) Phase of training. **Only METs required per the Force Generation Order shall be evaluated.**

MISSION ESSENTIAL TASKS PHASE	
CORE STAGE	**PAGE NUMBER**
COMBAT ASSAULT TRANSPORT (CAT)	2-77
CLOSE AIR SUPPORT (CAS)	2-82
STRIKE COORDINATION AND RECONNAISSANCE (SCAR)	2-87
FORWARD AIR CONTROL (AIRBORNE) (FACA)	2-90
TACTICAL RECOVERY OF AIRCRAFT AND PERSONNEL (TRAP)	2-89
AERIAL ESCORT (ESC)	2-73
AIR EVACUATION (AE)	2-82
CORE PLUS STAGE	**PAGE NUMBER**
AIRBORNE RAPID INSERTION/EXTRACTION (RIE)	2-97
AIR DELIVERY (AD)	2-103
AIRBORNE COMMAND AND CONTROL PLATFORM (AC2)	2-105
TACTICAL AIR CONTROLLER (AIRBORNE) (TACA)	2-113
EXPEDITIONARY SEA-BASED OPERATIONS (SEA)	2-114

2.18.1 Mission Essential Task (MET) Stage

Purpose. To assess squadrons or detachments executing community specific MET(s) or MET preparatory Events.

General

Prerequisite. If an event requires prerequisites in addition to those listed for the MET Phase, they will be covered in the individual event.

Crew Requirements. The participants required for the 7000 Phase are the evaluated unit and the assessor. The crew requirement is based on the specific event. The assessment shall be conducted from a crew position of the assessor's T/M/S. At the discretion of the assessor, observation of mission planning, briefing/debriefing, and execution from an OP may satisfy a portion of the assessment.

Respectively, the primary, alternate, and tertiary assessors shall be a MATSS representative, WTI (FLSE) from within the parent command designated by the owning Wing, or MAWTS-1 representative. The number of crews evaluated will be based on a percentage required to deploy per the Force Generation Order.

MET-7001 1.5 730 B,R,M (NS) A/S 2 1 UH-1Y & 1 H-1

Goal. Demonstrate the capability to conduct combat assault transport operations in a low to medium threat environment.

Performance Standard. Plan, brief and execute a tactical assault support mission (general support, NEO, resupply, insert, extract, raid) per MCT 1.3.4.1 and the T/M/S specific T&R. If an L-Hour is utilized arrive in the LZ +/- 30 sec within 50m of intended landing point.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase.

Ordnance. IAW Phase.

Range Requirement. Live fire and expendable range as required.

External Syllabus Support. Command and Control system if available. Escort and/or Command and Control aircraft are preferred, if available. Ground Combat Element preferred if available.

MET-7002 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the ability to conduct close air support in a low to medium threat environment.

Performance Standard. Plan, brief and execute a close air support mission per MCT 3.2.3.1.1 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as applicable.

External Syllabus Support. JTAC/TACP is preferred, but may be simulated if necessary.

MET-7003 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the capability to conduct strike coordination and reconnaissance in a low to medium threat environment.

Performance Standard. Plan, brief and execute a tactical strike coordination and reconnaissance evolution per MCT 3.2.3.1.2.3 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as required.

External Syllabus Support. External AR platforms preferred but may be simulated if required.

MET-7005 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the capability to operate as a forward air controller (airborne) in a low to medium threat environment.

Performance Standard. Plan, brief and execute a tactical FAC/A evolution per MCT 3.2.5.4 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as required.

External Syllabus Support. Requirements per FACA-3404.

MET-7006 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the ability to conduct Tactical Recovery of Aircraft and Personnel (TRAP) in a low to medium threat environment.

Performance Standard. Plan, brief and execute a TRAP mission per MCT 6.2.1.1 and the T/M/S specific T&R. Properly employ TRAP template. Effectively communicate with Isolated Personnel, Rescort, RMC and other supporting aircraft.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire and expendable range as required

External Syllabus Support. Assault and/or Command and Control aircraft are preferred if available. Isolated personnel in the objective area is preferred. Use of survival radios is preferred. Ground combat element is preferred if available.

MET-7007 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the capability to conduct aerial escort in a low to medium threat environment.

Performance Standard. Plan, brief and execute an aerial escort evolution per MCT 6.1.1.11 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as required.

External Syllabus Support. Actual assault transport element consisting of at least one aircraft.

MET-7008 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the ability to conduct an air evacuation operation in a low to medium threat environment.

Performance Standard. Plan, brief and execute a tactical air evacuation mission per MCT 6.2.2 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire and expendable range as required

External Syllabus Support. Ground Combat Element and/or Logistics Combat Element is preferred if available

MET-7009 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the capability to conduct operations from expeditionary sea-based sites in a low to medium threat environment.

Performance Standard. Plan, brief and execute any evolution from an expeditionary sea-based site per MCT 1.3.3.3.1 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as required.

External Syllabus Support. Naval shipping platform capable of conducting helicopter operations.

MET-7010 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the capability to airborne rapid insert/extract missions in a low to medium threat environment.

Performance Standard. Plan, brief and execute an airborne RIE evolution per MCT 1.3.4.1.1 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as required.

External Syllabus Support. HRST/Jump/Cast Master as required. Live passengers preferred but may be simulated.

MET-7011 1.5 730 B,R,M (NS) A/S 2 H-1

Goal. Demonstrate the ability to conduct air delivery in a low to medium threat environment.

Performance Standard. Plan, brief and execute a tactical aerial delivery mission per MCT 4.3.4 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range/approved drop zone as required

External Syllabus Support. HST, as required. Jump Master and ground safety personnel, as required

MET-7012 1.5 730 B,R,M (NS) A/S 1 UH-1Y

Goal. Demonstrate the capability to provide an airborne platform for command and control in a low to medium threat environment.

Performance Standard. Plan, brief and execute an airborne CC evolution per MCT 5.3.2.7.4 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as required.

External Syllabus Support. IAW Phase.

MET-7013 1.5 730 B,R,M (NS) A/S 1 UH-1Y

Goal. Demonstrate the capability to act as tactical air controller (airborne) in a low to medium threat environment.

Performance Standard. Plan, brief and execute a TAC(A) evolution per MCT 5.3.2.7.3 and the T/M/S specific T&R.

Instructor: MATSS representative, WTI (FLSE) designated by Wing, or MAWTS-1 representative

Prerequisites. IAW Phase

Ordnance. IAW Phase

Range Requirement. Live fire range as required.

External Syllabus Support. Per TACA-4500.

2.19 AVIATION CAREER PROGRESSION MODEL (8000)

Purpose. To enhance professional understanding of Marine Aviation and the MAGTF and to ensure aviators possess the requisite skills to fill battle command and battle staff positions in support of the ACE and the MAGTF in a joint environment. ACPM academic training requirements will be tracked and managed in M-SHARP. Commanding officers shall ensure the requisite ACPM training requirements have been met prior to designating flight leaders.

General. ACPM courseware is integrated into each Phase of instruction from 2000-6000. All ACPM courseware shall be completed prior to getting the culminating qualification for each phase.

8200 academics must be complete prior to PQM.

8300 academics must be complete prior to UHC.

8600 academics must be complete prior to each corresponding flight leadership stage.

The ACPM courseware can be found on MCALMS at: https://mcalms.usmc.mil
ACPM academic events, along with their identifying prerequisite association with other training phases/stages/events are listed below.

AVIATION CAREER PROGRESSION MODEL	
TRAINING CODES	**COURSEWARE**
CORE SKILL	
ACPM-8200	ACPM 8200 Series
MISSION SKILL	
ACPM-8300	ACPM 8300 Series
FLIGHT LEADERSHIP	
ACPM-8600	ACPM 8600 Series

At the completion of each ACPM Event, the appropriate training code shall be logged in M-SHARP by the individual pilot, or squadron operations personnel, as appropriate.

ACPM Events do not have re-fly intervals.

2.19.1 ACPM Core Skill Training Phase

Purpose. To provide and introduce basic integration of the ACE within the MAGTF and ACE Battle Staff planning.

General. The PUI must be complete the ACPM-8200 series prior to PQM designation.

2.19.2 ACPM Mission Skill Training Events

Purpose. To provide and introduce basic integration of the ACE within the MAGTF and Joint environment.

General. The PUI must be complete the ACPM-8300 series prior to UHC designation.

2.19.3 ACPM Flight Leadership Training Events

Purpose. To provide the prospective flight leader the concepts of basic integration of the MAGTF within the Joint environment.

General. The PUI must be complete the ACPM-8600 series prior to SL designation.

2.20 SYLLABUS EVALUATION FORMS. M-SHARP will upload E-ATF gradable items to use for pilot training jackets.

2.21 SYLLABUS MATRICES GENERAL INFORMATION

2.21.1 T&R Chaining

Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events.

Only events in a sequence entailing demonstration of equivalent skills shall be chained.

When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated.

The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes."

Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated:

Night Systems Optional. Chained codes annotated with a tilde after them, e.g. 2101~NS, are only chain-updated if the chaining code is flown using night systems.

Light Level Optional. Chained codes annotated with a tilde and a 'NS' after them, e.g. 2101~NS, are only chain-updated if the chaining code is flown using night systems during HLL. Chained codes annotated with a tilde and a 'LLL' after them, e.g. 2404~LLL, are only chain-updated if the chaining code is flown using night systems during LLL.

2.21.2 Syllabus Event Conversion. The syllabus event conversion information is used to convert T&R syllabus event proficiency status of the previous T&R syllabus into event proficiency status of the current T&R for individuals.

2.22 UH-1Y T&R SYLLABUS MATRIX (1000 & 5000 PHASE)

UH-1Y PILOT T&R MATRIX CORE SKILL INTRODUCTION (1000 & 5000 PHASE)																									
				ATTAIN				ACAD		SIM		FLIGHT													
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REF	SER CONV	MOD REF	#	TIME	#	TIME	#	TIME	CONDITION	SEAT	TYPE	# A/C or SIM	S-TEN	REFLY	PREREQUISITE	EATF	EVENT CONV
ACADEMICS (ACAD)																									
1000 ACAD	ACAD	Initial LAU	1000	X					1.0					(N)		G			*			New
	ACAD	Mid LAU	1001	X					1.0					(N)		G			*			New
	ACAD	Final LAU	1002	X					1.0					(N)		G			*			New
ACAD TOTAL								**3**	**3.0**	**0**	**0.0**	**0**	**0.0**									
FAMILIARIZATION (FAM)																									
1000 FAM	FAM	Intro Pre/Post Flt	1100	X									**0.0**	D		GE	1		*	1000		1100
	FAM	Rev Pre/Post Flt	1101	X	X	X	X						**0.0**	D		GE	1		485	1100		1101
	SFAM	Checklist	1102	X	X	X	X				**1.5**			D	RS	S	1	X	485	1101		1102
	FAM	Intro FAM	1103	X	X	X	X				**1.5**			D	RS	S	1	X	485	1102		1103
	SFAM	Intro FAM/Course Rules	1104	X									**2.0**	D	RS	A	1		*	1103,1200,1500		1104
	FAM	Intro FAM	1105	X	X	X	X						**2.0**	D	RS	A	1		485	1104		1105
	SFAM	Intro EPs	1106	X							**1.5**			D	RS	S	1	X	*	1105		1106
	SFAM	Intro EPs	1107	X							**1.5**			D	OS	S	1	X	*	1106		1107
	FAM	Review EP/FAM	1108	X		X							**2.0**	D	RS	A	1		*	1107		1108
	FAM	Review FAM	1109	X									**2.0**	D	LS	A	1		*	1108,1202		1109
	SFAM	Review EPs	1110	X	X	X	X				**1.5**			D	OS	S	1	X	485	1109,CRM		1110
	FAM	Review FAM/EP	1111	X									**1.5**	D	RS	A	1	X	*	1110		1111
	SFAM	Eval EPs	1112	X		X					**1.5**			D	OS	S	1	X	*	1111,1107,Co-Pilot Required		1112
	FAM	Review FAM/EP	1113	X	X	X	X						**2.0**	D	RS	A	1		485	1112		1113
	FAM	Eval FAM	1114	X	X	X	X						**2.0**	D	OS	A	1		485	1113,1203,1400,1503,1801		1114
	SFAM	Intro EM	1115	X	X	X	X						**2.0**	D	OS	A	1		485	1114		1115
	SFAM	NVD FAM	1116	X		X					**1.5**			NS	RS	S	1	X	*	1113		1116
	FAM	NVD EPs	1117	X							**1.5**			NS	RS	S	1	X	*	1116		1117
	NFAM	NVD FAM HLL	1118	X									**2.0**	NS	RS	A	1		*	1117		1118
	NFAM	Rev NVD FAM/EP	1119	X	X	X	X						**2.0**	NS	RS	A	1		485	1118		1119
FAM TOTAL								**0**	**0.0**	**8**	**12.0**	**12**	**19.5**									
INSTRUMENTS (INST)																									
1000 INST	SINST	Intro BI	1200	X							**1.5**			(N*)	OS	S	1	X	*	1101		1200
	SINST	Inst NAV	1201	X							**1.5**			(N*)	OS	S	1	X	*	1200		1201
	INST	Local INST	1202	X									**2.0**	(N)	OS	A	1		*	1104,1201		1202
	INST	INST NAV	1203	X									**2.0**	(N*)	OS	A	1		*	1113,1202		1203
	INST	INST Eval	1204	X	X	X	X				**1.5**			(N)	OS	S	1	X	485	1203		1205
INST TOTAL								**0**	**0.0**	**3**	**4.5**	**2**	**4.0**									

UH-1Y PILOT T&R MATRIX CORE SKILL INTRODUCTION (1000 & 5000 PHASE)																								
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				ACAD		SIM		FLIGHT		CONDITION	SEAT	TYPE	# A/C or SIM	S-TEN	REFLY	PREREQUISITE	EATF	EVENT CONV
				BASIC	REF	SER CONV	MOD REF	#	TIME	#	TIME	#	TIME									
FORMATION (FORM)																						
1000 FORM	SFORM	Intro FORM	1300	X									2.0	D	OS	A	2		*	1001,1115		1300
	FORM	Intro Sec Land	1301	X	X								2.0	D	OS	A	2		730	1300		1301
	FORM	Intro NVD FORM	1302	X	X		X						2.0	NS	OS	A	2		485	1300,1802		1302
FORM TOTAL								0	0.0	0	0.0	3	6.0									
TERRAIN FLIGHT (TERF)																						
1000 TERF	TERF	Intro TERF	1400	X									2.0	D	OS	A	1		*	1503,1800,1301~SEC		1400
	TERF	Intro NVD TERF	1401	X									2.0	NS	OS	A	2		*	1118,1302,1400,1301~SEC		1401
TERF TOTAL								0	0.0	0	0.0	2	4.0									
NAVIGATION (NAV)																						
1000 NAV	NAV	Intro DMS NAV	1500	X	X	X	X							(N)	OS	S	1		485	1102		1500
	NAV	Intro FLIR	1501	X		X								(N)	OS	S	1		*	1500		1501
	SNAV	Intro NAV	1502	X	X	X					1.5			D	OS	S	1	X	730	1112,1500,1501		1502
	NAV	Rev NAV	1503	X	X								2.0	D	OS	A	1		730	1113,1502		1503
	NAV	Intro NVD NAV	1504	X									2.0	NS	OS	A	1		*	1118,1302,1503		1504
NAV TOTAL								0	0.0	1	1.5	2	4.0									
SPECIFIC WEAPONS DELIVERY (SWD)																						
1000 SWD	SSWD	Intro SWD	1600	X	X	X	X				1.5			D	OS	S	1	X	485	1001,1115		1600
	SWD	Intro CSW	1601	X									1.5	D	OS	A	1		*	1300,1600		1601
	SWD	Intro Rockets	1602	X	X	X							1.5	D	OS	A	1		730	1601		1602
SWD TOTAL								0	0.0	1	1.5	2	3.0									
THREAT COUNTER TACTICS (TCT)																						
1000 TCT	STCT	Intro ASE,APKWS	1700	X	X	X	X				1.0			D	OS	S	1	X	485	1001,1115		1700
	TCT	Rev NTIS	1701	X									2.0	D	OS	A	1		*	1700		New
TCT TOTAL								0	0.0	1	1.0	0	0.0									
ASSAULT SUPPORT (ASPT)																						
1000 ASPT	ASPT	Intro CAT	1800	X									1.5	D	OS	A	1		*	1113		1800
	ASPT	Rev CAT	1801	X	X	X							1.5	D	OS	A	1		730	1800		1801
	ASPT	Intro NVD CAT	1802	X	X	X	X						1.5	NS	OS	A	1		485	1118,1801		1802
ASPT TOTAL								0	0.0	0	0.0	3	4.5									
CORE SKILL INTRODCUTION EVALUATION (CSIX)																						
1000 CSIX	SCSIX	NATOPS Eval	1900	X	X	X	X				1.5			D	OS	S	1	X	485	6002,6003,All Previous Core Skill Intro Events	X	1900
	CSIX	Core Intro Eval	1901	X	X	X	X						2.0	D	OS	A	2		485	1204,1900	X	1901
CSIX TOTAL								0	0.0	1	1.5	1	2.0									
CORE SKILL INTRODUCTION PHASE TOTAL								3	3.0	15	22.0	27	47.0									

UH-1Y PILOT T&R MATRIX CORE SKILL INTRODUCTION (1000 & 5000 PHASE)																							
				ATTAIN				ACAD		SIM		FLIGHT											
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REF	SER CONV	MOD REF	#	TIME	#	TIME	#	TIME	CONDITION	SEAT	TYPE	# A/C or SIM	S-TEN	REFLY	PREREQUISITE	EATF	EVENT CONV
ACADEMICS (ACAD)																						
5000 ACAD	ACAD	Fleet Replacement Squadron Instructor Course (FRSIC)	5060	X					1.0					(N)		G			*			5060
	ACAD	Familiarization Stage Standardization Lecture	5061	X					1.0					(N)		G			*			5061
	ACAD	Instrument Stage Standardization Lecture	5062	X					1.0					(N)		G			*			5062
	ACAD	Formation Flight Stage Standardization Lecture	5063	X					1.0					(N)		G			*			5063
	ACAD	TERF Stage Standardization Lecture	5064	X					1.0					(N)		G			*			5064
	ACAD	Navigation Stage Standardization Lecture	5065	X					1.0					(N)		G			*			5065
	ACAD	Specific Weapons Delivery Stage Standardization Lecture	5066	X					1.0					(N)		G			*			5066
ACAD TOTAL								**7**	**7.0**	**0**	**0.0**	**0**	**0.0**									
FLEET REPLACEMENT STANDARDIZATION INSTRUCTOR (FRSI)																						
5000 FRSI	SFRSI	(S) Rev EP	5310	X							1.5			D	LS	S	1	X	*	5202		5310
	FRSI	Rev FAM/INST	5311	X									**2.0**	D	LS	A	1		*	5310		5311
	FRSI	Rev FAM/INST	5312	X									**2.0**	D	LS	A	1		*	5310		5312
	FRSI	Rev FAM/TERF/CAT	5313	X									**2.0**	D	LS	A	1		*	5310		5313
	FRSI	Rev FORM	5314	X	X								**2.0**	D	LS	A	2		730	5311,5312,5313		5314
	FRSI	Rev SWD	5315	X	X								**2.0**	D	LS	A	1		730	5311,5312,5313		5315
	FRSI	ANI STAN	5316	X	X						1.5			D	LS	S	1	X	730	FRSI,6002,6003	X	5316
	FRSI	Rev NVD FAM/CAT/TERF	5317	X	X								**2.0**	NS	LS	A	1		730	NSI,5905,5311,5312,5313		5317
FRSI TOTAL								**0**	**0.0**	**2**	**3.0**	**6**	**12.0**									
NIGHT SYSTEMS FAMILIARIZATION INSTRUCTOR (NSFI)																						
5000 NSFI	NSFI	NVG TERF/NAV IUT	5600	X									**2.0**	NS	LS	A	1		*			5600
	NSFI	NVD FORM IUT	5601	X									**2.0**	NS	LS	A	2		*	5600		5601
	NSFI	NSFI Check	5602	X	X								**2.0**	NS	LS	A	1		730	5601	X	5602
NSFI TOTAL								**0**	**0.0**	**0**	**0.0**	**3**	**6.0**									

2.23 UH-1Y T&R PILOT MATRIX (2000-8000 PHASE)

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																										
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN				ACAD		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
				BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME											
ACADEMICS (ACAD)																										
ACAD	ACAD	HMLA Radios	2000	X					1.0					(N)		G				*				2000
	ACAD	NITE Lab Courseware	2001	X					9.0					(N)		G				*				New
	ACAD	H-1 Aerodynamics	2002	X					1.0					(N)		G				*				2012
	ACAD	ROC-V	2011	X					1.0					(N)		G				*				2011
	ACAD	(S) Evasive Maneuvers	2021	X					1.0					(N)		G				*				2021
	ACAD	(S) Threat Analysis	2022	X					1.0					(N)		G				*				New
	ACAD	(S) HMLA ASE	2023	X	X				1.0					(N)		G				365				2023
	ACAD	UH-1 FLIR Employment	2042	X					1.0					(N)		G				*				2042
	ACAD	UH-1 Ordnance Delivery	2060	X					1.0					(N)		G				*				2060
	ACAD	UH-1 Weapons Systems	2061	X					1.0					(N)		G				*				2061
	ACAD	UH-1 Rockets	2062	X					1.0					(N)		G				*				2062
	ACAD	(S) AGM-114 Hellfire	2063	X					1.0					(N)		G				*				2063
	ACAD	HMLA FARP Operations	2090	X					1.0					(N)		G				*				2090
ACAD SKILL TOTAL								13	21.0	0	0.0	0	0.0											
TERRAIN FLIGHT/NAVIGATION (TERF)																										
TERF	TERF	Day TERF	2100	X	X								2.0	D	OS	A	1			180	2002,1901			2100
	TERF	HLL TERF	2101	X	X	X	X						2.0	NS	OS	A	1			180	2001,2100	2100		2101
	TERF	LLL TACFORM/TERF	2102	X	X		X						1.5	NS	OS	A	2			180	2101,2404	2100,2101		2702
TERF SKILL TOTAL								0	0.0	0	0.0	3	5.5											
THREAT COUNTER TACTICS (TCT)																										
TCT	STCT	(S) Intro ASE RADAR	2200	X							1.5			D	OS	S	1	X		*	2021,2022,2023,1901			2200
	STCT	(S) TAC Employ ASE	2201	X	X	X	X				1.5			(NS)	OS	S/A	2	X	2	365	2200,2100~AC,2101~AC&NS	2100~AC,2101~AC&NS		2201
TCT SKILL TOTAL								0	0.0	2	3.0	0	0.0											
RECONNAISSANCE (REC)																										
REC	REC	DAY Recce	2300	X									1.5	D	OS	A	1			*	2011,2001,2042,2101~AC	2100~AC		2300
	REC	NVD Recce	2301	X	X	X	X						1.5	NS	OS	A	1			180	2101,2300	2100,2101		2301
REC SKILL TOTAL								0	0.0	0	0.0	2	3.0											
COMBAT ASSAULT TRANSPORT (CAT)																										
CAT	CAT	Day TAC Landing	2400	X									1.5	D	OS	A	1			*	1901			2400
	CAT	HLL TAC Landing	2401	X									1.5	NS	OS	A	1			*	2400			2401
	CAT	Sec TAC Approaches	2402	X	X								1.5	D	OS	A	2			180	2400,2100			2402
	CAT	HLL Sec TAC Approaches	2403	X	X	X	X						1.5	NS	OS	A	2			180	2401,2402,2101	2402		2403
	CAT	NVD LLL FAM/NAV	2404	X		X							2.0	NS	RS	A	1			*	2802,2403			2701
	CAT	NVD LLL SEC Landings	2405	X	X	X	X						1.5	NS	OS	A	2			180	2404	2402,2403		2703
CAT SKILL TOTAL								0	0.0	0	0.0	6	9.5											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																								
				ATTAIN				ACAD		SIM		FLIGHT												
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
SPECIFIC WEAPONS DELIVERY (SWD)																								
SWD	SSWD	(S) Rkt/Fixed Fwd Gun	2600	X							1.5			D	OS	S	1	X		*	2060,2061,2062,2200			2600
	SSWD	(S) PGM Delivery	2601	X	X	X					1.5			D	OS	S/A	1	X		730	2200,2300,2600			NEW
	SWD	Rkt/Gun Delivery	2603	X									1.5	D	OS	A	1			*	2100,2600			2603
	SWD	Rkt/Gun Delivery	2604	X	X								1.5	D	OS	A	1			180	2201,2603	2201		2604
	SWD	Scored Tgt Delivery	2605	X	X	X	X						1.5	D	OS	A	1			180	2604	2604		2605
	SSWD	(S) NVD HLL Rkt/Gun	2606	X							1.5			NS	OS	S/A	1	X		*	2604	2604~AC		2606
	SWD	NVD HLL Rkt/Gun	2607	X	X	X							1.5	NS	OS	A	1			180	2101,2606	2604		2607
	SSWD	(S) NVD LLL Ord Del	2608	X		X					1.5			NS	OS	S/A	1	X		*	2607,NSQ~NS,2102~AC	2604~AC,2607~AC,2102~AC		2608
	SWD	NVD LLL Ord Rev	2609	X	X	X	X						1.5	NS	OS	A	1			180	2608,2102	2604,2607,2404,2100		2609
	SSWD	Intro Moving Tgt	2610	X	X		X						1.5	(NS)	OS	S/A	1	X		365	2603,2607~NS,2609~LLL	2604,2607~NS,2609~LLL		2610
SWD SKILL TOTAL								0	0.0	4	6.0	6	9.0											
FAMILIARIZATION (FAM)																								
FAM	FAM	FAM/INST Prof	2800	X	X	X	X						1.5	(NS)	OS	A	1			180	1901			2800
	SFAM	(S) EP Sim	2801	X	X	X	X				1.5			(NS)	OS	S	1	X		90	1901			2801
	SFAM	(S) NVD LLL A/C EPs	2802	X							1.5			NS	RS	S/A	1	X		*	NSQ HLL~NS	2801		2700
FAM SKILL TOTAL								0	0.0	1	3.0	1	1.5											
EXPEDITIONARY SHORE-BASED SITE OPERATIONS (EXP)																								
EXP	EXP	DAY RVL	2900	X	X	X	X						1.5	D	OS	A	1			180	2402			2900
	EXP	NS RVL	2901	X	X	X	X						1.5	NS	OS	A	1			180	2403,2405~LLL	2900		2901
	EXP	Day FARP	2902	X										D	OS	A	1			*	2090,2100			2902
	EXP	NS FARP	2903	X	X		X							NS	OS	A/S*	1			180	2090,2100,2404~LLL			2903
EXP SKILL TOTAL								0	0.0	0	0.0	2	3.0											
2000 PHASE TOTAL								13	21.0	7	12.0	20	31.5											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																									
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
				BASIC	REFRESHER	SER CONV		#	TIME	#	TIME	#	TIME											
ACADEMICS (ACAD)																									
ACAD	ACAD	Intel Support for Aviation	3000	X					1.0					(N)		G				*				3000
	ACAD	Problem Framing	3001	X					1.0					(N)		G				*				3001
	ACAD	ROE	3002	X					1.0					(N)		G				*				3002
	ACAD	Execution Checklist	3003	X					1.0					(N)		G				*				3004
	ACAD	Objective Area Planning*	3004	X	X				1.0					(N)		G				365				3005
	ACAD	Rapid Response Planning	3005	X					1.0					(N)		G				*				3007
	ACAD	(S) Radar Guided Surface to Air Missiles	3006	X					1.0					(N)		G				*				3008
	ACAD	(S) Radar Theory	3007	X					1.0					(N)		G				*				New
	ACAD	(S) IR SAM threat to RW Aircraft*	3008	X	X				1.0					(N)		G				365				3010
	ACAD	(S) ADA threat to RW Aircraft*	3009	X	X				1.0					(N)		G				365				3011
	ACAD	(S) Electronic Warfare	3010	X					1.0					(N)		G				*				3013
	ACAD	Assault Support Escort Tactics*	3011	X	X				1.0					(N)		G				365				3019
	ACAD	H-1 Escort TTPs	3012	X					1.0					(N)		G				*				New
	ACAD	UH-1 Assault Support Planning	3021	X					1.0					(N)		G				*				3023
	ACAD	UH-1 Assault Support Execution	3022	X					1.0					(N)		G				*				3024
	ACAD	CASEVAC	3023	X					1.0					(N)		G				*				3027
	ACAD	Urban CAS*	3031	X	X				1.0					(N)		G				365				3031
	ACAD	Close Air Support	3032	X					1.0					(N)		G				*				3032
	ACAD	CAS STAN*	3033	X	X				1.0					(N)		G				365				3033
	ACAD	(S) RW Weaponeering	3034	X					1.0					(N)		G				*				3034
	ACAD	HMLA AR and SCAR TTPs	3035	X					1.0					(N)		G				*				3035
	ACAD	FAC(A) Ground School	3040	X					5.0					(N)		G				*				New
	ACAD	JFAC(A) Courseware*	3041	X					12.0					(N)		G				*				3041
	ACAD	FAC(A) TTPs	3042	X	X				1.0					(N)		G				365				3042
	ACAD	(S) TRAP	3051	X					1.0					(N)		G				*				3039
ACAD SKILL TOTAL								25	40.0	0	0.0	0	0.0											
ESCORT (ESC)																									
ESC	SESC	(S) ASPT ESC	3100	X	X		X				1.5			D	OS	S/A	2	X	2	365	3004,3011,3012,2604			3100
	ESC	DAY ASPR ESC	3101	X									1.5	D	OS	A	2			*	3011,3012,3100,2604~ORD			3101
	ESC	NVD ASPR ESC	3102	X	X		X						1.5	NS	OS	A/S*	2			365	3101,2403,2102~LLL,2607~NS&ORD,2609~LLL&ORD	2201,2301~AC&NS,3101,2102~AC&LLL		3102
	SESC	SFC ESC	3103	X	X						1.5			(NS)	OS	S/A	2	X	2	365	2604,2607~NS&ORD,2609~LLL&ORD	2201,2301~NS,2102~LLL&ORD		3103
	EXP	EXP CSP																						
	NSQ-LLL	NSQ-HLL, 2802,2102,2404,2405																						
ESC SKILL TOTAL								0	0.0	2	3.0	2	3.0											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																								
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
				BASIC	REFRESHER	SER CONV		#	TIME	#	TIME	#	TIME											
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																								
CAT	GCAT	(G) Utility Prac App	3200	X	X	X	X		1.0					D	OS	GE	1			365	3021,3022,2402			3200
	CAT	Fastrope/Rappel	3201	X	X		X						**1.0**	D	OS	A	1			365	2402,3200			3200
	CAT	NVD Fastrope/Rappel	3202	X	X		X						**1.0**	NS	OS	A	1			365	3201,2403~NS,2405~LLL,NSQ HLL~NS,NSQ LLL~LLL	2404~LLL,3201		3201
	SCAT	(S) Urban/Degraded CAT	3203	X	X		X				**1.5**			(NS)	OS	S/A	2	X	2	365	2403,3200,2405~LLL,NSQ~NS,2604~ORD	2402		3202
	SCAT	(S) NVD Insert Extract	3204	X	X	X	X				**1.5**			NS	OS	S/A	2	X	2	365	3203,2403,2405,2604,NSQ HLL~NS,NSQ LLL~LLL,2607~NS&ORD,2609~LLL &ORD	2301,2402,2403,2102~LLL, 2405~LLL,3203		3203
	CAT	Long Range CAT	3205	X	X	X	X						**2.0**	NS	OS	A/S*	2			365	3021,3022,3200,3204,NSQ HLL~NS, NSQ LLL~LLL	2301,2402,2403,2102~LLL, 2405~LLL,3204		3204
	EXP	EXP CSP																						
	NSQ-LLL	NSQ-HLL, 2802,2102,2404,2405																						
3000 CAT SKILL TOTAL								**1**	**1.0**	**2**	**3.0**	**3**	**4.0**											
CASUALTY EVACUATION (AE)																								
AE	EVAC	CASEVAC Trk Code	3206	X	X		X						**0.0**	(NS)	OS	A	1			365	3200,3023,2400,2403~NS,2405~LLL			3206
	EXP	EXP CSP																						
	NSQ-LLL	NSQ-HLL, 2802,2102,2404,2405																						
AE SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**1**	**0.0**											
CLOSE AIR SUPPORT (CAS)																								
CAS	SCAS	(S) Intro CAS	3300	X							**1.5**			D	OS	S	1	X	2	*	3030,3031,3032,3033,2201,2301, 2604	2201		3300
	CAS	Day CAS	3301	X		X							**1.5**	D	OS	A	2			*	3300	2201		3301
	CAS	NVD CAS	3302	X	X	X	X						**1.5**	NS	OS	A/S	2	X	2	180	2102,3301,2609~LLL	2201,2301,3301,2404~LLL,2102~LLL		3302
	CAS	LLL CAS	3303	X	X		X						**1.5**	NS	OS	A	2			180	2609,3302	2201,2301,3301,3302, 2404~LLL,2102~LLL		3303
	CAS	URB CAS	3304	X	X		X						**1.5**	(NS)	OS	A/S	2	X	2	365	3301,3302~NS,3303~LLL	3301,2201,2301,2404~LLL,2102~LLL,3302~NS, 3303~LLL		3304
	SWD	NVD LLL Ord Rev	2609	X	X	X	X													180				
	EXP	EXP CSP																						
	NSQ-LLL	NSQ-HLL, 2802,2102,2404,2405																						
CAS SKILL TOTAL								**0**	**0.0**	**1**	**1.5**	**4**	**6.0**											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																									
				ATTAIN				ACAD		SIM		FLIGHT													
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
STRIKE COORDINATION AND RECONNAISSANCE (SCAR)																									
SCAR	SCAR	AR	3305	X	X		X						**1.5**	(NS)	OS	A/S	2	X	2	730	3035,2102,2201,2301,2604,2607~NS,2609~LLL	2100,2101~NS,2201,2301~NS,2102~LLL,2405~LLL		3305
	SSCAR	(S) SCAR	3306	X	X		X				**1.5**			(NS)	OS	S/A	2	X	2	365	3305,2609~AC&LLL	2100~AC,2101~AC&NS,2201,2301~AC&NS,2404~AC&LLL,2102~AC&LLL,3305~AC		3307
	SWD	NVD LLL Ord Rev	2609	X	X		X													180				
	EXP	EXP CSP																						
	NSQ-LLL	NSQ-HLL, 2802,2102,2404,2405																						
SCAR SKILL TOTAL								**0**	**0.0**	**1**	**1.5**	**0**	**1.5**											
FORWARD AIR CONTROLLER (AIRBORNE) [FAC(A)]																									
FAC(A)	FAC(A)	IDF Ctrl	3400	X	X		X						**2.0**	(NS)	OS	A/S*	1	X		365	3041,3042,6300			3400
	SFAC(A)	RW Control	3401	X	X		X				**1.5**			(NS)	OS	S/A	2	X		*	3041,3042,3043,6398			3401
	FAC(A)	FW Control	3402	X	X		X						**2.0**	D	OS	A/S*	2	X		*	3041,3042,3043,6398	3301		3402
	SFAC(A)	NVD Urban FW/RW Control	3403	X	X		X				**1.5**			NS	OS	S/A	1	X		*	3401,3402,6398	3301,3303~NS		3403
	FAC(A)	Sup Arms Consolidate	3404	X	X	X	X						**2.0**	(NS)	OS	A/S*	2	X		365	3400,3401,3402,3403,6398	3301,3303~NS,3403~NS		3404
	SFAC(A)	FAC(A) Standardization	3405	X	X		X				**1.5**			(NS)	OS	S/A	1	X		730	3400,3403,6398	3404		6906
	SWD	NVD LLL Ord Rev	2609	X	X	X	X													180				
	EXP	EXP CSP																						
	NSQ-LLL	NSQ-HLL, 2802,2102,2404,2405																						
FAC(A) SKILL TOTAL								**0**	**0.0**	**3**	**4.5**	**3**	**6.0**											
TACTICAL RECOVERY OF AIRCRAFT AND PERSONNEL (TRAP)																									
TRAP	TRAP	TRAP	3500	X	X		X						**1.5**	(NS)	OS	A/S	2	X	2	365	3051,2102,3100,3200,3101~NS,2604~ORD	3101~NS,2404~LLL,2102~LLL		3308
	ESC	NVD ASPR ESC	3102	X	X		X							NS	OS	A/S*	2			365				
	EXP	EXP CSP																						
	NSQ-LLL	NSQ-HLL, 2802,2102,2404,2405																						
TRAP SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**1**	**1.5**											
3000 PHASE TOTAL								**26**	**41.0**	**9**	**13.5**	**14**	**22.0**											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																								
				ATTAIN				ACAD		SIM		FLIGHT												
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
ACADEMICS (ACAD)																								
ACAD	ACAD	High Altitude Ops/Power Mang	4012	X					1.0					(N)		G				*				4012
	ACAD	A/A Considerations	4030	X					1.0					(N)		G				*				4030
	ACAD	DACM Trng	4031	X					1.0					(N)		G				*				4031
	ACAD	DACM TAC Gameplan	4032	X					1.0					(N)		G				*				4032
	ACAD	(S)RW Threat to MAGTF	4033	X					1.0					(N)		G				*				4033
	ACAD	(S)Atck Helo Threat RW	4034	X					1.0					(N)		G				*				4034
	ACAD	(S)FW Threat to MAGTF	4035	X					1.0					(N)		G				*				4035
	ACAD	(S)FW Threat to RW	4036	X					1.0					(N)		G				*				4036
	ACAD	TACC	4050	X					1.0					(N)		G				*				4050
	ACAD	TAC(A) TTPs	4051	X					1.0					(N)		G				*				4051
	ACAD	Intro to Shipboard Ops	4060	X					1.0					(N)		G				*				New
	ACAD	(S) HMLA Sea-Based Ops	4061	X					1.0					(N)		G				*				New
	ACAD	(S) VBSS	4062	X					1.0					(N)		G				*				New
ACAD SKILL TOTAL								**13**	**13.0**	**0**	**0.0**	**0**	**0.0**											
AIRBORNE RAPID INSERTION/EXTRACTION (RIE)																								
RIE	RIE	Para Ops	4100	X									**1.0**	(NS)	OS	A	1			*	2400,2403~NS,2405~LLL			4100
	RIE	Day Water Insertion	4101	X	X		X						**1.5**	D	OS	A	1			730	2100,2400	2100		4101
	RIE	Night Water Insertion	4102	X	X		X						**1.5**	(NS)	OS	A	1			365	4101,2403~NS,2405~LLL	2101		4102
	RIE	SPIE	4103	X	X		X						**1.5**	(NS)	OS	A	1			365	2400,2403~NS,2405~LLL			4103
	RIE	Hoist Ops	4104	X	X	X	X						**1.5**	(NS)	OS	A	1			365	2100,2400,2403~NS,2405~LLL			4105
		NSQ LLL,2405																						
RIE SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**5**	**7.0**											
COMBAT ASSAULT TRANSPORT (CAT)																								
CAT	SCAT	(S) MAT Intro	4105	X							**1.5**			D	OS	S/A	1	X		*	2400,4012			4105
	CAT	MAT Review	4106	X	X		X						**2.0**	(NS)	OS	A	1			365	2100,4105,2101~NS,2403~NS,2404~LLL	2404~LLL,2100,2101~NS		4106
	CAT	Sniper Ops	4107	X									**1.5**	(NS)	OS	A	1			*	2400,2600,HSQ HLL~NS,NSQ LLL~LLL			4107
	SCAT	(S) High Threat Insert	4108	X	X		X				**1.5**			(NS)	OS	S/A	2	X	2	730	6498	2201,2402~AC,2403~AC&NS,2402~AC,2405~AC&LLL,3203~AC&NS~3204, AC&LLL~3205		4108
		NSQ LLL,2405																						
CAT SKILL TOTAL								**0**	**0.0**	**2**	**3.0**	**2**	**3.5**											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																								
				ATTAIN				ACAD		SIM		FLIGHT												
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
AIR DELIVERY (AD)																								
AD	AD	External Cargo Procedures	4109	X	X		X						1.0	D	OS	A	1			730	2100	2100,2400		4109
AD SKILL TOTAL								0	0.0	0	0.0	1	1.0											
AIR DELIVERY+ (AD+)																								
AD+	SAD	Non-Permissive AD	4110	X	X		X				1.5			(NS)		S/A	2			365	6498	2402~AC,2403~AC&LLL,2102~AC&LLL, 2405~AC&LLL,3203~AC		4110
		NSQ LLL,2405																						
AD+ SKILL TOTAL								0	0.0	1	1.5	0	0.0											
AIRBORNE COMMAND AND CONTROL (AC2)																								
AC2	AC2	Acts as an AC2 platform	4111	X	X		X						1.5	(NS)	OS	A/S	1	X		730	2400,HSQ HLL~NS,NSQ LLL~LLL			4111
AC2 SKILL TOTAL								0	0.0	0	0.0	1	1.5											
ESCORT (ESC)																								
ESC	ESC	Med/High Threat ESC	4200	X	X	X	X						1.5	(NS)	OS	A/S	2	X	2	730	6498	2100,2101~NS,2201,2301~NS,3301, 2102~NS,3302~NS,3303~LLL		4200
	SWD	NVD LLL Ord Rev	2609	X	X	X	X													180				
		NSQ LLL,2102																						
ESC SKILL TOTAL								0	0.0	0	0.0	1	1.5											
CLOSE AIR SUPPORT (CAS)																								
CAS	CAS	Med/High Threat CAS	4201	X	X	X	X						1.5	(NS)	OS	A/S	2	X		730	6498	2100,2101~NS,2201,2301~NS,3301, 2102~NS,3302~NS,3303~LLL		4201
	SWD	NVD LLL Ord Rev	2609	X	X	X	X													180				
		NSQ LLL,2102																						
CAS SKILL TOTAL								0	0.0	0	0.0	1	1.5											
STRIKE COORDINATION AND RECONNAISSANCE (SCAR)																								
SCAR	SSCAR	(S) Med/High Threat SCAR	4202	X	X	X	X				1.5			(NS)	OS	S/A	2	X	2	730	6498	3307, 2100~AC, 2101~NS&AC, 2201, 2301~NS, 2404~LLL&AC, 2102~LLL&AC, 3305~AC		4207
	SWD	NVD LLL Ord Rev	2609	X	X	X	X													180				
		NSQ LLL,2102																						
SCAR SKILL TOTAL								0	0.0	1	1.5	0	0.0											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																									
				ATTAIN				ACAD		SIM		FLIGHT													
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
DEFENSIVE AIR COMBAT MANEUVERING (DACM)																									
DACM	DACM	1v1 RW	4301	X		X							1.0	D	OS	A	1			*	2101,2201,2300,2600,4030,4031,4032	2100		4301
	DACM	2v1 RW	4302	X	X		X						1.0	D	OS	A	2			485	4301	2100		4302
	DACM	Tactical RW	4303	X									2.0	D	OS	A	2			*	3013,4030,4031,4032,4033,4034,4302	2100		4303
	DACM	1v1 FW	4304	X									1.0	D	OS	A	1			*	2101,2201,2300,2600,4030,4031,4332	2100		4304
	DACM	2v2 FW	4305	X	X		X						1.0	D	OS	A	2			485	4030, 4031, 4032, 4035, 4036, 4304	2100		4305
DACM SKILL TOTAL								0	0.0	0	0.0	5	6.0												
CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR WARFARE (CBRN)																									
CBRN	SCBRN	(S) Protective Mask	4400	X	X		X				1.0			D/NS	OS	S/A	1	X		1095	2800,2100~AC,2101~AC&NS,2404~AC&LLL	2800		4400
CBRN SKILL TOTAL								0	0.0	1	1.0	0	0.0												
TACTICAL AIR COORDINATOR AIRBORNE OPERATIONS [TAC(A)]																									
TAC(A)	TAC(A)	TAC(A)	4500	X	X		X						2.0	(NS)	OS	A	1			730	FAC(A) QUAL,4050,4051,6498	4111		4500
TAC(A) SKILL TOTAL								0	0.0	0	0.0	1	2.0												
SEA-BASED EXPEDITIONARY OPERATIONS (SEA)																									
SEA	SSEA	(S) Intro FCLP	4600	X							1.5			D,NS,N*	OS	S	1	X		*	2800,4060,4061			2500
	SEA	Day FCLP	4601	X	X								1.0	D	OS	A	1			365	4600			2501
	SEA	Night FCLP	4602	X	X		X						1.0	NS,N*	OS	A	1			365	4601	4601		2502
	SEA	Day CQ	4603	X	X	X							1.0	D	OS	A	1			365	4601	4601		4600
	SEA	NVD CQ	4604	X	X	X	X						1.0	NS	OS	A	1			365	4602,4603,2403,NSQ HLL	4601,4602,4603,4605		4601
	SEA	Unaided CQ	4605	X	X	X							1.0	N*	OS	A	1			365	4603,4602	4601,4602,4603		4602
		NSQ LLL,2405																						
SKILL TOTAL								0	0.0	0	0.0	3	3.0												
ELECTRONIC WARFARE (EW)																									
EW	EW	Intro to EW	4700	X	X		X							(NS)	OS	GE	1			730	6398			4700
EW SKILL TOTAL								0	0.0	0	0.0	0	0.0												

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																									
				ATTAIN				ACAD		SIM		FLIGHT													
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
ACADEMICS (ACAD)																								
ACAD	ACAD	Intro to Training and Readiness	5001	X				1	1.0					(N)		G				*				5001
	ACAD	Coach or Umpire	5002	X				1	1.0					(N)		G				*				5003
	ACAD	Student Trends	5003	X				1	1.0					(N)		G				*				5004
	ACAD	Briefing/Debriefing	5004	X				1	1.0					(N)		G				*				5005
	ACAD	How to Write ATF	5005	X				1	1.0					(N)		G				*				5012
	ACAD	Instructional STAN	5006	X				1	1.0					(N)		G				*				5013
	ACAD	How to Give Quality X	5007	X				1	1.0					(N)		G				*				5022
	ACAD	How to Build Scenario	5008	X				1	1.0					(N)		G				*				5023
	ACAD	FAC(A)I Presentation	5040	X				1	1.0					(N)		GE				*				New
	ACAD	FAC(A)I Chalk Talk	5041	X				1	1.0					(N)		G				*				New
	ACAD	FRSSI Course	5060	X				1	1.0					(N)		G				*				New
	ACAD	FAM Stan Lecture	5061	X				1	1.0					(N)		G				*				New
	ACAD	Inst Stan Lecture	5062	X				1	1.0					(N)		G				*				New
	ACAD	Form Stan Lecture	5063	X				1	1.0					(N)		G				*				New
	ACAD	TERF Stan Lecture	5064	X				1	1.0					(N)		G				*				New
	ACAD	Nav Stan Lecture	5065	X				1	1.0					(N)		G				*				New
	ACAD	SWD Stan Lecture	5066	X				1	1.0					(N)		G				*				New
	ACAD	DACM RW Presentation	5080	X				1	1.0					(N)		GE				*				New
	ACAD	DACM FW Presentation	5081	X				1	1.0					(N)		GE				*				New
	ACAD	NSI Presentation	5090	X				1	1.0					(N)		GE				*				5090
ACAD SKILL TOTAL								20	20.0	0	0.0	0	0.0											
BASIC INSTRUCTOR PILOT (BIP)																								
BIP	SBIP	(S) Sim Instruction/FAM/EP	5100	X	X	X					1.5			D	OS	S	1	X		*	6398,5001,5002,5003,5004,5005, 5006,5007,5008	2801		NEW
	SBIP	(S) INST/CQ Review	5101	X							1.5			D	OS	S/A	1	X		*	5100	2801		5100
	SBIP	(S) Instruct CAL,RVL,RIE	5102	X	X	X					1.5			D	OS	S/A	1	X		*	5101	2800~AC		5102
	BIP	Instruct CAL,RVL,RIE	5103	X	X	X							2.0	D	OS	A	2			*	5102	2402		5103
BIP SKILL TOTAL								0	0.0	3	4.5	1	2.0											
TERRAIN FLIGHT / NAVIGATION INSTRUCTOR (TERFI)																								
TERFI	TERFI	TERF NAV	5110	X	X	X							2.0	D	OS	A	1			*	5103	2100		5111
TERFI SKILL TOTAL								0	0.0	0	0.0	1	2.0											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																									
				ATTAIN				ACAD		SIM		FLIGHT													
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
WEAPONS TRAINING OFFICER (WTO)																									
WTO	SWTO	(S) UH-1 TEN Instruction	5200	X	X	X					1.5			D	OS	S	1	X		*	5100,5110			NEW
	SWTO	(S) UH- Mission Profiles	5201	X	X	X					1.5			D	OS	S/A	1	X		*	5200,5110			5200
	SWTO	(S) OAS Scenario Dev/Instruction	5202	X	X	X					1.5			D	OS	S/A	1	X		*	5201			5201
	WTO	CAT Instruction	5203	X									1.5	D	OS	A	2			*	5202	2100,2201		5202
	WTO	OAS Instruction	5204	X	X	X							1.5	D	OS	A	2			*	5202	2100,2201,2604		5203
WTO SKILL TOTAL								0	0.0	3	4.5	2	3.0											
CONTRACT SIMULATOR INSTRUCTOR (CSI)																									
CSI	SCSI	(S) Stan Eval	5300	X			X				1.5			D	OS	S		X		365				5300
CSI SKILL TOTAL								0	0.0	1	1.5	0	0.0											
FORWARD AIR CONTROLLER (AIRBORNE) INSTRUCTOR [FAC(A) I]																									
FAC(A)I	SFAC(A)I	(S) FAC(A)I IUT	5400	X							1.5			(NS)	OS	S/A	2	X	2	*	3405,5905			5400
	FAC(A)I	FAC(A)I UT	5401	X									1.5	(NS)	OS	A	2			*	5400			5401
	FAC(A)I	FAC(A)I Check	5402	X	X								1.5	(NS)	OS	A	2			*	5401,5040,5041			5402
FAC(A)I SKILL TOTAL								0	0.0	1	1.5	2	3.0											
TACTICAL AIR CONTROLLER (AIRBORNE) INSTRUCTOR [TAC(A) I]																									
TAC(A)I	TAC(A)I	TAC(A)I Check	5700	X	X								2.0	(NS)	OS	A	1			*	3405,4500	4500		5700
TAC(A)I SKILL TOTAL								0	0.0	0	0.0	1	2.0											
DEFENSIVE AIR COMBAT MANEUVERING INSTRUCTO (DACM I)																									
DACM(I)	DACM(I)	1v1/2v1 RW IUT	5800	X									2.0	D	OS	A	2			*	RWDACM Q,WTO			5800
	DACM(I)	1v1/2v1 FW IUT	5801	X									2.0	D	OS	A	2			*	FWDACM Q, WTO			5801
	DACM(I)	RW IUT Check	5802	X	X								2.0	D	OS	A	2			*	RWDACM Q, WTO,4303,5204,5800,5080, certification & academic stage complete	2201,4303		5802
	DACM(I)	FW IUT Check	5803	X	X								2.0	D	OS	A	2			*	FWDACM Q,WTO,4305,5204,5801,5081,certification & academic stage complete	2201,4305		5803
DACM(I) SKILL TOTAL								0	0.0	0	0.0	4	8.0											
NIGHT SYSTEMS INSTRUCTOR (NSI)																									
NSI	SNSI	(S) NVD Instructorship	5900	X							1.5			NS	OS	S/A	1	X		*	5204,5090	2101,2502,2801		5901
	NSI	NSI FAM/CAT	5901	X									2.0	NS	OS	A	1			*	5900	2201,2801,2301		5900
	NSI	NSI SWD/CAT	5902	X									2.0	NS	OS	A	2			*	5901	2201,2301,2404		5902
	SNSI	(S) NSI OAS/CAT STAN	5903	X	X						1.5			NS	OS	S/A	1	X		*	5902	2201,2301,2404		5904
	NSI	NSI OAS/CAT	5904	X									2.0	NS	OS	A	2			*	5903	2201,2301,2404		5903
	NSI	NSI Evaluation	5905	X	X								2.0	NS	OS	A	2			*	5904	2201,2301,2404		5905
NSI SKILL TOTAL								0	0.0	2	3.0	4	8.0											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																								
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
				BASIC	REFRESHER	SER CONV		#	TIME	#	TIME	#	TIME											
FLIGHT LEADERSHIP STANDARDIZATION EVALUATOR (FLSE)																								
FLSE	FLSE	FLSE Evaluation	5920	X	X								**2.0**	(NS)	OS	A	2+			*	5905,6598			5920
	FLSE	FLSE Annual Training	5921	X	X	X	X		0.0					(N)		G				365	5920			5921
FLSE SKILL TOTAL								1	0.0	0	0.0	1	2.0											
ACADEMICS (ACAD)																								
ACAD	ACAD	Intel Prep Battlespace	6040	X					1.0					(N)		G				*				6040
	ACAD	MAGTF Tgt/Fire Spt	6041	X					1.0					(N)		G				*				6041
	ACAD	JTAC-Aircrew Integration	6042	X					1.0					(N)		G				*				6042
	ACAD	AMC	6071	X					1.0					(N)		G				*				6071
ACAD SKILL TOTAL								4	4.0	0	0.0	0	0.0											
NATOPS (NTPS)																								
NTPS	NTPS	Open Book NATOPS	6002	X	X	X	X		1.0							G				365			X	6002
	NTPS	Closed Book NATOPS	6003	X	X	X	X		1.0							G				365			X	6003
	NTPS	Oral NATOPS Exam	6004	X	X	X	X		1.0							G				365			X	6004
	NTPS	NATOPS Check	6101	X	X	X	X						**1.5**	(N)	OS	A/S	1			365	6002,6003,6004	2800,2801	X	6101
	NTPS	ANI Stan	6105	X	X	X	X		0.0					(N)	OS	A/S	1			365	6002,6003,6004,BIP,CRMF	2800,2801		New
	NTPS	NI Stan	6106	X	X	X	X		0.0					(N)	OS	A/S	1			365	6002,6003,6004,BIP,CRMF	2800,2801		New
	NTPS	NE Stan	6107	X	X	X	X		0.0					(N)	OS	A/S	1			365	6002,6003,6004,FRSI,CRMI	2800,2801		New
NTPS SKILL TOTAL								6	3.0	0	0.0	1	1.5											
INSTRUCTOR (INST)																								
INST	INST	INST Grnd Sch	6000	X	X	X	X		8.0							G				365				6000
	INST	IGS Exam	6001	X	X	X	X		1.0							G				365			X	6001
	INST	INST Check	6100	X	X	X	X						**1.5**	(N*)	OS	A/S	1	X		365	6000,6001		X	6100
INST SKILL TOTAL								2	9.0	0	0.0	1	1.5											
CREW RESOURCE MANAGEMENT (CRM)																								
CRM	CRM	CRM Ground Trng	6005	X	X	X	X		1.0					(N)		G				365				6005
	CRM	CRM Eval Trk Code	6102	X	X	X	X					1	0.0	(N)	OS	A/S	1	X		365				6102
	CRM	CRMF Training	6103	X	X	X								(N)		G				*				
	CRM	CRMI Training	6104	X										(N)		G				*				
CRM SKILL TOTAL								1	1.0	0	0.0	1	0.0											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																								
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
				BASIC	REFRESHER	SER CONV		#	TIME	#	TIME	#	TIME											
FUNCTIONAL CHECK PILOT (FCP)																								
FCP	FCP	FCP Open Book	6006	X	X				1.0					(N)		G				*				6006
	FCP	FCP Closed Book	6007	X	X				1.0					(N)		G				*				6007
	SFCP	(S) FCP Demo/Intro	6200	X	X	X					1.5			D	OS	S	1			*	6300,6006			6200
	SFCP	(S) FCP Demo/Intro	6201	X							1.5			D	RS	S/A	1			*	6200			6201
	FCP	Main & TR Track & Balance	6202	X									1.5	D	OS	A	1			*	6201			6202
	SFCP	(S) Rev FCF Proc	6203	X	X	X	X				1.5			D	RS	S/A	1			365	6202			6203
	FCP	FCP Eval	6204	X	X	X							1.5	D	RS	A	1			*	6203,6007			6204
FCP SKILL TOTAL								2	2.0	3	4.5	2	3.0											
DESIGNATION (DESG)																								
DESG	DESG	PQM Eval Trk Code	6300	X	X								1.5	(N)	OS	A	1			*	1901,8200			6300
	DESG	UHC EVAL	6398	X	X	X							1.5	(NS)	OS	A	2			*	8300,6300,CORE & MISSION SKILL COMPLETE			6398
DESG SKILL TOTAL								0	0.0	0	0.0	2	3.0											
SECTION LEADER (SL)																								
SL	SL	SL Day	6400	X									1.5	D	OS	A	2			*	6398,6907,50hrs as UHC, three flights as wingman UHC, brief and lead 2 sections.			6400
	SL	SL Night	6401	X									1.5	NS	OS	A	2			*	6398,6907			6401
	SL	SL Eval	6498	X	X								2.0	(NS)	OS	A	2			*	6400,6401,8600			6498
SL SKILL TOTAL								0	0.0	0	0.0	3	5.0											
DIVISION LEADER (DL)																								
DL	DL	DL Day	6500	X									1.5	D	OS	A	3+			*	6498,Lead a min of three flights as SL. Min of: 600 tot hrs, 200 R/W hours, and 50 hours in model.			6500
	DL	DL Night	6501	X									1.5	NS	OS	A	3+			*	6498,Lead a min of three flights as SL. Min of: 600 tot hrs, 200 R/W hours, and 50 hours in model.			6501
	DL	DL Eval	6598	X	X								2.0	(NS)	OS	A	3+			*	6500,6501,8600			6598
DL SKILL TOTAL								0	0.0	0	0.0	3	5.0											
FLIGHT LEADER (FL)																								
FL	FL	FL Eval	6698	X	X								2.0	(NS)	OS	A	5+			*	6598,6060,6061,8600,Lead a min of three flights as a Div Lead. Minimum of 750 total hours.			6698
FL SKILL TOTAL								0	0.0	0	0.0	1	2.0											
AIR MISSION COMMANDER (AMC)																								
AMC	AMC	AMC Eval	6798	X	X				0.0					(NS)	OS	GE	1			*	6598,6070,6071,6072			6798
AMC SKILL TOTAL								1	0.0	0	0.0	0	0.0											

UH-1Y PILOT T&R SYLLABUS MATRIX (2000-8000 PHASES)																									
				ATTAIN				ACAD		SIM		FLIGHT													
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	MAINTAIN	#	TIME	#	TIME	#	TIME	COND	SEAT	TYPE	# A/C or Sim	NETWORK	NUM-NET	REFLY	PREREQUISITE	CHAINING	EOM	EVENT CONV
SPECIFIC OPERATIONS TRACKING CODE (SOTC)																								
SOTC	SOTC	Illum Rkt Prof	6900	X	X								**0.0**	NS	OS	A	1			*				6900
	SOTC	Guided Rkt Prof	6901	X	X								**0.0**	(NS)	OS	A	1			*				6901
	SOTC	Flechette Rkt Prof	6902	X	X								**0.0**	(NS)	OS	A	1			*				6902
	SOTC	Section Brief and Lead	6907	X									**0.0**	(NS)	OS	A	2		2	*				New
SOTC SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**4**	**0.0**											
AUTOROTATION TRACKING CODE (AUTO TRK)																								
AUTO TRK	A-TRK	Autorotation Day	6998	X									**0.0**	D	OS	A	1			*				6998
	A-TRK	Autorotation Night	6999	X									**0.0**	NS	OS	A	1			*				6999
AUTO TRK SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**2**	**0.0**											
MISSION ESSENTIAL TASK (MET)																								
MET	MET	COMBAT ASSAULT TRANS	7001	X									**1.5**	(NS)		A/S	2	X	2	730				NEW
	MET	CLOSE AIR SUPPORT	7002	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	SCAR	7003	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	FAC/A	7005	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	TRAP	7006	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	AERIAL ESCORT	7007	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	AIR EVACUATION	7008	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	EXP SEA BASED OPS	7009	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	AIRBORNE RI/E	7010	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	AIR DELIVERY	7011	X									**1.5**	(NS)		A/S	2	X		730				NEW
	MET	AIRBORNE COMMAND AND CONT	7012	X									**1.5**	(NS)		A/S	1	X		730				NEW
	MET	TAC(A)	7013	X									**1.5**	(NS)		A/S	1	X		730				NEW
MET SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**12**	**18.0**											
AVIATION CAREER PROGRESSION MODEL (ACPM)																								
ACPM	ACPM	8200 SERIES	8200	X					**10.0**					(N)		G				*				8200
	ACPM	8300 SERIES	8300	X					**13.0**					(N)		G				*				8300
	ACPM	8600 SERIES	8600	X					**5.0**					(N)		G				*				8600
ACPM SKILL TOTAL								**3**	**28.0**	**0**	**0.0**	**0**	**0.0**											

2.24 UH-1Y T&R PILOT RANGE & ORDNANCE MATRIX (1000 & 5000 PHASE)

UH-1Y PILOT RANGE & ORDNANCE MATRIX CORE SKILL INTRODUCTION (1000 & 5000 PHASE)															
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			FLIGHT	CONDITION	SEAT	TYPE	# A/C or SIM	REFLY	ORDNANCE	RANGE
				BASIC	REF	SER CONV	TIME							
TERRAIN FLIGHT (TERF)														
1000 TERF	TERF	Intro TERF	1400	X			**2.0**	D	OS	A	1	*		Authorized TERF Area
	TERF	Intro NVD TERF	1401	X			**2.0**	NS	OS	A	2	*		Authorized TERF Area
SPECIFIC WEAPONS DELIVERY (SWD)														
1000 SWD	SWD	Intro CSW	1601	X			**1.5**	D	OS	A	1	*	(7) 2.75 inch rockets, (600) .50cal GAU-21, (1500) 7.62mm GAU-17, (400) M240	Live fire LASER safe range (raked/scored range if available)
	SWD	Intro Rockets	1602	X	X	X	**1.5**	D	OS	A	1	730	(7) 2.75 inch rockets, (600) .50cal GAU-21, (1500) 7.62mm GAU-17, (400) M240	Live fire LASER safe range (raked/scored range if available)
FLEET REPLACEMENT STANDARDIZATION INSTRUCTOR (FRSI)														
5000 FRSI	FRSI	Rev NVD FAM/CAT/TERF	5317	X	X		**2.0**	NS	LS	A	1	730		Authorized TERF Area

2.25 UH-1Y PILOT ORDNANCE AND RANGE MATRIX (2000-8000 PHASE)

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
TERRAIN FLIGHT/NAVIGATION (TERF)																	
TERF	TERF	Day TERF	2100	X	X			2.0	D	OS	A	1	180			Authorized TERF route	
	TERF	HLL TERF	2101	X	X	X	X	2.0	NS	OS	A	1	180			Authorized TERF route	
	TERF	LLL TACFORM/TERF	2102	X	X		X	1.5	NS	OS	A	2	180			Auth TERF area and route	
THREAT COUNTER TACTICS (TCT)																	
TCT	STCT	(S) TAC Employ ASE	2201	X	X	X	X		(NS)	OS	S/A	2	365	(60) chaff/flares	~AC	~AC EW range, live or non-live fire LASER safe range	~AC TRTG, remote radar emitter and IR stimulator support
RECONNAISSANCE (REC)																	
REC	REC	DAY Recce	2300	X				1.5	D	OS	A	1	*			Authorized TERF area	Thermally augmented threat vehicles
	REC	NVD Recce	2301	X	X	X	X	1.5	NS	OS	A	1	180			Authorized TERF area	Thermally augmented threat vehicles
COMBAT ASSAULT TRANSPORT (CAT)																	
CAT	CAT	NVD LLL FAM/NAV	2404	X		X		2.0	NS	RS	A	1	*				Unlit field or remote landing site free from artificial illumination
	CAT	NVD LLL SEC Landings	2405	X	X	X	X	1.5	NS	OS	A	2	180				Unlit field or remote landing site free from artificial illumination

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
SPECIFIC WEAPONS DELIVERY (SWD)																	
SWD	SSWD	(S) PGM Delivery	2601	X	X	X			D	OS	S/A	1	730	(1) 2.75 inch guided rocket	~AC	~AC Live fire LASER safe range with thermally significant tactical targets	
	SWD	Rkt/Gun Delivery	2603	X				1.5	D	OS	A	1	*	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side		Live fire and LASER safe range.	
	SWD	Rkt/Gun Delivery	2604	X	X			1.5	D	OS	A	1	180	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side		Live fire LASER safe range with tactical targets	
	SWD	Scored Tgt Delivery	2605	X	X	X	X	1.5	D	OS	A	1	180	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side		Raked or scored range, live fire LASER safe range	
	SSWD	(S) NVD HLL Rkt/Gun	2606	X					NS	OS	S/A	1	*	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares, IR Pointer	~AC	~AC Live fire LASER safe range with thermally significant tactical targets	
	SWD	NVD HLL Rkt/Gun	2607	X	X	X		1.5	NS	OS	A	1	180	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side		Live fire LASER safe range with thermally significant tactical targets	
	SSWD	(S) NVD LLL Ord Del	2608	X		X			NS	OS	S/A	1	*	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side	~AC	~AC Live fire LASER safe range with thermally significant tactical targets	
	SWD	NVD LLL Ord Rev	2609	X	X	X	X	1.5	NS	OS	A	1	180	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire LASER safe range with thermally significant tactical targets	
	SSWD	Intro Moving Tgt	2610	X	X		X	1.5	(NS)	OS	S/A	1	365	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		~AC Live fire LASER safe range	Moving target or 1 aircraft to provide a shadow
EXPEDITIONARY SHORE-BASED SITE OPERATIONS (EXP)																	
EXP	EXP	Day FARP	2902	X					D	OS	A	1	*				Actual or simulated FARP
	EXP	NS FARP	2903	X	X		X		NS	OS	A/S*	1	180				Actual or simulated FARP

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
ESCORT (ESC)																	
ESC	SESC	(S) ASPT ESC	3100	X	X		X		D	OS	S/A	2	365	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240, (60) chaff/flares	~AC Optional	~AC Live fire and LASER safe range	Device operator. ~AC one or more assault support aircraft
	ESC	DAY ASPR ESC	3101	X				1.5	D	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240, (60) chaff/flares	Optional.	Live fire and LASER safe range.	One or more assault support aircraft
	ESC	NVD ASPR ESC	3102	X	X		X	1.5	NS	OS	A/S*	2	365	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240, (60) chaff/flares	Optional.	Live fire and LASER safe range.	One or more assault support aircraft
	SESC	SFC ESC	3103	X	X				(NS)	OS	S/A	2	365	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240, (60) chaff/flares	Optional.	Live fire and LASER safe range	Device operator ~AC: One ground/amphibious unit minimum 3 vehicles
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																	
CAT	GCAT	(G) Utility Prac App	3200	X	X	X	X		D	OS	GE	1	365	Crew Served Weapons	Optional.		
	CAT	Fastrope/Rappel	3201	X	X		X	1.0	D	OS	A	1	365	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side	Optional.	Simulated/actual rooftop or landing point (authorized fastrope/rappel site)	HRST Master and at least two ropers
	CAT	NVD Fastrope/Rappel	3202	X	X		X	1.0	NS	OS	A	1	365	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side	Optional.	Simulated/actual rooftop or landing point (authorized fastrope/rappel site)	HRST Master and at least two ropers
	SCAT	(S) Urban/Degraded CAT	3203	X	X		X		(NS)	OS	S/A	2	365	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side	Optional.	Live fire and LASER safe range.	Embarked troops
	SCAT	(S) NVD Insert Extract	3204	X	X	X	X		NS	OS	S/A	2	365	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side	Optional.	Live fire and LASER safe range.	Embarked troops
	CAT	Long Range CAT	3205	X	X	X	X	2.0	NS	OS	A/S*	2	365	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side	Optional.	Live fire and LASER safe range.	Embarked troops

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
CASUALTY EVACUATION (AE)																	
AE	EVAC	CASEVAC Trk Code	3206	X	X		X	0.0	(NS)	OS	A	1	365				
CLOSE AIR SUPPORT (CAS)																	
CAS	CAS	Day CAS	3301	X		X		1.5	D	OS	A	2	*	(7) 2.75 inch rockets, (600).50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire and LASER safe range.	TACP
	CAS	NVD CAS	3302	X	X	X	X	1.5	NS	OS	A/S	2	180	(7) 2.75 inch rockets, (600).50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire and LASER safe range.	TACP
	CAS	LLL CAS	3303	X	X		X	1.5	NS	OS	A	2	180	(7) 2.75 inch rockets, (600).50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire LASER safe range with thermally significant tactical targets	TACP
	CAS	URB CAS	3304	X	X		X	1.5	(NS)	OS	A/S	2	365	(7) 2.75 inch rockets, (600).50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	Optional.	Live fire and LASER safe range.	JTAC with appropriate marking devices (if available), suitable urban environment or MOUT facility
STRIKE COORDINATION AND RECONNAISSANCE (SCAR)																	
SCAR	SCAR	AR	3305	X	X		X	1.5	(NS)	OS	A/S	2	730	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	Optional.	Live fire LASER safe range with thermally augmented targets	
	SSCAR	(S) SCAR	3306	X	X		X		(NS)	OS	S/A	2	365	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	Optional.	~AC Live fire LASER safe range with thermally significant tactical targets	FW or RW aircraft~AC

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
FORWARD AIR CONTROLLER (AIRBORNE) [FAC(A)]																	
FAC(A)	FAC(A)	IDF Ctrl	3400	X	X		X	2.0	(NS)	OS	A/S*	1	365			Live fire LASER safe range with thermally significant targets, if available	1 indirect fire asset (with 8 rounds)
	SFAC(A)	RW Control	3401	X	X		X		(NS)	OS	S/A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	Optional	Live fire LASER safe range with thermally significant targets, if available	2 RW CAS aircraft with ordnance, Ground Maneuver Unit with TACP
	FAC(A)	FW Control	3402	X	X		X	2.0	D	OS	A/S*	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire LASER safe range with thermally significant targets, if available	2 FW CAS aircraft with ordnance and Ground Maneuver Unit with TACP (If conducted in aircraft).
	SFAC(A)	NVD Urban FW/RW Control	3403	X	X		X		NS	OS	S/A	1	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire LASER safe range with thermally significant targets, if available	(2) FW CAS and (2) RW CAS aircraft with ordnance and Ground Maneuver Unit with TACP (If conducted in aircraft).
	FAC(A)	Sup Arms Consolidate	3404	X	X	X	X	2.0	(NS)	OS	A/S*	2	365	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire LASER safe range with thermally significant targets, if available	(2) FW CAS aircraft with ordnance, (2) RW aircraft with ordnance (separate from flight), and Ground Maneuver unit with TACP.
	SFAC(A)	FAC(A) Standardization	3405	X	X		X		(NS)	OS	S/A	1	730	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares			(2) FW CAS aircraft with ordnance, (2) RW aircraft with ordnance (separate from flight), and Ground Maneuver unit with TACP.
TACTICAL RECOVERY OF AIRCRAFT AND PERSONNEL (TRAP)																	
TRAP	TRAP	TRAP	3500	X	X		X	1.5	(NS)	OS	A/S	2	365	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	Optional.	Live fire LASER safe range with thermally significant tactical targets	One or more assault aircraft required

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
AIRBORNE RAPID INSERTION/EXTRACTION (RIE)																	
RIE	RIE	Para Ops	4100	X				1.0	(NS)	OS	A	1	*			Drop Zone or authorized paraops area	Jump Master and two jumpers (jump master may be one of the jumpers)
	RIE	Day Water Insertion	4101	X	X		X	1.5	D	OS	A	1	730			Water drop zone or authorized helocast area	Helocast Master and two swimmers (Helocast Master may be one of the swimmers)
	RIE	Night Water Insertion	4102	X	X		X	1.5	(NS)	OS	A	1	365			Water drop zone or authorized helocast area	Helocast Master and two swimmers (Helocast Master may be one of the swimmers)
	RIE	SPIE	4103	X	X		X	1.5	(NS)	OS	A	1	365			Drop zone/landing zone or authorized SPIE area	HRST Master and two ropers
	RIE	Hoist Ops	4104	X	X	X	X	1.5	(NS)	OS	A	1	365				Appropriate external weight
COMBAT ASSAULT TRANSPORT (CAT)																	
CAT	CAT	MAT Review	4106	X	X		X	2.0	(NS)	OS	A	1	365				
	CAT	Sniper Ops	4107	X				1.5	(NS)	OS	A	1	*			Live fire range	Sniper personnel with or without ordnance
	SCAT	(S) High Threat Insert	4108	X	X		X		(NS)	OS	S/A	2	730	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	~AC	Live fire range with at least one emitter	2 or more escort assets. EW aircraft (may be simulated)
AIR DELIVERY (AD)																	
AD	AD	External Cargo Procedures	4109	X	X		X	1.0	D	OS	A	1	730				Helicopter Support Team (HST) and cargo
AIR DELIVERY+ (AD+)																	
AD+	SAD	Non-Permissive AD	4110	X	X		X		(NS)		S/A	2	365	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side	Optional.	Live fire and LASER safe range.	HST~AC
ESCORT (ESC)																	
ESC	ESC	Med/High Threat ESC	4200	X	X	X	X	1.5	(NS)	OS	A/S	2	730	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	~AC	LASER safe live fire range with thermally significant targets, if available	2 or more assault support aircraft
CLOSE AIR SUPPORT (CAS)																	
CAS	CAS	Med/High Threat CAS	4201	X	X	X	X	1.5	(NS)	OS	A/S	2	730	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	~AC	Live fire LASER safe range with thermally significant targets, if available	JTAC with appropriate marking devices (if available), suitable urban environment or MOUT facility

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
STRIKE COORDINATION AND RECONNAISSANCE (SCAR)																	
SCAR	SSCAR	(S) Med/High Threat SCAR	4202	X	X	X	X		(NS)	OS	S/A	2	730	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	~AC	Live fire LASER safe range	2 OAS aircraft
DEFENSIVE AIR COMBAT MANEUVERING (DACM)																	
DACM	DACM	1v1 RW	4301	X		X		1.0	D	OS	A	1	*	(30) flares			One adversary helicopter and appropriate air-to-air training area
	DACM	2v1 RW	4302	X	X		X	1.0	D	OS	A	2	485	(30) flares			One adversary helicopter and appropriate air-to-air training area
	DACM	Tactical RW	4303	X				2.0	D	OS	A	2	*	(60) flares			One adversary helicopter and appropriate air-to-air training area
	DACM	1v1 FW	4304	X				1.0	D	OS	A	1	*	(30) flares, TCTS pod (as required)			One FW adversary and appropriate air-to-air training area
	DACM	2v2 FW	4305	X	X		X	1.0	D	OS	A	2	485	(30) flares, TCTS pod (as required)			Two FW adversary and appropriate air-to-air training area
TACTICAL AIR COORDINATOR AIRBORNE OPERATIONS [TAC(A)]																	
TAC(A)	TAC(A)	TAC(A)	4500	X	X		X	2.0	(NS)	OS	A	1	730			Range with tactical targets	MACCS (may be simulated), at least two CAS elements and 2 terminal controllers
SEA-BASED EXPEDITIONARY OPERATIONS (SEA)																	
SEA	SEA	Day FCLP	4601	X	X			1.0	D	OS	A	1	365				FCLP pad
	SEA	Night FCLP	4602	X	X		X	1.0	NS,N*	OS	A	1	365				FCLP pad with shipboard lighting
	SEA	Day CQ	4603	X	X	X		1.0	D	OS	A	1	365				Landing platform afloat
	SEA	NVD CQ	4604	X	X	X	X	1.0	NS	OS	A	1	365				Landing platform afloat
ELECTRONIC WARFARE (EW)																	
EW	EW	Intro to EW	4700	X	X		X		(NS)	OS	GE	1	730				Intrepid Tiger pod, ground stations, and RadBn support personnel
BASIC INSTRUCTOR PILOT (BIP)																	
BIP	SBIP	(S) Sim Instruction/FAM/EP	5100	X	X	X			D	OS	S	1	*				Device operator
	SBIP	(S) INST/CQ Review	5101	X					D	OS	S/A	1	*				Device operator
	SBIP	(S) Instruct CAL,RVL,RIE	5102	X	X	X			D	OS	S/A	1	*				Device operator
	BIP	Instruct CAL,RVL,RIE	5103	X	X	X		2.0	D	OS	A	2	*				
TERRAIN FLIGHT / NAVIGATION INSTRUCTOR (TERFI)																	
TERFI	TERFI	TERF NAV	5110	X	X	X		2.0	D	OS	A	1	*				Authorized TERF route

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
WEAPONS TRAINING OFFICER (WTO)																	
WTO	SWTO	(S) UH-1 TEN Instruction	5200	X	X	X			D	OS	S	1	*				Device operator
	SWTO	(S) UH- Mission Profiles	5201	X	X	X			D	OS	S/A	1	*				Device operator
	SWTO	(S) OAS Scenario Dev/Instruction	5202	X	X	X			D	OS	S/A	1	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240, (60) chaff/flares		LASER safe live fire range with thermally significant targets, if available	
	WTO	CAT Instruction	5203	X				1.5	D	OS	A	2	*	(600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240, (60) chaff/flares	Optional.	LASER safe live fire range with thermally significant targets, if available	
	WTO	OAS Instruction	5204	X	X	X		1.5	D	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62mm GAU-17, or (600) 7.62mm M240, (60) chaff/flares		LASER safe live fire range with thermally significant targets, if available	
FORWARD AIR CONTROLLER (AIRBORNE) INSTRUCTOR [FAC(A) I]																	
FAC(A)I	SFAC(A)I	(S) FAC(A)I IUT	5400	X					(NS)	OS	S/A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	~AC	Live fire laser safe range with thermally significant tactical targets and combat town (if available)	MACCS agencies (live or simulated), FiST or TACP (live or simulated), 2 or more FW CAS aircraft with ordnance, 1 indirect fire asset or 1 section of RW aircraft separate from flight simulated), FiST or TACP (live or simulated), 2 or more FW CAS aircraft with ordnance, 1 indirect fire asset or 1 section of RW aircraft separate from flightMACCS agencies (live or
	FAC(A)I	FAC(A)I UT	5401	X				1.5	(NS)	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		LASER safe live fire range with thermally significant targets, if available	MACCS agencies (live or simulated), FiST or TACP (live or simulated), 2 or more FW CAS aircraft with ordnance, 1 indirect fire asset or 1 section of RW aircraft separate from flight
	FAC(A)I	FAC(A)I Check	5402	X	X			1.5	(NS)	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62mm GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		LASER safe live fire range with thermally significant targets, if available	MACCS agencies (live or simulated), FiST or TACP (live or simulated), 2 or more FW CAS aircraft with ordnance, 1 indirect fire asset or 1 section of RW aircraft separate from flight

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
TACTICAL AIR CONTROLLER (AIRBORNE) INSTRUCTOR [TAC(A) I]																	
TAC(A)I	TAC(A)I	TAC(A)I Check	5700	X	X			2.0	(NS)	OS	A	1	*				Operational DASC or TACC with supporting Tactical Air Traffic Control (TATC) and Tactical Air Direction (TAD) nets, minimum two terminal controllers, minimum of two CAS sections, indirect fire support assets (artillery, mortars, or Naval Surface Fire Support (NSFS)
DEFENSIVE AIR COMBAT MANEUVERING INSTRUCTO (DACM I)																	
DACM(I)	DACM(I)	1v1/2v1 RW IUT	5800	X				2.0	D	OS	A	2	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	One rotary wing aggressor
	DACM(I)	1v1/2v1 FW IUT	5801	X				2.0	D	OS	A	2	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	Two fixed wing aggressors
	DACM(I)	RW IUT Check	5802	X	X			2.0	D	OS	A	2	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	One rotary wing aggressor
	DACM(I)	FW IUT Check	5803	X	X			2.0	D	OS	A	2	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	Two fixed wing aggressors

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
NIGHT SYSTEMS INSTRUCTOR (NSI)																	
NSI	NSI	NSI SWD/CAT	5902	X				2.0	NS	OS	A	2	*	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62 GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		LASER safe live fire range with thermally significant targets, if available	
	SNSI	(S) NSI OAS/CAT STAN	5903	X	X				NS	OS	S/A	1	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62 GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares	~AC	LASER safe live fire range with thermally significant targets, if available	
	NSI	NSI OAS/CAT	5904	X				2.0	NS	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62 GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		LASER safe live fire range with thermally significant targets, if available	
	NSI	NSI Evaluation	5905	X	X			2.0	NS	OS	A	2	*	(14) 2.75 inch rockets, (600) .50 Cal GAU-21, (3000) 7.62 GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		LASER safe live fire range with thermally significant targets, if available	TACP and MACCS (live or notional)
FLIGHT LEADERSHIP STANDARDIZATION EVALUATOR (FLSE)																	
FLSE	FLSE	FLSE Evaluation	5920	X	X			2.0	(NS)	OS	A	2+	*				Program Coordinator
	FLSE	FLSE Annual Training	5921	X	X	X	X		(N)		G		365				Program Coordinator
DESIGNATION (DESG)																	
DESG	DESG	UHC EVAL	6398	X	X	X		1.5	(NS)	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17, or (600) 7.62mm M240 per side, (60) chaff/flares		Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
SECTION LEADER (SL)																	
SL	SL	SL Day	6400	X				1.5	D	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional. 2/3 EVENTS REQUIRE ORDNANCE	Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)
	SL	SL Night	6401	X				1.5	NS	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional. 2/3 EVENTS REQUIRE ORDNANCE	Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)
	SL	SL Eval	6498	X	X			2.0	(NS)	OS	A	2	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional. 2/3 EVENTS REQUIRE ORDNANCE	Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)
DIVISION LEADER (DL)																	
DL	DL	DL Day	6500	X				1.5	D	OS	A	3+	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional. 2/3 EVENTS REQUIRE ORDNANCE	Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)
	DL	DL Night	6501	X				1.5	NS	OS	A	3+	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional. 2/3 EVENTS REQUIRE ORDNANCE	Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)
	DL	DL Eval	6598	X	X			2.0	(NS)	OS	A	3+	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional. 2/3 EVENTS REQUIRE ORDNANCE	Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)
FLIGHT LEADER (FL)																	
FL	FL	FL Eval	6698	X	X			2.0	(NS)	OS	A	5+	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional.	Live fire LASER safe range with appropriate LZ and thermally significant tactical targets, if available	One or more assault support aircraft (if escort mission) and embarked troops (if available, for assault support mission)
AIR MISSION COMMANDER (AMC)																	
AMC	AMC	AMC Eval	6798	X	X				(NS)	OS	GE	1	*	(7) 2.75 inch rockets, (600) .50 Cal GAU-21, (1500) 7.62 GAU-17 or (600) 7.62mm M-240 per side, (60) chaff/flares	Optional.	Live fire LASER safe range, as required	GCE, MACCS agencies, AGS assets, multiple T/M/S RW and/or FW assets as required, and any other support required based on the Tactical scenario (HST, threat emitter/simulator)

UH-1Y PILOT RANGE & ORDNANCE MATRIX (2000-8000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	SEAT	TYPE	# A/C or Sim	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE NOTES	EXTERNAL SYLLABUS NOTES
				B	R	SC											
SPECIFIC OPERATIONS TRACKING CODE (SOTC)																	
SOTC	SOTC	Illum Rkt Prof	6900	X	X			0.0	NS	OS	A	1	*	(1) 2.75 inch illumination rocket			
	SOTC	Guided Rkt Prof	6901	X	X			0.0	(NS)	OS	A	1	*	(1) 2.75 inch guided rocket			
	SOTC	Flechette Rkt Prof	6902	X	X			0.0	(NS)	OS	A	1	*	(1) 2.75 inch flechette rocket			
	SOTC	Section Brief and Lead	6907	X				0.0	(NS)	OS	A	2	*				
MISSION ESSENTIAL TASK (MET)																	
MET	MET	COMBAT ASSAULT TRANS	7001	X				1.5	(NS)		A/S	2	730			Live fire range as required.	Command and Control system if available. Escort and/or Command and Control aircraft are preferred, if available. Ground Combat Element preferred if available.
	MET	CLOSE AIR SUPPORT	7002	X				1.5	(NS)		A/S	2	730			Live fire range as required.	JTAC/TACP is preferred, but may be simulated if necessary.
	MET	SCAR	7003	X				1.5	(NS)		A/S	2	730			Live fire range as required.	External AR platforms preferred but may be simulated if required.
	MET	FAC/A	7005	X				1.5	(NS)		A/S	2	730			Live fire range as required.	Requirements per FACA-3404.
	MET	TRAP	7006	X				1.5	(NS)		A/S	2	730			Live fire range as required.	Assault and/or Command and Control aircraft are preferred if available. Isolated personnel in the objective area is preferred. Use of survival radios is preferred. Ground combat element is preferred if available.
	MET	AERIAL ESCORT	7007	X				1.5	(NS)		A/S	2	730			Live fire range as required.	Actual assault transport element consisting of at least one aircraft.
	MET	AIR EVACUATION	7008	X				1.5	(NS)		A/S	2	730			Live fire range as required.	Ground Combat Element and/or Logistics Combat Element is preferred if available
	MET	EXP SEA BASED OPS	7009	X				1.5	(NS)		A/S	2	730			Live fire range as required.	Naval shipping platform capable of conducting helicopter operations.
	MET	AIRBORNE RI/E	7010	X				1.5	(NS)		A/S	2	730			Live fire range as required.	HRST/Jump/Cast Master as required. Live passengers preferred but may be simulated.
	MET	AIR DELIVERY	7011	X				1.5	(NS)		A/S	2	730			Live fire range/approved drop zone as required.	HST, as required. Jump Master and ground safety personnel, as required
	MET	AIRBORNE COMMAND AND CONT	7012	X				1.5	(NS)		A/S	1	730			Live fire range as required.	IAW Phase
	MET	TAC(A)	7013	X				1.5	(NS)		A/S	1	730			Live fire range as required.	IAW Phase

CHAPTER 3

UH-1Y CREW CHIEF (MOS 6174)

	PARAGRAPH	PAGE
INDIVIDUAL TRAINING AND READINESS REQUIREMENTS.	3.0	3-3
TRAINING PROGRESSION MODEL	3.1	3-3
PROGRAMS OF INSTRUCTION (POI)	3.2	3-3
PROFICIENCY & CURRENCY	3.3	3-5
CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATION (CQD) TABLES	3.4	3-5
SYLLABUS NOTES	3.5	3-6
CORE INTRODUCTION PHASE	3.6	3-12
CORE INTRODUCTION STAGES	3.7	3-12
CORE PHASE	3.8	3-21
CORE STAGES	3.9	3-22
MISSION PHASE	3.10	3-35
MISSION STAGES	3.11	3-36
CORE PLUS PHASE	3.12	3-44
CORE PLUS STAGES	3.13	3-45
MISSION PLUS PHASE	3.14	3-51
MISSION PLUS STAGES	3.15	3-51
INSTRUCTOR TRAINING PHASE	3.16	3-57
INSTRUCTOR TRAINING STAGES	3.17	3-57
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RCQD) PHASE	3.18	3-59
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS STAGES	3.19	3-60
MISSION ESSENTIAL TASK (MET) PHASE	3.20	3-64
MISSION ESSENTIAL TASK (MET) STAGE	3.21	3-64
AVIATION CAREER PROGRESSION MODEL (ACPM) PHASE	3.22	3-64
AVIATION CAREER PROGRESSION MODEL (ACPM) STAGE	3.23	3-64
ELECTRONIC AIRCREW TRAINING FORM (EATF) REASON CODES	3.24	3-64
T&R SYLLABUS MATRICES	3.25	3-64
T&R QUICK REFERENCE GUIDE	3.26	3-81

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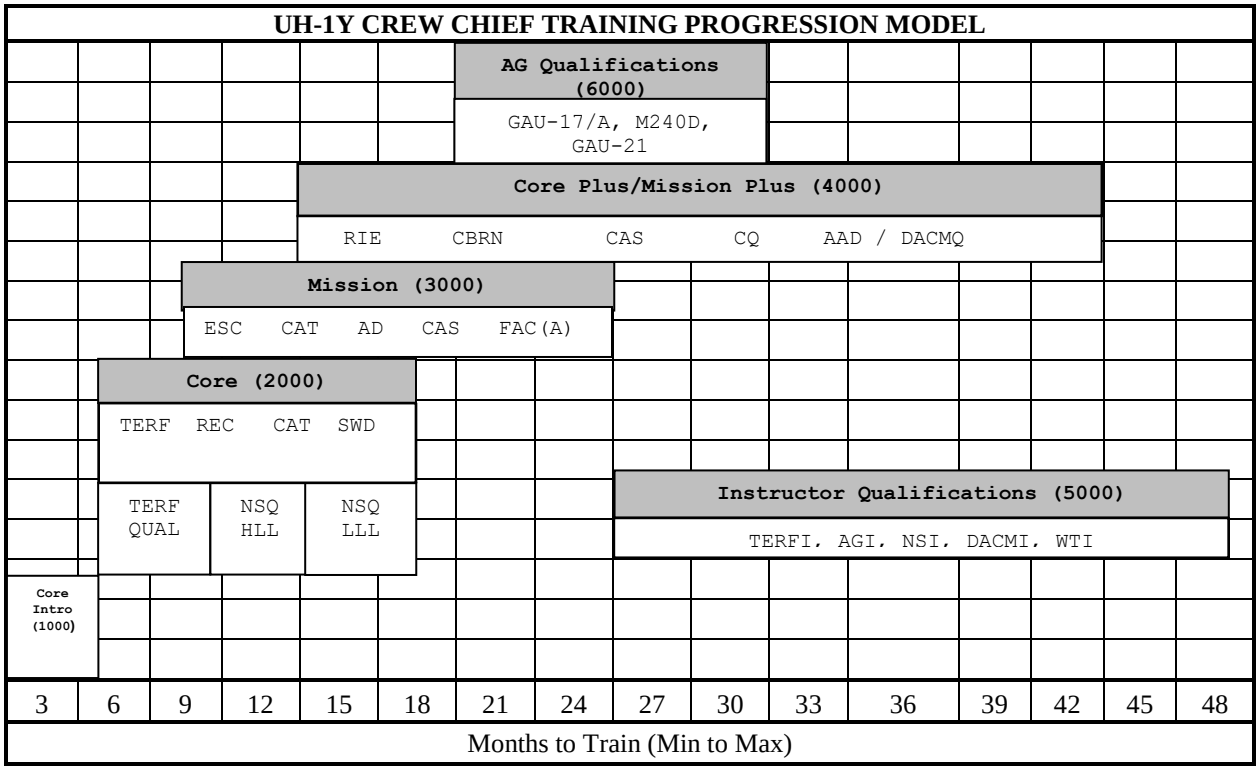
CHAPTER 3

UH-1Y CREW CHIEF

3.0 CREWMEMBER SYLLABUS T&R 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.

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



3.2 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 aircrew 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 Syllabus Matrix at the end of the Chapter to ensure events are converted correctly. ***Enlisted Aircrew Training Managers (EATM) shall ensure enlisted aircrew are placed in the appropriate syllabus (B, R, SC) in MSHARP, in order to ensure MSHARP functions properly.***

3.2.1 Basic/Transition (B/T) POI. The Transition POI mirrors the Basic POI. Basic and Transition enlisted aircrew are required to fly the entire syllabus.

BASIC POI		
WEEKS	**COURSE**	**PERFORMING ACTIVITY**
1	UH-1Y Familiarization	USMC UH-1Y FRS
2	Ground School	USMC UH-1Y FRS
3-8	Core Introduction Training	USMC UH-1Y FRS
9-14	Core/Mission Skill Training	Tactical Squadron

3.2.2 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 (T&R Syllabus Matrix), previously designated UH-1N aircrew in the Series Conversion syllabus shall fly all "SC" coded events if the crewmember is proficient in the UH-1N. The Series Conversion syllabus is predicated on the experience of the Series Conversion aircrew and is primarily designed for aircrews that are not out of the UH-1N for longer than 485 days and is beginning the series conversion within days of the last UH-1N flight. Aircrew that fall outside this date window shall comply with the Refresher POI syllabus. The commanding officer may tailor the Series Conversion syllabus to fit the experience, and proficiency, of the Series Conversion aircrew per T&R Program Manual. All UH-1N aircrew qualified and proficient LLL that are undergoing a Series Conversion syllabus may fly all "NS" and "(NS)" flights under HLL or LLL conditions. M-SHARP will not automatically convert UH-1N events for proficiency in the UH-1Y. The training officer will have to manually enter these dates, for each aircrew, before commencing training in the Series Conversion POI.

Upon completion of SWD-2609, SWD-2610, LLL-2405 and CAT-3203 events for the Series Conversion syllabus, the crewmember may be re-designated/qualified NSQ LLL, AG GAU-17/A, AG M240D, TERFI, AGI GAU-17/A, AGI M240D, NSI, and WTI (if previously held in the UH-1N) as appropriate by the squadron commanding officer. CQ and DACM events are not required to be completed prior to regaining the above qualifications/designations in the series conversion syllabus.

Upon completion of DACM-4301 events for the Series Conversion syllabus, the crewmember may be re-designated/qualified RWDACM, FWDACM and DACMI (if previously held in the UH-1N) as appropriate by the squadron commanding officer.

WEEKS	COURSE	PERFORMING ACTIVITY
1	UH-1Y Familiarization	USMC UH-1Y FRS
2	Ground School	USMC UH-1Y FRS
3-8	Core Introduction Training	USMC UH-1Y FRS
9-14	Core/Mission Skill Training	Tactical Squadron

3.2.3 Refresher (R) POI. 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 aircrew (completed at least one fleet tour in an operational unit) returning to a squadron, who have not flown in an UH-1Y for more than 485 days shall be placed in the Refresher POI.

The Refresher syllabus is predicated on the experience of the Refresher aircrew. Aircrew in the Refresher syllabus should fly all "R" coded events; however, aircrew 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 aircrew per the T&R Program Manual. This assumes that the Refresher has had previous proficiency in that stage of training. If the aircrew has no previous proficiency in a stage or particular event, then the aircrew 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 aircrew will complete the entire remaining syllabus. Prerequisites apply only to replacement aircrew and not to Refresher aircrew.

Previously designated UH-1N aircrew 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 with no direct comparison to a UH-1N event or an event with no proficiency date because the aircrew never performed it in the UH-1N. ***M-SHARP will not automatically convert UH-1N T&R syllabus codes for proficiency in the UH-1Y. The Enlisted Aircrew Training Manager will have to manually enter these dates for each CC/AO before commencing Core Skill training in the Refresher POI at the tactical unit.*** At the discretion of the commanding officer, aircrew under the Refresher POI who were previously ANSQ (NSQ-LLL) qualified may conduct NS or (NS) Refresher syllabus events under HLL or LLL conditions.

REFRESHER POI		
WEEKS	**COURSE**	**PERFORMING ACTIVITY**
1	UH-1Y Familiarization	Tactical Squadron
2-3	Ground School	Tactical Squadron
4-8	Core Introduction Training	Tactical Squadron
9-18	Core/Mission Skill Training	Tactical Squadron

3.2.4 MAWTS-1 Level Instructor POI

WEEKS	COURSE	PERFORMING ACTIVITY
24	Night Systems Instructor	MAWTS-1
24	Defensive Aerial Combat Maneuvering Instructor	MAWTS-1

3.3 PROFICIENCY & CURRENCY

3.3.1 Event Proficiency. Event proficiency is defined as successful completion of the performance standard as determined by the instructor or evaluator. Event completion is predicated upon demonstrated proficiency. Once completed, it is logged in M-SHARP by entering the appropriate event code. M-SHARP automatically updates the event proficiency date to reflect the completion date.

3.3.2 Skill Proficiency. Management of individual proficiency serves as the foundation for developing proficiency requirements in DRRS-MC. Proficiency is attained by individual Phase where the training events for each skill are determined by POI assignment. Proficiency is a measure of achievement of a specific skill. To attain Individual Skill proficiency, an individual must be simultaneously proficient in all events for that Skill. Individuals may be attaining proficiency in some skills while maintaining proficiency in others.

Maintaining Skill Proficiency. Once attained, skill proficiency is maintained by executing those events which have a Proficiency Period (Maintain events). Proficiency Periods establish the maximum time between event demonstration. Should proficiency be lost in any maintain event, for a specific skill, that skill proficiency is temporarily lost. Skill proficiency can be re-attained by again demonstrating proficiency in the Event(s) that are not proficient. For flying communities, an individual shall complete delinquent events with a proficient instructor.

Loss of Individual Skill Proficiency. Should an individual lose proficiency in all maintain events in a skill, the individual will be assigned to the Refresher POI for the skill. To regain skill proficiency, the individual must demonstrate proficiency in all R-coded events for the skill.

Loss of Unit Skill Proficiency. If an entire unit loses proficiency in an Event, unit instructors shall regain proficiency by completing the Event with an instructor from a like unit. If not feasible, the instructor shall regain proficiency by completing the Event with another instructor. If a unit has only one instructor and cannot complete the event with an instructor from another unit, the instructor shall regain proficiency with the next highest qualified crew chief available or as designated by the commanding officer.

Proficiency Status. Proficiency is a "Yes/No" status by skill assigned to an individual. When an individual attains and maintains Core Skill Proficiency (CSP), Mission Skill Proficiency (MSP), Core Plus Skill Proficiency (CPSP), or Mission Plus Skill Proficiency (MPSP), the individual may count towards CMMR or CMTS.

3.3.3 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.

3.4 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 CREW CHIEF QUALIFICATIONS AND DESIGANTIONS	
Qualification	**Event Requirements**
NATOPS	6101, IAW CNAF M-3710.7 and an annual qualification letter signed by the commanding officer.
TERF	2100,2101
NSQ-HLL	TERFQ,2300,2400,2401,2402,2403
NSQ-LLL	NSQ-HLL, 2102,2404,2405
CQ	4601,4603
NVDCQ	4601,4602,4603,4604
UNAIDED CQ	4601,4602,4603,4605
RW DACM	TERFQ,4301,4302
FW DACM	TERFQ,4304,4305
AG GAU-17/A	NSQ LLL,2601,2605,2609,3100,3101,3103,3200,3203,3301,6301
AG M240D	NSQ LLL,2602,2606,2610,3100,3101,3103,3200,3203,3301,6302
AG GAU-21	NSQ LLL,2603,2607,2611,3100,3101,3103,3200,3203,3301,6303
Designation	**Event Requirements**
CC	CIX-1901
FRSI	AGI GAU-17/A, AGI M240D, AGI GAU-21, 5300, 5301
TERFI AGI GAU-17/A AGI M240D AGI GAU-21 RW DACMI FW DACMI NSFI NSI WTI	IAW the MAWTS-1 Course Catalogs. Designations for TERFI and AGI are signed by the unit commanding officer. DACMI, NSI, and WTI designations are signed by the MAWTS-1 Commanding Officer and forwarded to squadron commanding officers. Squadron commanding officers should designate crew chiefs who satisfactorily complete the evaluation flight(s) and have an EATF filed in the APR. FRS commanding officers should designate NSFIs as appropriate per the MAWTS-1 Course Catalog.
ANI	6101 given by a NATOPS Instructor
NI	6101 given by a NATOPS Evaluator
CRMF	6103
CRMI	6104

UH-1Y AERIAL OBSERVER QUALIFICATIONS AND DESIGANTIONS	
Qualification	**Event Requirements**
NATOPS	6101, IAW CNAF M-3710.7 and an annual qualification letter signed by the commanding officer.
TERF	2100,2101
NSQ-HLL	TERFQ,2300,2402,2403
NSQ-LLL	NSQ-HLL,2102,2404,2405
CQ	4601,4603
NVDCQ	4601,4602,4603,4604
UNAIDED CQ	4601,4602,4603,4605
RW DACM	TERFQ,4301,4302
FW DACM	TERFQ,4304,4305
AG GAU-17/A	NSQ LLL,2601,2605,2609,3100,3101,3103,3200,3203,3301,6301
AG M240D	NSQ LLL,2602,2606,2610,3100,3101,3103,3200,3203,3301,6302
AG GAU-21	NSQ LLL,2603,2607,2611,3100,3101,3103,3200,3203,3301,6303
Designation	**Event Requirements**
AO	CIX-1901

3.5 SYLLABUS NOTES

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 will be put in the Aircrew Performance Record (APR) of all aircrew to thoroughly track training progression. As each training event is completed, the EATM will input the date of completion.

All events, to include simulators, shall begin with a comprehensive brief with emphasis on administrative procedures, Crew Resource Management (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. videotape, participating aircrews, external support personnel).

An EATF is required for any initial event completed by a Basic/Transition, Refresher or Series Conversion aircrew, 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 EATFs can be obtained by the T&R sponsor, MAWTS-1.

All aircrew will have an APR. The EATM shall ensure each EATF 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 crewmember.

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 CCUI/AOUI 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, CQs, DACM, etc.) can be found in Chapter 3 of the Aviation T&R Program Manual.

3.5.1 Event Header

Sortie Duration. Times indicated for each event are recommendations. When scheduling sorties, Enlisted Aircrew Training Managers are allowed to schedule additional training codes based on anticipated mission sets. This is allowed as long as the performance standards are met for each sortie and sufficient time is available during the flight to accomplish those sorties. 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.

Proficiency Interval. The proficiency Interval, more commonly called “Refly Factor”, 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).

Programs of Instruction. Delineates event requirements for specific syllabi.

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

Code	Environmental Condition
D	Shall be conducted during day.
N	Shall be conducted at night, aided or unaided.
(N)	May be conducted day or night. If at night, aided or unaided.
NS	Shall be conducted at night aided under High Light Level or Low Light Level.
HLL	Shall be conducted at night aided under High Light Level conditions.
LLL	Shall be conducted at night aided under Low Light Level conditions.
(NS)	May be conducted day or night. If at night, aided under HLL or LLL.
(HLL)	May be conducted day or night. If at night, aided under HLL.
(LLL)	May be conducted day or night. If at night, aided under LLL.
N*	Shall be conducted at night unaided.
(N*)	May be conducted day or night. If at night, shall be flown unaided.

E”-Coded Events. Delineates a special event that requires an evaluation. The “E”-coded event also requires an EATF upon execution of every occurrence.

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
G	Ground/academic training
GE	Ground Event requiring evaluation

3.5.2 Event Body

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

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

Demonstrate. The ICC performs the procedure with accompanying description. The CCUI/AOUI observes the procedure and is responsible for the knowledge of the procedure prior to the sortie.

Introduce. The ICC may perform the procedure with an accompanying description, or the ICC may coach the CCUI/AOUI through the procedure without demonstration. The CCUI/AOUI shall perform the procedure with coaching, as necessary, and is responsible for knowledge of the procedure prior to the sortie.

Review. The ICC observes and grades the procedure without coaching the CCUI/AOUI. An airborne critique of the CCUI/AOUI performance is at the option of the instructor. The CCUI/AOUI is expected to perform the procedure without coaching and devoid of procedural error at a level acceptable to warrant progress into the next stage of training.

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.***

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 SWD-2607~NS ORD, indicates that ***if*** the event is flown under HLL (NS) and ordnance is utilized (ORD), SWD-2607 is a required prerequisite.

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 CNAFINST, NATOPS, and NAVMC 3500.14. When not clearly defined by higher directives, the squadron commanding officer, DOSS, or local SOPs may dictate the minimum crew requirements.

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

3.5.3 Crew served weapons ordnance delivery standards

CREW SERVED WEAPONS ENGAGEMENT STANDARDS		
CORE INTRODUCTION & CORE PHASE (1000 & 2000)		
DAY & HLL		
RANGE	**MAJORITY OF IMPACTS**	**PERFORMANCE**
1500 METERS	Within 50 meter radius	Rounds on target by second burst
1000 METERS	Within 25 meter radius	
500 METERS	Within 15 meter radius	
LLL		
RANGE	**MAJORITY OF IMPACTS**	**PERFORMANCE**
1500 METERS	Within 40 meter radius	Rounds on target by second burst
1000 METERS	Within 20 meter radius	
500 METERS	Within 10 meter radius	
MISSION PHASE (3000)		

RANGE	MAJORITY OF IMPACTS	PERFORMANCE
1500 METERS	Within 40 meter radius	Rounds on target by second burst
1000 METERS	Within 20 meter radius	
500 METERS	Within 10 meter radius	
CORE PLUS PHASE (4000)		
RANGE	**MAJORITY OF IMPACTS**	**PERFORMANCE**
1500 METERS	Within 40 meter radius	Rounds on target by second burst
1000 METERS	Within 20 meter radius	
500 METERS	Within 10 meter radius	
REQUIREMENTS & QUALIFICATIONS PHASE (6000)		
RANGE	**MAJORITY OF IMPACTS**	**PERFORMANCE**
1500 METERS	Within 30 meter radius	First burst accuracy
1000 METERS	Within 15 meter radius	
500 METERS	Within 5 meter radius	

3.5.4 Grading Standards

Complete. The CCUI/AOUI has demonstrated sufficient grasp of the concepts and skills to proceed to the next training evolution or be designated appropriately.

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.

Requires Additional Training (RAT). A RAT is used when the CCUI/AOUI 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.

Unsatisfactory. Identifies a condition where the CCUI/AOUI 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 CC/AO 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 &

3.5.5 Academic Training

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.

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:

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.

Academic Support Package (ASP). These are MAWTS-1 prepared classes available on the MAWTS-1 websites. All material contained on the websites, both classified and unclassified are instructor-presented lectures. The classes listed are only the Generics, Common or Specific UH-1 classes.

Computer Based Training. These are software and/or hardware computer training aids designed to augment training for specific systems.

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

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

NIPR: https://hcs.usmc.mil/sites/mawts1/default.aspx

SIPR: http://intelshare.intelink.sgov.go/sites/mawts1

Graduate Level Courses. There are 9 graduate level courses (TERFI, AGI GAU-17, AGI M240D, AGI GAU-21, NSFI, NSSI, DACMI, NSI, and 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 Catalogs.

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
Weapons and Tactics Instructor (WTI) Course	MAWTS-1

3.5.6 Secondary AMOS Crew Chief. All efforts shall be made with MMEA-84 to receive assignment of Primary MOS crew chiefs prior to utilizing the secondary AMOS program. If inventory shortages cannot be filled through MMEA-84, authorization is granted to individual unit commanding officers to train secondary AMOS 6174 under the following guidelines:

The number of secondary MOS crew chiefs that an individual unit commander may train is limited to the current staffing formula; 1.6 CC x primary assigned aircraft (PAA) = number of crew chiefs minus primary/additional MOS crew chiefs on hand. For example, if a squadron has 14 primary/additional MOS crew chiefs assigned, and the staffing formula computes to 19 total crew chiefs, unit commanders may only request to train a maximum of 5 secondary AMOS crew chiefs to equal PAA.

To ensure standardization of training and aviation adaptability, all requested trainees shall be designated an Aerial Observer prior to starting secondary AMOS training.

The source population shall be restricted to aviation maintenance MOS of 6114, 6154, and 6324 only. All requests shall be submitted via AMHS message format to CG TECOM MTESD for approval prior to trainee starting flight syllabus. Message shall include:

(1) Organization requesting training of secondary AMOS crew chief.

(2) Name, rank, MOS, and SSN of trainee.

(3) Total number of crew chiefs rated by PAA.

(4) Total number of primary and secondary AMOS crew chiefs assigned to requesting MCC.

(5) Adequate justification for training a secondary AMOS crew chief.

(6) Faxed copy of initial AO NATOPS evaluation report (OPNAV 3710.7 form).

Upon receipt of request, TECOM ASB will approve/disapprove request via ASL/ASM and notify requesting command through AMHS format. Approved training will be conducted in strict compliance with this Manual and MCO P1200.7, Military Occupational Specialties Manual. Additional requirements are outlined below:

To ensure MOS standardization all Core Introduction (1000 Phase) codes shall be flown with a current Enlisted Weapons and Tactics Instructor (MOS 6177) or NATOPS Evaluator/Instructor holding a primary MOS of 6174. Only a currently assigned and designated FRS Crew Chief instructor (FRSI) shall administer the Core Skill Introduction evaluation flight (CSIX-1901).

The Total Time to Train (TTT) secondary AMOS crew chiefs shall not exceed six months. The date of initial flight and completion of evaluation flight define the TTT.

Core Introduction flights previously flown as an Aerial Observer will transfer to the training of the secondary AMOS Crew Chief, provided those flights were flown with the secondary AMOS candidate acting in the capacity of a crew chief.

Core Introduction flights not previously flown or that do not meet the above requirement shall be flown with the secondary AMOS candidate acting in the capacity of a crew chief.

Only the FRS commanding officer has the authority to designate the secondary AMOS of 6174. The evaluation flight may be flown at the respective FRS or individual requesting squadron. Requesting commands shall coordinate with the FRS for scheduling of the evaluation flight. TAD funding for either the trainee or FRS CC instructor shall be the responsibility of the requesting squadron.

The FRSI shall administer the oral and Core Skill Introduction evaluation flight (CSIX-1901) and closed book NATOPS examination. Prior to Core Skill Introduction evaluation flight parent commands shall ensure:

(1) Nominees complete squadron approved open book NATOPS examination.

(2) Prior to designation, nominees shall attend SERE training.

Upon completion of Core Skill Introduction evaluation flight, copies of all certifications and evaluations shall be submitted to the FRS Commanding officer for secondary AMOS certification/approval. Documents to be submitted are:

(1) Copy of current flight physical.

(2) Copy of physiology/water survival Form 3760.32.

(3) Copy of all crew chief 1000 series EATFs.

(4) Copy of current flight orders.

(5) Copy of section III(c), examination record, OPNAV 3760/32G.

(6) Copy of initial AO evaluation form, OPNAV 3710.7.

(7) Original Crew Chief evaluation form, OPNAV 3710.7.

(8) Copy of SERE completion certificate.

(9) Marines listed as instructor on 1000 phase EATFs must submit a copy of respective WTI certificate or NATOPS Evaluator/Instructor designation. The primary purpose of this documentation is to assist the model manager in tracking the certification process and identifies positive/negative trends in the training process. Evaluation standards applicable to primary MOS crew chiefs shall be strictly adhered to for secondary AMOS crew chiefs.

The FRSI shall forward original OPNAV 3710.7 form to FRS Commanding officer for approval. The FRS commanding officer shall sign the NATOPS evaluation and a Crew Chief designation letter and forward to the originating command for insertion into trainees NATOPS jacket.

To facilitate management of the MOS end strengths, secondary AMOS crew chiefs desiring a primary 6174 MOS will forward the appropriate AA form to MMEA-6 requesting a lateral move from a secondary AMOS Crew Chief to a primary MOS Crew Chief.

On hand primary designated MOS Crew Chiefs shall have priority for crewmember flight orders IAW MCO 1326.2G, Administration of Temporary Indefinite Flight Orders.

Core, Mission, and Core Plus Skill events previously completed by the secondary AMOS crew chief in the Aerial Observer syllabus may transfer to their crew chief syllabus upon designation by the FRS Commanding officer and at the discretion of the crewmember's commanding officer. Flights not previously completed as an Aerial Observer shall be flown by the AMOS Crew Chief; an EATF shall be written and filed in their APR. Qualifications attained previously may transfer at the unit commanding officer's discretion.

This policy applies to Marines currently in training and is effective immediately. This is not applicable to Marines designated prior to this revision, or Marines currently assigned to the Executive Flight Detachment of HMX-1.

3.6 CORE INTRODUCTION PHASE (1000)

Purpose. To develop a Core Introduction complete Crew Chief or Aerial Observer, and to prepare the CCUI/AOUI for follow on Core Phase training. At the completion of this phase the CCUI/AOUI will be designated as a crew chief or aerial observer.

General. Completion of this phase meets the requirements for the designation as a Crew Chief with an MOS of 6174 or an Aerial Observer with an MOS of 6199. At the discretion of the squadron commanding officer a letter designating the CC/AO, shall be placed in the NATOPS jacket and an entry made in the flight log book. The TERF-1403 and CAT-1803 must be completed within (6) months (180) days of the CIX-1901. If six months have elapsed since the completion of either flight, that flight must be re-flown prior to completing the CIX-1901.

Core Introduction Stages

CORE INTRODUCTION (1000 Phase)		
STAGE	**PARAGRAPH**	**PAGE NUMBER**
Academics (ACAD)	3.7.1	3-12
Familiarization (FAM)	3.7.2	3-12
Formation (FORM)	3.7.3	3-14
Terrain Flight (TERF)	3.7.4	3-16
Navigation (NAV)	3.7.5	3-17
Specific Weapons Delivery (SWD)	3.7.6	3-17
Combat Assault Transport (CAT)	3.7.7	3-18
Core Introduction Check (CIX)	3.7.8	3-21

3.7 CORE INTRODUCTION STAGES

3.7.1 Academics. 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.

CORE INTRODUCTION ACADEMICS (ACAD)	
TRAINING CODES	**COURSEWARE**
ACAD-1000	CURRENT FRS ACADEMIC SYLLABUS

3.7.2 Familiarization (FAM)

Purpose. To develop familiarity with aircraft flight characteristics, limitations, and emergency procedures during day and night operations. Develop proficiency in assisting pilots in all aspects of FAM flight and to instill basic CRM procedures throughout the familiarization stage.

General. At the completion of this stage, the CCUI/AOUI shall have demonstrated the ability to assist pilots in all aspects of FAM flight, both day and night.

AOUI Requirements. 1100, 1102, 1103

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

Ground/Academic Training. IAW HMLA/T-303 curriculum requirements.

FAM-1100 1.5 * B D A/S 1 UH-1Y

Goal. Introduce normal ground and flight procedures.

Requirements

Discuss

Engine Fire on Start (external)
APU Fire

Demonstrate
Use of ICS
Voice procedures
Aircraft Lighting
Using the clock code system
Estimating distance

Introduce
Preflight
Starting
Taxi
Takeoff
Low work
Precision approach
Lookout
Waveoff procedures
Normal approach
No hover landingsPost flight

Performance Standards

Demonstrate knowledge of the procedures prior to the sortie.

Display knowledge of ICS voice procedure and all applicable emergency procedures.

Perform crewmember duties during all phases of flight in accordance with UH-1Y NATOPS.

Prerequisite. 1000

Crew. FRSI or TERFI/CCUI or AOUI

FAM-1101 1.5 * B,SC D A/S 1 UH-1Y

Goal. Introduce communications, passenger procedures, normal and emergency procedures.

Requirements

Discuss
Engine Failures in Flight
Smoke and Fumes Elimination
Ditching procedures
Aircraft, engine, and transmission limitations

Introduce
Precautionary/emergency landings
Autorotations
Communication/navigation equipment (DFD)
Passenger briefs
Passenger emergency procedures
Weight and balance calculations
Responsibilities during loading

Performance Standards

Demonstrate knowledge of the procedures prior to the sortie.

Display knowledge of ICS voice procedures and all applicable emergency procedures.

Perform crewmember duties during all phases of flight in accordance with UH-1Y NATOPS.

Prerequisite. 1100

Crew. FRSI or TERFI/CCUI

FAM-1102 1.5 * B,SC D A/S 1 UH-1Y

Goal. Introduce FAM maneuvers.

Requirements

Discuss

Airfield pattern operations
MDG/NATOPS maneuvers

Review

Preflight
Starting
Taxi
Takeoff
Low work
Precision approach
Lookout
Waveoff procedures
Normal approach
No hover landings
Sliding landings
Post flight

Introduce

Maximum power takeoff
Power limited takeoff
High Speed approach and landing
Tactical approach profile
Sliding Landings
Fixed pitch tail rotor malfunctions

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

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

Prerequisite. 1101

Crew. FRSI or TERFI/CCUI or AOUI

FAM-1103 1.5 * B,SC NS A/S 1 UH-1Y

Goal. Introduce NVD techniques (HLL).

Requirements

Discuss

NVD preflight/adjustment/focusing
ANV-20-20 Eye Lane System Resolution Test Set use
NVD emergencies/malfunctions
Aircraft emergencies while using NVDs
Aircrew coordination

Introduce.

Wear and use of NVDs

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display ability to perform crewmember duties using NVDs.

Prerequisite. 1102, 1800

Crew. NSFI or NSI/CCUI or AOUI

3.7.3 Formation (FORM)

Purpose. To become familiar with crew functions and responsibilities required during formation flying.

General. At the completion of this stage, the CCUI/AOUI shall have demonstrated the ability to assist pilots in all aspects of formation flight, both day and night.

AOUI requirement. 1301

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

Ground/Academic Training. IAW HMLAT-303 curriculum requirements.

FORM-1301 1.5 * B D A 2 H-1

Goal. Introduce formation flight and tactical formation flight maneuvering.

Requirements

Discuss

- Parade
- Cruise
- Combat cruise
- Combat spread
- Tac turn
- Center turn
- In-place turn
- Split turn
- Cross turn
- Break turn
- Dig and pinch/resume
- Reversal
- Shackle turn
- Cover
- Ordnance delivery patterns

Introduce

- Tactical formations
- Maneuvers
- Hand and arm signals

Review

- Lookout procedures
- Crewmember responsibilities

Performance Standards

Demonstrate knowledge of the procedures prior to the sortie.

Display thorough knowledge of Tactical formation maneuvers.

Demonstrate proficiency assisting pilots in Tactical formation maneuvers.

Prerequisite. 1102

Crew. FRSI or TERFI/CCUI or AOUI

FORM-1303 1.5 * B NS A 2 H-1

Goal. Introduce NVD formation flight and tactical formation flight maneuvering (HLL).

Requirements

Review

- Hand and arm signals
- Lookout procedures
- Crewmember responsibilities associated with formation flying at night

Performance Standards. Demonstrate proficiency assisting pilots in night formation maneuvers.

Prerequisite. 1103, 1301

Crew. NSFI or NSI/CCUI

3.7.4 Terrain Flight (TERF)

Purpose. To develop aircrew coordination required during TERF.

General. At the completion of this stage, the CCUI/AOUI shall have demonstrated the ability to assist the pilot in TERF.

AOUI requirements. 1401, 1403

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

Ground/Academic Training. IAW HMLAT-303 curriculum requirements.

TERF-1401	**1.0**	*****	**B,SC**	**D**	**A**	**1**	**UH-1Y**

Goal. Introduce TERF techniques.

Requirements

Discuss

Aircraft clearance
Aircraft emergencies during TERF altitudes

Introduce

Blade walk
Power checks
Masking/unmasking
NOE quickstops
Bunt
Roll
Low level, contour, and NOE profiles

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display knowledge and ability to assist pilots in TERF environment.

Prerequisite. 1102

External Syllabus Support. Authorized TERF Area

Crew. FRSI or TERFI/CCUI or AOUI

TERF-1403	**1.0**	*****	**B**	**NS**	**A**	**1**	**UH-1Y**

Goal. Introduce NVD TERF techniques (HLL).

Requirements

Discuss. NVD considerations in the TERF environment

Introduce

Blade walk
Power checks
Masking/unmasking
NOE quickstops
Bunt
Roll
Low level, contour, and NOE profiles on NVDs

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display knowledge and ability to assist pilots in TERF environment while using NVDs.

Prerequisites. 1103, 1401

External Syllabus Support. Authorized TERF Area

Crew. NSFI or NSI/CCUI or AOUI

3.7.5 Navigation Flight (NAV)

Purpose. To become familiar with crew functions and responsibilities while navigating without use of radio navigational aids.

General. At the completion of this stage, the CCUI/AOUI shall have demonstrated the ability to assist the pilots in all phases of in-flight navigation.

AOUI requirement. Not Required.

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

Ground/Academic Training. IAW HMLA/T-303 curriculum requirements.

NAV-1500 1.5 * B D A/S 1 UH-1Y

Goal. Introduce aircrew duties during navigation.

Requirements

Introduce

- Checkpoints
- Time distance checks
- Barrier features
- Prominent terrain features
- Map legends
- Map preparation
- Route card usage

Review

- Lookout procedures
- Aircrew coordination required during navigation

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display the knowledge and ability to assist pilots in navigation

Prerequisite. 1102.

Crew. FRSI or TERFI (NSFI or NSI)/CCUI

3.7.6 Specific Weapons Delivery (SWD)

Purpose. To familiarize the aircrew with the procedures required to provide fire on targets of opportunity.

General. At the completion of this stage, the CCUI/AOUI shall have demonstrated knowledge of weapons systems and ordnance delivery with crew served weapons. If there is no UH-1Y enlisted aircrew simulator or static weapons trainer available, the SSWD-1600 may be logged in conjunction with SWD-1601.

AOUI requirements. SSWD-1600 and 1601

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

Ground/Academic Training. IAW HMLA/T-303 curriculum requirements.

SWD-1600 1.5 * B D A/S 1 UH-1Y

Goal. Introduce weapons and checklist procedures.

Requirements

Introduce

Ordnance loading
Preflight/post-flight of the weapon
Operations
Safety procedures
Weapons conditions
Ordnance weapons checklist
Practice firing weapons on pre-briefed targets
Crew coordination

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display knowledge and ability to safely employ crew served weapons IAW crew served weapons engagement standards per paragraph 3.5.3.

Prerequisites. 1401, 1800

Ordnance. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

External Syllabus Support. UH-1Y enlisted aircrew simulator or Static Weapons Trainer.

Range Requirement. Live fire range (Static Weapons Trainer)

Crew. AGI/CCUI or AOUI

SWD-1601 1.5 * B D A/S 1 UH-1Y

Goal. Introduce aerial gunnery training.

Requirements

Discuss

Attack patterns
Section operations
Sighting procedures
Malfunction/stoppage procedures
Range estimation techniques.

Introduce

Ordnance loading
Preflight/post-flight of the weapon
Operations
Safety procedures
Weapons conditions
Ordnance weapons checklist
Practice firing weapons on pre-briefed targets
Crew coordination

Performance Standards. Display knowledge and ability to safely employ crew served weapons IAW crew served weapons engagement standards per paragraph 3.5.3.

Prerequisites. 1600

Ordnance. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement. Aerial gunnery range

Crew. AGI/CCUI or AOUI

3.7.7 Combat Assault Transport (CAT)

Purpose. To become familiar with crew responsibilities during operations in confined areas and safely conduct hook/hoist operations. All aspects of aircrew coordination shall be thoroughly briefed.

General. At the completion of this stage, the CCUI/AOUI shall have demonstrated the ability to assist the pilot in all aspects of confined areas, Tactical Landings, and hook/hoist operations IAW UH-1Y NATOPS and NTTP 3-22.3-UH1.

AOUI requirements. 1801, 1802.

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

Ground/Academic Training. IAW HMLAT-303 curriculum requirements.

CAT-1800 1.5 * B D A/S 1 UH-1Y

Goal. Introduce confined area operations.

Requirement

Discuss

Settling with power
Landing zone brief
Dynamic rollover
Slope landings
Aircrew coordination

Introduce

Lookout procedures during CALs
Safety procedures
Aircraft clearance from obstacles
Terrain suitability
Approach/departure routes
Wave-off procedures

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display ability to safely conduct confined area landings.

Prerequisite. 1102

Crew. FRSI or TERFI/CCUI

CAT-1801 1.5 * B,SC D A/S 1 UH-1Y

Goal. Introduce Tactical Landing approaches.

Requirements

Discuss

Threat conditions
Tactical approaches/departures

Introduce

Operating in a low to high threat environment
Safety procedures
Aircraft clearance from obstacles
Terrain suitability
Approach/departure route
Wave-off procedures

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display ability to safely conduct TACTICAL landings and HIE approaches per NATOPS.

Prerequisites. 1800 (1102 for AOUI)

Crew. FRSI or TERFI/CCUI or AOUI

CAT-1802 1.5 * B,SC NS A/S 1 UH-1Y

Goal. Introduce Confined Area Landings while using NVDs (HLL)

Requirements

Discuss

Brown/white out
Effects of moisture
Crew coordination

Introduce

Confined area landing night operating procedures
Safety procedures
Aircraft obstacle clearance
Terrain suitability
Approach/departure routes
Wave-off procedures
Ground lighting systems

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display ability to safely conduct confined area landings while using NVDs.

Prerequisite. 1103, 1801

Crew. NSFI or NSI/CCUI or AOUI

CAT-1803 1.5 * B NS A 1 UH-1Y

Goal. Introduce night Tactical Landings using NVDs (HLL).

Requirements

Discuss

Brown/white out
Effects of moisture
Crew coordination

Introduce

Confined area landing night operating procedures
Safety procedures
Aircraft obstacle clearance
Terrain suitability
Approach/departure routes
Wave-off procedures
Ground lighting systems

Performance Standards.

Demonstrate knowledge of the procedures prior to the sortie.

Display ability to safely conduct confined area landings while using NVDs.

Prerequisite. 1802

Crew. NSFI or NSI/CCUI

CAT-1804 1.5 * B D A/S 1 UH-1Y

Goal. Introduce external load/hoist procedures.

Requirements

Discuss

Aircrew coordination

Hand and arm signals
ICS terminology
Hook/hoist limitations/malfunctions
Load release
Emergency procedures
Chicago grip, quick splice, and cable cutters

Introduce

Operational check of hoist/hook
Use of rescue strop and jungle penetrator
Cargo hook pendant and manual release
Emergency procedures for external hook/rescue hoist

Performance standards

Demonstrate knowledge of the procedures prior to the sortie.

Demonstrate proper ICS terminology, hook/hoist operation and installation.

Perform at least two hook-up, flight and release operations for cargo hook.

Perform two hoisting operations using a suitable weight.

Prerequisite. 1800

External Syllabus Support. External weight, hoist if available

Crew. FRSI/CCUI

3.7.8 Core Introduction Check (CIX)

Purpose. To evaluate proficiency in the performance of Core Introduction CC/AO duties and conduct an initial NATOPS/CRM Evaluation per the UH-1Y NATOPS and CNAFINST 1542.7 series.

General. Upon completion of the evaluation event, the CCUI/AOUI can be designated a CC/AO at the discretion of the FRS/squadron commanding officer.

AOUI requirement. CIX-1901

Crew Requirements. Initial CIX-1901 for CCUI must be conducted by the FRS. Initial CIX-1901 for AOUI may be conducted by squadron Assistant NATOPS Instructor.

Ground/Academic Training. NATOPS open book test, NATOPS closed book test and ground CRM training must be completed per the UH-1Y NATOPS and CNAFINST 1542.7 series prior to commencing the CIX-1901 flight event.

CIX-1901 1.0 * B,SC (NS) A 1 UH-1Y

Goal. Core Skill Introduction NATOPS and CRM evaluation.

Requirement. Conduct a CC/AO Initial NATOPS and CRM evaluation per criteria in the UH-1Y NATOPS and CNAFINST 1542.7 series.

Performance Standards. IAW UH-1Y NATOPS and CNAFINST 1542.7 series.

Prerequisite. Core Introduction phase complete, CRM ground training, NATOPS open book test, NATOPS closed book test

Crew. CRMF designated ANI (NSFI or NSI)/CCUI or AOUI

3.8 CORE PHASE (2000)

Purpose. To produce a TERF, NSQ-HLL, and NSQ-LLL qualified CC/AO.

General. Upon completion of this phase, the aircrew will be TERF, NSQ-HLL, and NSQ-LLL complete and may conduct additional missions as specified by the Squadron Commander.

TERFQ

After completing TERF-2100 and TERF-2101 the CCUI/AOUI meets the requirements to be Terrain Flight Qualified (TERFQ).

At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as TERFQ shall be placed in the NATOPS jacket and an entry made in the flight log book.

NSQ-HLL

After completing CAT-2403, the CCUI/AOUI meets the requirements to be Night Systems Qualified High Light Level (NSQ-HLL).

At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as NSQ-HLL shall be placed in the NATOPS jacket and an entry made in the flight log book.

NSQ-LLL

After completing LLL-2405, the CCUI/AOUI meets the requirements to be Night Systems Qualified Low Light Level (NSQ-LLL).

At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as NSQ-LLL shall be placed in the NATOPS jacket and an entry made in the flight log book.

CORE Stages

CORE (2000 Phase)		
STAGE	**PARAGRAPH NUMBER**	**PAGE NUMBER**
Academics (ACAD)	3.9.1	3-22
Terrain Flight (TERF)	3.9.2	3-23
Reconnaissance (REC)	3.9.3	3-25
Combat Assault Transport (CAT)	3.9.4	3-25
Specific Weapons Delivery (SWD)	3.9.5	3-29
Night Systems Qualification Low Light Level (NSQ LLL)	3.9.6	3-34
Familiarization (FAM)	3.9.7	3-35

3.9 CORE STAGES

3.9.1 Academics (ACAD)

Purpose

To develop a Core Skill complete Crew Chief or Aerial Observer.

These academics facilitate understanding of functions/operations in the UH-1Y and ensure individuals possess the requisite knowledge to be TERF, NSQ-HLL and NSQ-LLL qualified.

The focus of this training is combat proficiency.

General

These academics are intended to be an integrated series of academic lectures contained within each phase of training.

Accordingly, academic events are like any other event in that they serve as prerequisites to selected flight events or stages.

The lectures are contained in the MAWTS-1 Enlisted Aircrew Academic Support Package.

The codes associated with these academic requirements do not require EATFs.

At the completion of each ACAD event, the appropriate training code shall be logged in M-SHARP by the EATM.

The codes below are for lectures only; readings and guided discussions are NOT included and are contained only in the course catalog.

Reference the current UH-1Y Course Catalog for the most recent academic requirements.

Core Skill academic events are listed below:

CORE ACADEMIC (ACAD)	
TRAINING CODES	**COURSEWARE**
GENERAL REQUIREMENTS	
ACAD-2050	EA TACTICAL AIRCREW CONSIDERATIONS AND RESPONSIBILITIES
TERF	
ACAD-2051	TERRAIN FLIGHT FOR ENLISTED AIRCREW
ACAD-2052	EA NIGHT VISION TRAINING
SWD	
LAB-2040	EA GAU-17/A GUN CLASS
LAB-2041	EA M240D GUN CLASS
LAB-2042	EA GAU-21 GUN CLASS
ACAD-2053	EA FUNDAMENTALS OF AERIAL GUNNERY
ACAD-2055	EA GAU-17/A MACHINE GUN
ACAD-2056	EA M240D MACHINE GUN
ACAD-2057	EA GAU-21 MACHINE GUN
ACAD-2058	EA LASER AIMING DEVICES
ACAD-2059	EA LASER BORESIGHTING
CAT	
ACAD-2060	EA INTRO TO INSERTS AND RAID OPERATIONS
ACAD-2061	EA UH-1 RAPID INSERTION AND EXTRACTION (RIE)

3.9.2 Terrain Flight (TERF)

Purpose. To refine proficiency in terrain flight and navigation.

General. CCUI/AOUI will demonstrate proficiency in terrain flight and navigation.

AOUI Requirements. 2100, 2101, 2102

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

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

TERF-2100 1.0 180 B,R,M D A 1 UH-1Y

Goal. Introduce TERF navigation.

Requirements

Discuss

Safety precautions when operating in a TERF environment
Tactical considerations during TERF
Obstacle avoidance

Introduce

TERF Navigation
Use of checkpoints
Time distance checks
Barrier features
Prominent terrain features
Map legend
Map preparation
Route cards

Review

TERF Profiles
TERF maneuvers
Blade walk
Power checks

Performance Standards

Demonstrate the ability to safely perform TERF navigation in low level, contour, and NOE environments.

Demonstrate the ability to conduct all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTTP.

Prerequisites. 2050, 2051, 1901

Range Requirement. Authorized TERF route

Crew. TERFI/CCUI or AOUI

TERF-2101 1.0 180 B,R,SC,M NS A 1 UH-1Y

Goal. Review TERF maneuvers and navigation using NVDs (HLL).

Requirements

Discuss

Safety precautions when operating in a TERF environment
Safety precautions when flying on NVGs
Terrain suitability
TERF maneuvers at night

Introduce

NVD lookout procedures during TERF
Use of the ANV-20/20 NVD Infinity Focus Device

Review

Checkpoints
Time distance checks
Barrier features
Prominent terrain features
Map legend
Map preparation
Route cards

Performance Standards

Demonstrate the ability to safely perform TERF navigation in low level, contour, and NOE environments.

Demonstrate the ability to conduct all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTTP.

Prerequisite. 2052, 2100

Range Requirement. Authorized TERF route

Crew. NSI/CCUI or AOUI

TERF-2102 1.5 180 B,R,M NS A 2 1 UH-1Y & 1 H-1

Goal. Develop proficiency in tactical formation flight and TERF navigation (LLL).

Requirements

Discuss

Safety precautions when flying during Low Light Level conditions
Terrain suitability
Section mechanics during TERF
LLL formation flight considerations

Introduce. TERF maneuvers in the LLL environment

Review

Safety precautions when operating in a TERF environment
NVD lookout procedures during TERF
Use of the ANV-20/20 NVD Infinity Focus Device

Performance Standards

Demonstrate proficiency in all TERF maneuvers IAW the UH-1Y NATOPS, MDG and NTTP.

Demonstrate the ability to accurately prepare a map and assist the pilots in navigation in the TERF environment.

Prerequisite. NSQ HLL

Range Requirement. Authorized TERF route

Crew. NSI/CCUI or AOUI

3.9.3 Reconnaissance (REC)

Purpose. To develop proficiency in reconnaissance operations.

General

The CCUI/AOUI will demonstrate proficiency in sensor employment for target detection, recognition and identification during reconnaissance operations.

The CCUI/AOUI shall be familiar with the use of the Night Thermal Imaging System (NTIS).

The CCUI/AOUI will safely conduct operational tasks prior to and during NTIS operations.

The GREC-2300 shall be conducted on the ground with an operable FLIR.

All efforts should be made to utilize BSB II configured aircraft for these events.

AOUI Requirement. 2300

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

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

GREC-2300 1.0 * B (NS) G 1 UH-1Y

Goal. Familiarize the CCUI and AOUI with terminology, preflight, post-flight, switchology of NTIS.

Requirements

Discuss

Terminology
LRF operation and Laser safety considerations
CRM as it relates to NTIS
Integration of handheld optics and aircraft sensor systems

Introduce

Sensor system power up
Controller operation
Laser operations
Shutdown procedures

Performance Standards.

Demonstrate basic knowledge and understanding of FLIR/NTIS operations to include; track, polarity, freeze, cage, zoom and safe LRF utilization.

Locate and demonstrate the ability to assist crew with target correlation (if available) utilizing the FLIR/NTIS.

Prerequisite. 2050, 1901

Range Requirement. LASER safe range, if available.

External Syllabus Support. Thermally augmented threat vehicles, if available.

Crew. NSI/CCUI or AOUI

3.9.4 Combat Assault Transport (CAT)

Purpose. To develop proficiency in section tactical approaches, landings and departures during day and HLL conditions.

General. The CCUI/AOUI will demonstrate proficiency in tactical landings, tactical approaches and section Combat Assault Transport skills.

AOUI Requirements. 2402 through 2405

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

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

CAT-2400 1.5 * B D A 1 UH-1Y

Goal. Develop proficiency in tactical approaches, landings and departures.

Requirement

Discuss

Tactical approaches, landings and departures
Individual waveoffs
HIE operations
Safety and NATOPS limitations
Reduced Visibility Landings (RVLs) and CRM
Terrain/obstacle clearance
ICS terminology
Crew coordination during Tactical Landing and HIE approaches

Introduce

Tactical approaches/departures
Slope landings
HIE terminology and operations

Performance Standards

Demonstrate the ability to assist pilots in a minimum of 8 landings, with a minimum of 1 simulated/actual reduced visibility landing.

Demonstrate proper crew coordination during takeoff/landings and aircraft clearance.

Prerequisites. 2050, 2060, 2061, 1901

Crew. TERFI/CCUI

CAT-2401 1.5 * B NS A 1 UH-1Y

Goal. Develop proficiency in tactical approaches, landings and departures utilizing NVDs during (HLL).

Requirements

Discuss

Crew coordination during Tactical Landings and HIE approaches
RVL considerations
Closure rates and drift
NVD lookout procedures during tactical landings and HIE approaches
Use of the ANV-20/20 NVD Infinity Focus Device

Introduce

Tactical approaches/departures while using NVDs
HIE terminology and operations at night

Review

Tactical approaches/departures
HIE operations
Safety and NATOPS limitations
Terrain/obstacle clearance
ICS terminology

Performance Standards

Demonstrate the ability to assist pilots in a minimum of 8 landings, with a minimum of 1 simulated/actual reduced visibility landing.

Demonstrate proper crew coordination during takeoffs/landings, and aircraft obstacle clearance.

Prerequisites. 2052, 2400

Crew. NSI/CCUI

CAT-2402 1.5 180 B,R,SC D A 2 UH-1Y

Goal. Introduce tactical Combat Assault Transport ingress profiles and landing formations IAW UH-1 NTTP.

Requirements

Introduce

Section tactical approaches, landings and departures
Single Point, Single Axis Ingress Profile
Single Point, Dual Axis Ingress Profile
Multiple Point, Single Axis Ingress Profile
Multiple Point, Dual Axis Ingress Profile

Review

Tactical approaches/departures
Section mechanics
HIE operations
Safety and NATOPS limitations
Terrain/obstacle clearance
ICS terminology
Crew coordination during Tactical Landings and HIE approaches
Brown/white out considerations
Closure rates and drift

Performance Standards

Demonstrate the ability to assist pilots with minimum of 4 ingress profiles accomplished as lead and 4 ingress profiles accomplished as the wingman.

A minimum of two ingress profiles shall end in a fast rope approach.

Demonstrate proper crew coordination, aircraft clearance, and wingman awareness.

Prerequisites. 2100, 2400

Crew. TERFI/CCUI

CAT-2403 1.5 180 B,R,SC,M NS A 2 UH-1Y

Goal. Conduct tactical Combat Assault Transport ingress profiles and landing formations IAW UH-1 NTTP (HLL).

Requirements

Discuss. Previously discussed stage items.

Review

Section tactical ingress profiles, approaches, landings and departures
Simultaneous landings
Low to high rejoins 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
Fast rope/Rappel Profiles and communication
Flight and individual waveoffs

Evaluate. CCUI's ability to assist the pilots in safely conducting tactical ingress profiles, approaches and landings under HLL conditions

Performance Standards

Demonstrate the ability to assist pilots with minimum of 4 ingress profiles accomplished as lead and 4 ingress profiles accomplished as the wingman.

A minimum of 2 ingress profiles shall end in a fast rope approach.
Demonstrate proper crew coordination, aircraft clearance, and wingman awareness.

Prerequisite. TERFQ, 2300, 2401, 2402

Crew. NSI/CCUI or AOUI

CAL-2404 2.0 * B NS A 1 UH-1Y

Goal. Develop proficiency in landings and departures utilizing NVDs during (LLL).

Requirements

Discuss

Crew coordination during Tactical Landings and RIE approaches
RVL considerations
Closure rates and drift
NVD lookout procedures during tactical landings and RIE Approaches

Introduce

Tactical approaches and departures during LLL

Review

Tactical approaches/departures while using NVDs
HIE operations
Safety and NATOPS limitations
Terrain/obstacle clearance
ICS terminology
Use of the ANV-20/20 NVD Infinity Focus Device

Performance Standards

Demonstrate the ability to assist pilots in a minimum of 5 landings.
Demonstrate proper crew coordination during takeoffs/landings, and aircraft obstacle clearance.

Prerequisites. NSQ HLL

Crew. NSI/CCUI or AOUI

CAT-2405 1.5 180 B,R,SC,M NS A 2 UH-1Y

Goal. Review section tactical ingress profiles, approaches, landings, and departures (LLL).

Requirements

Discuss

Section tactics under LLL conditions
Reduced Visibility Landings (RVLs) and CRM

Introduce

Section Tactical landings under LLL conditions

Review

Section mechanics
RIE operations
Safety and NATOPS limitations
Reduced Visibility Landings (RVLs) and CRM
Closure rates and drift

Performance Standards

Demonstrate the ability to assist pilots in a minimum of 4 landings as lead and 4 landings as the wingman.
A minimum of 2 approaches shall end in a fast rope profile.

Prerequisite 2404

External Syllabus Support Unlit field or remote landing site free from artificial illumination

Crew NSI/CCUI or AOUI

3.9.5 Specific Weapons Delivery (SWD)

Purpose. To develop proficiency in SWD and weapons system employment.

General

Upon successful completion of this stage the CCUI/AOUI will demonstrate knowledge of weapons systems and proficiency in SWD with crew served weapons.

Section operations should be used if available.

Weapon mounted Lasers should be used for all SWD NVD flights.

Refer to paragraph 3.5.3 for crew served weapons ordnance delivery standards.

AOUI Requirements. 2601-2603, 2605-2607, 2609-2611

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

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog. Prior to commencing each flight, the CCUI/AOUI shall receive appropriate ground training by an Aerial Gunnery Instructor/Night Systems Instructor for the respective weapons and Laser usage.

SWD-2601 1.5 180 B,R,SC D A 1 UH-1Y

Goal. Introduce GAU-17/A machine gun employment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions
Weapons Checklist procedures
Crew coordination
Attack profiles
Range estimation
Squadron ordnance SOPs
CALA and Arm/De-arm procedures
Switchology

Introduce

Ordnance loading
Weapon system preflight
Weapon system employment
Weapon system post-flight
Cycle of operation
Weapon system troubleshooting and malfunction procedures
Proper switchology
Attack profiles

Review

Weapon system emergency procedures
Weapons control procedures
Verbal/non-verbal fire control commands
Fundamentals of aerial gunnery

Performance Standards

Demonstrate basic knowledge of nomenclature and cycle of operation.

Demonstrate the ability to safely and effectively employ the

GAU-17/A IAW crew served weapons employment table.

Demonstrate proper disassembly, inspection and reassembly of the weapon system.

Prerequisite. 2040, 2053, 2055, 2100, 2400

Ordnance. 1,500 rounds 7.62mm

Range Requirement. Aerial gunnery range

Crew. AGI/CCUI or AOUI

SWD-2602 1.5 180 B,R,SC D A 1 UH-1Y

Goal. Introduce M240D machine gun employment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions
Weapons Checklist procedures
Crew coordination
Attack profiles
Range estimation
Squadron ordnance SOPs
CALA and Arm/De-arm procedures

Introduce

Ordnance loading
Weapon system preflight
Weapon system employment
Weapon system post-flight
Cycle of operation
Weapon system troubleshooting and malfunction procedures
Attack profiles

Review

Weapon system emergency procedures
Weapons control procedures
Verbal/non-verbal fire control commands
Fundamentals of aerial gunnery

Performance Standards

Demonstrate basic knowledge of nomenclature and cycle of operation.

Demonstrate the ability to safely and effectively employ the M240D IAW crew served weapons employment table.

Demonstrate proper disassembly, inspection and reassembly of the weapon system.

Prerequisites. LAB-2041, ACAD-2053 and 2056, TERF-2100, CAT-2400

Ordnance. 600 rounds 7.62mm

Range Requirement. Aerial gunnery range

Crew. AGI/CCUI or AOUI

SWD-2603 1.5 180 B,R,SC D A 1 UH-1Y

Goal. Introduce GAU-21 .50 caliber machine gun employment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions
Weapons Checklist procedures
Crew coordination
Attack profiles
Range estimation
Squadron ordnance SOPs
CALA and Arm/De-arm procedures

Introduce

Ordnance loading
Weapon system preflight
Weapon system employment
Weapon system post-flight
Cycle of operation
Weapon system troubleshooting and malfunction procedures
Attack profiles

Review

Weapon system emergency procedures
Weapons control procedures
Verbal/non-verbal fire control commands
Fundamentals of aerial gunnery

Performance Standards

Demonstrate basic knowledge of nomenclature and cycle of operation.

Demonstrate the ability to safely and effectively employ the GAU-21 IAW crew served weapons employment table.

Demonstrate proper disassembly, inspection and reassembly of the weapon system.

Prerequisites. 2042, 2053, 2057, 2100, 2400

Ordnance. 600 rounds .50 cal

Range Requirement. Aerial gunnery range

Crew. AGI/CCUI or AOUI

SWD-2605 1.5 * B NS A 1 UH-1Y

Goal. Introduce GAU-17/A machine gun employment in the night environment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions during night time operations
Range estimation
CALA and Arm/De-arm procedures
Laser Aiming Devices

Introduce

Weapons employment during NVD operations
Preflight, post-flight, and usage of Laser Aiming Devices
Laser terminology

Review

Weapons Checklist procedures
Crew coordination
Attack profiles
Switchology

Performance Standards

Demonstrate detailed knowledge of nomenclature and cycle of operation.

Demonstrate the ability to safely and effectively employ the GAU-17/A IAW crew served weapons employment table.

Demonstrate proper jam clearing and troubleshooting techniques while using NVDs.

Prerequisites. 2058, 2059, 2401, 2601, TERFQ

Ordnance. 1,500 rounds 7.62mm

Range Requirement. Aerial gunnery range

Crew. NSI/CCUI or AOUI

SWD-2606 1.5 * B NS A 1 UH-1Y

Goal. Introduce M240D machine gun employment in the night environment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions during night time operations
Range estimation
CALA and Arm/De-arm procedures
Laser Aiming Devices

Introduce

Weapons employment during NVD operations
Preflight, post-flight, and usage of Laser Aiming Devices
Laser terminology

Review

Weapons Checklist procedures
Crew coordination
Attack profiles

Performance Standards

Demonstrate detailed knowledge of nomenclature and cycle of operation.

Demonstrate the ability to safely and effectively employ the M240D IAW crew served weapons employment table.

Demonstrate proper jam clearing and troubleshooting techniques while using NVDs.

Prerequisites. 2058, 2059, 2401, 2602, TERFQ

Ordnance. 600 rounds 7.62mm

Range Requirement. Aerial gunnery range

Crew. NSI/CCUI or AOUI

SWD-2607 1.5 * B NS A 1 UH-1Y

Goal. Introduce GAU-21 .50 caliber machine gun employment in the night environment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions during night time operations
Range estimation
CALA and Arm/De-arm procedures
Laser Aiming Devices

Introduce

Weapons employment during NVD operations
Preflight, post-flight, and usage of Laser Aiming Devices
Laser terminology

Review

Weapons Checklist procedures
Crew coordination
Attack profiles

Performance Standards

Demonstrate detailed knowledge of nomenclature and cycle of operation.

Demonstrate the ability to safely and effectively employ the GAU-21 IAW crew served weapons employment table.

Demonstrate proper jam clearing and troubleshooting techniques IAW checklist procedures while using NVDs.

Prerequisite. 2058, 2059, 2401, 2603, TERFQ

Ordnance. 600 rounds .50 cal

Range Requirement. Aerial gunnery range

Crew. NSI/CCUI or AOUI

SWD-2609 2.0 180 B,R,SC,M NS A 2 1 UH-1Y & 1 H-1

Goal. Demonstrate GAU-17/A machine gun employment in the night environment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions during night time operations
Penetration checklist procedures
Aircraft Survival Equipment (ASE)
Sensor integration
Ordnance effects on NVDs during NS operations

Introduce

Weapons employment during NS operations
Integration of FLIR to aid in acquiring targets

Review

Weapons Checklist procedures
Crew coordination
Attack profiles
Preflight, post-flight, and usage of Laser Aiming Devices
Laser terminology and operating characteristics

Performance Standards

Demonstrate detailed knowledge of nomenclature and cycle of operation.

Demonstrate proficiency in all aspects of GAU-17/A weapons employment IAW crew served weapons employment table.

Demonstrate proper jam clearing and troubleshooting techniques while on NVDs IAW checklist procedures.

Prerequisite. 2403, 2605, TERFQ

Ordnance. 1,500 rounds 7.62mm

Range Requirement. Aerial gunnery range

Crew. NSI/CCUI or AOUI

SWD-2610 2.0 180 B,R,SC,M NS A 2 1 UH-1Y & 1 H-1

Goal. Demonstrate M240D machine gun employment in the night environment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions during night time operations
Penetration checklist procedures
Aircraft Survival Equipment (ASE)
Sensor integration
Ordnance effects using NVDs during NS operations

Introduce

Weapons employment during NS operations
Integration of FLIR to aid in acquiring targets

Review

Weapons Checklist procedures
Crew coordination
Attack profiles
Preflight, post-flight, and usage of Laser Aiming Devices

Laser terminology and operating characteristics

Performance Standards

Demonstrate detailed knowledge of nomenclature and cycle of operation.

Demonstrate proficiency in all aspects of M240D weapons employment IAW crew served weapons employment table.

Demonstrate proper jam clearing and troubleshooting techniques while on NVDs IAW checklist procedures.

Prerequisites. 2403, 2606, TERFQ

Ordnance. 600 rounds 7.62mm

Range Requirement. Aerial gunnery range

Crew. NSI/CCUI or AOUI

SWD-2611 2.0 180 B,R,SC,M NS A 2 1 UH-1Y & 1 H-1

Goal. Demonstrate GAU-21 .50 caliber machine gun employment in the night environment.

Requirements

Discuss

Safety considerations associated with ordnance evolutions during night time operations
Penetration checklist procedures
Aircraft Survival Equipment (ASE)
Sensor integration
Ordnance effects on NVDs during NS operations

Introduce

Weapons employment during NS operations
Integration of FLIR to aid in acquiring targets

Review

Weapons Checklist procedures
Crew coordination
Attack profiles
Preflight, post-flight, and usage of Laser Aiming Devices
Laser terminology and operating characteristics

Performance Standards

Demonstrate detailed knowledge of nomenclature and cycle of operation.

Demonstrate proficiency in all aspects of GAU-21 weapons employment IAW crew served weapons employment table.

Demonstrate proper jam clearing and troubleshooting techniques IAW checklist procedures while using NVDs.

Prerequisites. 2403, 2607, TERFQ

Ordnance. 600 rounds .50 cal

Range Requirement. Aerial gunnery range

Crew. NSI/CCUI or AOUI

3.9.6 Night Systems Qualification Low Light Level (NSQ-LLL)

Purpose. To develop proficiency during LLL operations.

General. At the completion of this stage, the CCUI/AOUI shall demonstrate core skills proficiency under LLL conditions.

AOUI requirements. 2404, 2102, 2405

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

Ground/Academic Training. IAW the MAWTS-1 UH-1 Course Catalog.

3.9.7 Familiarization (FAM)

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.

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.

AOUI requirements. 2800

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 * B (NS) A 1 UH-1Y

Goal Familiarization/Instrument flight proficiency.

Requirements

Discuss

- Startup Procedures
- Emergency Procedures
- Cabin Security
- ICS procedures
- CRM
- Basic systems knowledge

Introduce/Demonstrate

- Demonstrate safe flight operations IAW NATOPS procedures
- Utilize standardized terminology
- Demonstrate the ability to use CRM to assist crew in FAM/INST operations

Review

- Lookout doctrine
- CRM
- Standardized terminology
- Aircraft limitations

Performance Standards

Safely conduct startup and shut down procedures IAW NATOPS.
Utilize CRM and standard terminology while safely conducting FAM/INST or FERRY.

Prerequisite 1901

Crew TERFI(NSI)/CCUI or AOUI

Note For those aircrew assigned to the Refresher and Series Conversion POI. If CIX-1901 has been flown within the preceding 90 days, they meet the Performance Standards of FAM-2800. Manual entry, i.e. baseline in M-SHARP with proficiency date of CIX-1901.

3.10 MISSION PHASE (3000)

Purpose To produce a mission skill proficient CC/AO. Upon completion of the Mission Phase aircrew shall be Mission Skill Proficient in all Mission Essential Tasks.

General Upon completion of this phase, the aircrew will be ESC, CAT, AD, and CAS complete and may conduct additional missions as specified by the squadron commander.

Mission Stages

MISSION (3000 Phase)		
STAGE	**PARAGRAPH NUMBER**	**PAGE NUMBER**
Academics (ACAD)	3.11.1	3-36
Escort (ESC)	3.11.2	3-36
Combat Assault Transport (CAT)	3.11.3	3-38
Close Air Support (CAS)	3.11.4	3-41
Forward Air Controller (Airborne) [FAC(A)]	3.11.5	3-43

3.11 MISSION STAGES

3.11.1 Academics (ACAD)

Purpose

To develop a Mission Skill proficient Crew Chief or Aerial Observer.

These academics facilitate understanding of operations in the UH-1Y and MAGTF level functions to ensure individuals possess the requisite knowledge to perform crewmember functions in those Mission Skills.

General

These academics are intended to be an integrated series of academic lectures contained within each phase of training.

Accordingly, academic events are like any other event in that they serve as prerequisites to selected flight events or stages.

Completion of the academic events in conjunction with the Mission Skill flight phase meets the requirements for the CCUI/AOUI to be proficient in those specific mission skills.

The lectures are contained in the MAWTS-1 Enlisted Aircrew Academic Support Package.

The codes associated with these academic requirements do not require EATFs.

At the completion of each ACAD event, the appropriate training code shall be logged in M-SHARP by the EATM.

The codes below are for lectures only; readings and guided discussions are NOT included and are contained only in the course catalog.

Reference the current UH-1Y Course Catalog for the most recent academic requirements.

Mission Skill academic events are listed below.

ACADEMIC (ACAD)	
TRAINING CODES	COURSEWARE
ESCORT (ESC)	
ACAD-3050	EA BASIC PRINCIPLES OF ESCORT OPERATIONS
CLOSE AIR SUPPORT (CAS)	
ACAD-3053	EA INTRO TO CAS AND FAC(A)
COMBAT ASSAULT TRANSPORT	
ACAD-3054	EA CASEVAC CONSIDERATIONS

3.11.2 Escort (ESC)

Purpose To develop proficiency in prescribed airborne and surface escort formations and maneuvers.

General The CCUI/AOUI will develop a detailed understanding and functional knowledge of escort formations, maneuvers and techniques associated with Combat Assault Transport and surface operations.

AOUI requirements ESC-3100, 3101 and 3103

Crew Requirement As listed at the end of each event.

Ground/Academic Training IAW the MAWTS-1 UH-1 Course Catalog.

ESC-3100 1.5 * B D A 2 1 UH-1Y & 1 H-1

Goal Introduce day Combat Assault Transport escort procedures.

Requirements

Discuss

Purpose of escort
Responsibilities of escort and assault aircraft
Sectors of fire
Winter/devil criteria
Types of escort
Six missions of Combat Assault Transport escort

Introduce

Escort formations
Techniques and responsibilities per Tactical doctrine for escort

Review

Lookout doctrine
Sectors of fire

Performance Standards

Demonstrate the ability to conduct escort operations.

If ordnance is utilized, safe and effective employment of applicable weapon IAW crew served system weapons employment table.

Prerequisite 3050, 2100, 2300, 2402(2601, 2602 or 2603~ORD, based on configuration)

Ordnance Optional. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement Aerial gunnery range (if required)

External Syllabus Support One or more Combat Assault Transport aircraft

Crew AGI/CCUI or AOUI

ESC-3101 1.5 485 B,R,M NS A 2 1 UH-1Y & 1 H-1

Goal Introduce night Combat Assault Transport escort.

Requirements

Discuss

Night LZ clearance/coverage techniques and procedures
Responsibilities of escort and assault aircraft
Types of escort in relation to threat levels
Route reconnaissance

Introduce

Night helicopter escort procedures
Threat countertactics in defense of the assault aircraft

Review

Lookout doctrine
Sectors of fire
Responsibilities of escort and assault aircraft

Performance Standards

Demonstrate the ability to conduct escort operations in the night environment.

If ordnance is utilized, safe and effective employment of applicable weapon IAW crew served system

weapons employment table.

Prerequisites 3100, 2403, NSQ HLL (2605, 2606 or 2607~NS, 2609, 2610 or 2611~LLL ORD based on configuration)

Ordnance Optional. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement Aerial gunnery range (if required)

External Syllabus Support One or more Combat Assault Transport aircraft

Crew NSI/CCUI or AOUI

ESC-3103 1.5 485 B,R (NS) A 2 1 UH-1Y & 1 H-1

Goal Introduce surface force support/escort operations.

Requirements

Discuss

Purpose of surface escort
Responsibilities of escort aircraft
Sectors of fire/fragmentation patterns
Route reconnaissance procedures
Types of escort
Tactics, techniques, and procedures of surface forces
Friendly marking techniques and procedures
Threat systems and counter-tactics
Attack briefs
Sensor integration
Gridded Reference Graphic (GRG)
Target correlation
Rules of Engagement (ROE)/Positive Identification (PID)
Collateral Damage Estimate (CDE)

Introduce

Route coverage patterns
Actions in the objective area
Ordnance delivery geometry, techniques, and procedures in support of surface forces
Techniques and responsibilities per tactical doctrine for escort

Review

Lookout doctrine
Sectors of fire

Performance Standards

Exhibit a thorough understanding of surface force escort responsibilities in support of the GCE scheme of maneuver.
If ordnance is utilized, safe and effective employment of applicable weapon system IAW crew served system weapons employment table.

Prerequisite 3050, 2100, 2300, 2402 (2601, 2602 or 2603~DAY ORD based on configuration), NSQ HLL, 2403~NS (2605, 2606 or 2607~NS, 2609, 2610 or 2611~LLL ORD based on configuration)

Ordnance Optional. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement Aerial gunnery range (if required)

External Syllabus Support One surface Ground Combat Element

Crew AGI (NSI)/CCUI or AOUI

3.11.3 Combat Assault Transport (CAT)

Purpose To develop procedures and skills to tactically employ the UH-1Y, while conducting a variety of Combat Assault Transport missions.

General

Upon the completion CAT event the CCUI/AOUI will be MISSION SKILLS proficient for CAT.

Prior to conducting HRST, a face-to-face brief with the HRST Master is required.

Actual ordnance for crew served weapons should be incorporated to the maximum extent practical.

AOUI requirement 3200, 3203

Crew Requirements As listed at the end of each event.

Ground/Academic Training IAW MAWTS-1 UH-1 Course Catalog.

GCAT-3200 1.0 * B (N) G 1 UH-1Y

Goal Familiarize aircrew with the utility configurations, planning factors, and tactical loading and unloading of cargo and passengers on a static UH-1Y.

Requirements

Discuss

Cabin configuration management
Aircraft Combat Assault Transport configuration considerations
Combat Assault Transport mission specific kits
Alternate Restraint Anchor System
Combat resupply planning configuration
Internal transport of cargo
On/Off drills and rehearsals
PZ operations
Cargo lifting devices
Helicopter Support team (HST)
External cargo safety considerations
TFOA avoidance
Escort requirements
Signal plan
Manifest procedures
Aircraft MACO markings
Accountability procedures
Required communication
Crew/passenger hand and arm signals

Introduce

Load and unload a static UH-1Y with airworthy combat cargo configurations
Passenger securing procedures and checks
Passenger briefing requirements
On/Off drills

Review

Aircraft configuration
Actions on contact

Performance standards

CCUI shall brief UH-1Y cargo and passenger loading and unloading procedures.

CCUI shall load and unload cargo and passengers in an efficient and airworthy manner.

Prerequisites: 2060, 2061, 3054

Ordnance: Configured with weapons (no ordnance)

External Syllabus Support: Troops embarked (6 preferred) and actual cargo

Crew. WTI/CCUI or AOUI

CAT-3201 1.0 365 B,R,M D A 1 UH-1Y

Goal. Develop proficiency in tactical fast rope operations.

Requirements

Discuss

Configuration
Passenger briefing considerations
Fast rope profiles
Cabin management
Gunner threat reaction
HRST master briefing requirements
HRST manual/applicable local orders

Introduce

Fast rope gantry installation
Fast rope profiles
Communication procedures
Rope release procedures
HRST briefing

Review Passenger briefing

Performance Standards

Display proper crew coordination and communications IAW UH-1 NTTP.

Display the ability to safely perform fast rope operations.

Prerequisites 2060, 2061, 2402, 3200

Range Requirements Simulated/Actual rooftop or landing point. (authorized fast rope site)

External Syllabus Support HRST Master and at least two ropers

Crew TERFI/CCUI

CAT-3202 1.0 365 B,R,M NS A 1 UH-1Y

Goal Develop proficiency in tactical fast rope operations at night.

Requirements

Discuss

Aircrew/HRST master coordination using NVDs
Aircraft and roper emergencies using NVDs
Passenger briefing considerations
Fast rope profiles
Cabin management
Gunner threat reaction
HRST master briefing requirements
HRST manual/applicable local orders

Review

Fast rope gantry installation
Fast rope profiles
Communication procedures
Rope release procedures
HRST briefing

Performance Standards

Display proper crew coordination and communications IAW UH-1 NTTP.

Display the ability to safely perform fast rope operations using NVDs.

Prerequisites 3201, 2403. NSQ-HLL, NSQ-LLL

Range Requirements Simulated/Actual rooftop or landing point. (authorized fast rope site)

External Syllabus Support HRST Master and at least two ropers

Crew. NSI/CCUI

CAT-3203 1.5 365 B,R,SC,M (NS) A 2 UH-1Y

Goal Demonstrate proficiency of crewmember responsibilities during a tactical CAT mission while employing crew served weapons.

Requirements

Discuss

Crewmember responsibilities in a tactical environment
Threat profiles and counter-tactics
METT-TSL considerations
Aircraft Survivability Equipment (ASE)
Sensor integration
Sectors of fire/Field of fire

Introduce

Threat counter-tactics and profiles
Considerations of delivering ordnance when inserting/extracting troops

Review

Tactical approaches/departures
Section mechanics
Safety and aircraft limitations
Terrain/obstacle clearance
Closure rates and drift

Performance Standards

Demonstrate proficiency in all aspects of tactical landings while conducting a minimum of 4 landings.

Deliver ordnance during a minimum of two landing profile. Safe and effective employment of applicable weapon IAW crew served system weapons employment table.

Prerequisite 3200, 2403, NSQ-LLL (SWD-2601, 2602 or 2603~DAY, SWD-2605, 2606 or 2607~NS, SWD-2609, 2610 or 2611~NS ORD based on configuration)

Ordnance 1,500 rounds 7.62mm GAU-17/A, or 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement Aerial gunnery range

Crew AGI(NSI)/CCUI or AOUI

3.11.4 Close Air Support (CAS)

Purpose. To develop procedures and skills to tactically employ the UH-1Y while conducting CAS missions.

General

Upon completion of this stage the aircrew will have demonstrated the ability to assist in the execution of CAS missions.

Refer to paragraph 3.5.3 for crew served weapons ordnance delivery standards.

AOUI requirement. 3301

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

Ground/Academic Training. IAW MAWTS-1 UH-1 Course Catalog.

CAS-3301 1.5 180 B,R,M (NS) A 2 1 UH-1Y & 1 H-1

Goal. Develop proficiency in tactical crewmember responsibilities while providing CAS to ground forces.

Requirements

Discuss

- Rules of engagement
- Gridded reference graphic (GRG)
- Objective Area Diagram (OAD)
- CAS Execution Template
- Friendly marking techniques and procedures
- Threat systems and counter-tactics
- ASE utilization
- Airspace Coordination Measures
- Types of Terminal Control
- Crew member responsibilities during CAS

Introduce

- Ordnance considerations and effects in proximity to the forward line of troops
- Attack briefs
- Objective area mechanics
- Sensor integration
- Target correlation
- Tablet/KILSWITCH utilization

Performance Standards

Display ability to perform a minimum of 4 RW CAS missions utilizing 5-line or 9-line attack briefs.

Display proficiency in the use of applicable weapon system IAW crew served system weapons employment table.

Prerequisites. 3053, 2405, NSQ-LLL (SWD-2601, 2602 or 2603~DAY, SWD-2605, 2606 or 2607~NS. SWD-2609, 2610 or 2611~NS ORD based on configuration)

Ordnance. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement. Aerial gunnery range

Crew. AGI(NSI)/CCUI or AOUI

CAS-3303 1.5 180 B,R,M (NS) A 2 1 UH-1Y & 1 H-1

Goal. Demonstrate proficiency in tactical crewmember responsibilities while providing CAS to ground forces.

Requirements

Discuss

- Rules of engagement
- Friendly marking techniques and procedures
- Threat systems and counter-tactics
- ASE utilization
- Airspace Coordination Measures
- Fire Support Coordination Measures
- Types of Terminal Control
- Crew member responsibilities during CAS
- Battle Tracking

Introduce

- Ordnance considerations and effects in proximity to the forward line of troops
- Objective area mechanics
- Sensor integration
- Target correlation
- Combined Attacks

Review

Objective Area Diagram (OAD)
Gridded reference graphic (GRG)
Attack briefs
CAS Execution Template
Tablet/KILSWITCH utilization

Performance Standards

Display ability to perform a minimum of 4 RW CAS missions utilizing 5-line or 9-line attack briefs.

Display proficiency in the use of applicable weapon system IAW crew served system weapons employment table.

Demonstrate ability to perform basic functions in relation to plotting and correlation of attack briefs on tablet/KILSWITCH, if available.

Prerequisites. 3301, (SWD-2601, 2602 or 2603~DAY, SWD-2605, 2606 or 2607~NS. SWD-2609, 2610 or 2611~LLL ORD based on configuration)

Ordnance. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement. Aerial gunnery range

Crew. AGI(NSI)/CCUI

3.11.5 Forward Air Controller (Airborne) [FAC(A)]

Purpose To familiarize the aircrew with responsibilities and communication required to assist pilots while conducting FAC(A).

General At the completion of this stage, the CCUI/AOUI will have an increased knowledge of CAS and FAC(A) procedures used to control RW/FW aircraft and supporting arms under varied environmental and threat conditions.

Ordnance is optional for this stage of training. However, it is strongly recommended. If ordnance is utilized the aircrew shall have completed the SWD flight corresponding to the ordnance load. Refer to paragraph 3.5.3 for crew served weapons ordnance delivery standards.

AOUI requirement Not Required

Crew Requirements As listed at the end of each event.

Ground/Academic Training IAW MAWTS-1 UH-1 Course Catalog.

FAC(A)-3400 2.0 365 B,R,M (NS) A 1 UH-1Y

Goal. Develop proficiency in tactical crewmember responsibilities while conducting FAC(A).

Requirements

Discuss

CAS Execution Template
CAS aircraft capabilities
Weapons to target matching
Types of Terminal Control
Friendly marking techniques and procedures
Airspace Coordination Measures
SEAD procedures
Task sharing in the FAC(A) environment
FAC(A) terminology
Attack geometry verification

Review

Objective area mechanics
Attack briefs
Sensor integration
FAC(A) terminology

Target correlation

Performance Standards

Display the ability to assist the pilots in task sharing during FAC(A) controls.

CCUI must be present in the controlling aircraft that is providing FAC(A) controls.

If flown with ordnance, display proficiency in the use of applicable weapon system IAW crew served system weapons employment table.

Prerequisites 3053, 3301 (2601, 2602, or 2603~DAY, 2605, 2606, or 2607~NS, 2609, 2610, or 2611~NS ORD based on configuration)

Ordnance Optional. 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement Aerial gunnery range

External Syllabus Support One CAS aircraft

Crew AGI(NSI)/CCUI

3.12 CORE PLUS PHASE (4000)

Purpose To certify the CCUI/AOUI in large scale integrated mission events having unique mission tasking, a low probability of execution in combat, are theater specific, and/or are relatively high-threat events.

General: Upon completion of each individual stage, the CCUI/AOUI will be considered Core Plus/Mission Plus proficient in that stage.

Completion of DACM-4302 meets the requirements for the CCUI/AOUI to be RWDACM qualified. At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as RWDACM qualified shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of DACM-4305 meets the requirements for the CCUI/AOUI to be FWDACM qualified. At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as FWDACM qualified shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of CBRN-4400 meets the requirements for the CCUI/AOUI to be CBRN qualified. At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as CBRN qualified shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of CQ-4603 meets the requirement for the CCUI/AOUI to be Day CQ qualified. At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as Day CQ qualified shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of CQ-4604 meets the requirement for the CCUI/AOUI to be NVD CQ qualified. At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as NVD CQ qualified shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of CQ-4605 meets the requirement for the CCUI/AOUI to be Unaided CQ qualified. At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as Unaided CQ qualified shall be placed in the NATOPS jacket and an entry made in the flight log book.

Core Plus Stages

CORE PLUS (4000 Phase)		
STAGE	**PARAGRAPH NUMBER**	**PAGE NUMBER**
Academics (ACAD)	3.13.1	3-45
Air Delivery	3.13.2	3-45
Combat Assault Transport (CAT)	3.13.3	3-46
Close Air Support (CAS)	3.13.4	3-46
Defensive Air Combat Maneuvering (DACM)	3.13.5	3-47
Chemical, Biological, Radiological and Nuclear warfare (CBRN)	3.13.6	3-50

3.13 CORE PLUS STAGES

3.13.1 Academics (ACAD)

Purpose: To develop a Core Plus Skill complete Crew Chief or Aerial Observer. These academics facilitate understanding of high threat operations in the UH-1Y and MAGTF/Joint level functions to ensure individuals possess the requisite knowledge to execute unique mission tasking, events having a low probability of execution in combat, are theater specific, and/or are high-risk events.

General: These academics are intended to be an integrated series of academic lectures contained within each phase of training. Accordingly, academic events are like any other event in that they serve as prerequisites to selected flight events or stages.

Completion of these academics and accompanying Core Plus/Mission Plus flights meet the requirements for the Crew Chief or Aerial Observer to be proficient in those specific Core Plus/Mission Plus missions.

The lectures are contained in the MAWTS-1 Enlisted Aircrew Academic Support Package. The codes associated with these academic requirements do not require EATFs. At the completion of each ACAD event, the appropriate training code shall be logged in M-SHARP by the EATM. The codes below are for lectures only; readings and guided discussions are NOT included and are contained only in the course catalog. Reference the current UH-1Y Course Catalog for the most recent academic requirements.

Core Skill academic events are listed below:

CORE PLUS/MISSION PLUS ACADEMIC PHASE	
TRAINING CODES	**COURSEWARE**
DACM	
ACAD-4050	EA INTRO TO DACM
ACAD-4051	EA RW DACM
ACAD-4052	EA FW DACM

3.13.2 Air Delivery (AD)

Purpose To develop procedures and skills to tactically employ the UH-1Y while conducting aerial delivery.

General Upon completion of the AD stage, the crew chief will be Mission Skills Proficient for AD.

AOUI requirement Not required

Crew Requirements As listed at the end of each event.

Ground/Academic Training IAW MAWTS-1 UH-1 Course Catalog.

AD-4109 1.0 730 B,R,SC,M (NS) A 1 UH-1Y

Goal Conduct tactical external cargo procedures.

Requirements

Discuss

- Aircrew coordination
- Hand and arm signals
- ICS terminology
- Hook limitations/malfunctions
- Load release
- Emergency procedures

Review

- Operational check of cargo hook
- Cargo hook pendant and manual release
- Emergency procedures for external operations
- Review TERF profiles

Performance standards

Demonstrate proper ICS terminology, hook operation and installation.

Perform at least two hook-up, flight and release operations for cargo hook.

Prerequisite 2100, 2400, (NSQ-HLL~NS, NSQ-LLL~LLL)

External Syllabus Support Appropriate external load

Crew TERFI (NSI)/CCUI

3.13.3 Combat Assault Transport (CAT)

Purpose To develop the ability to perform specialized Combat Assault Transport missions.

General Upon completion of each event the aircrew will be considered capable of performing that particular mission.

AOUI requirement CAT-4106

Crew Requirement As listed at the end of each event.

Ground/Academic Training IAW MAWTS-1 UH-1 Course Catalog.

CAT-4106 2.0 365 B,R,M (NS) A 1 UH-1Y

Goal Introduce Mountain Area Training.

Requirements

Discuss

Tactical approaches, landings, and departures
High altitude operations
HIE operations
Loss of tail rotor effectiveness
Brown/White out considerations
Terrain/obstacle clearance
Turbulence
Orographic lifting and downdrafts

Introduce

Tactical approaches, landings, and departures
High altitude operations
HIE terminology and operations

Performance Standards

Demonstrate the ability to assist pilots in operating in mountainous areas while performing a minimum of 5 mountain area landings and 2 fast rope profiles.

Demonstrate proper crew coordination, ICS terminology and terrain clearance while operating in a mountainous environment.

Prerequisites 2402 (NSQ-HLL~NS, NSQ-LLL~LLL)

Crew TERFI (NSI)/CCUI or AOUI

3.13.4 Close Air Support (CAS)

CAS-4203 1.5 365 B,R,M (NS) A 2 H-1

Goal. Refine CAS procedures in an urban environment.

Requirements

Discuss

Urban terrain considerations
Altitude considerations for weapons and visual reference
Weapon selection
ROE/PID
Collateral Damage Estimate(CDE)

Gridded Reference Graphic(GRG)
Urban threat considerations

Review
GRG usage
Sensor integration
Target correlation

Performance Standards
Display ability to perform aircrew responsibilities in a tactical urban environment.

If flown with ordnance, display proficiency in the use of applicable weapon system IAW crew served system weapons employment table.

Display ability to utilize gridded reference graphic (GRG) to enhance aircrew situational awareness.

Prerequisites
3053, 3303 (2601, 2602, or 2603~DAY, 2605, 2606, or 2607~NS, 2609, 2610, or 2611~LLL ORD based on configuration)

Ordnance 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.

Range Requirement Aerial gunnery range

External Syllabus Support JTAC with appropriate marking devices (if available), suitable urban environment or MOUT facility.

Crew AGI(NSI)/CCUI

3.13.5 Defensive Air Combat Maneuvering (DACM)

Purpose To demonstrate and introduce DACM and to qualify the CCUI/AOUI as RWDACM and FWDACM complete.

General
At the completion of this stage, the CCUI/AOUI will be proficient in the conduct of the DACM and have a thorough knowledge of weapons employment, aircraft control, and threat tactics of RW and FW adversaries.

Refer to paragraph 3.5.3 for crew served weapons ordnance delivery standards.

AOUI requirements 4300 through 4305

Crew Requirement As listed at the end of each event. All participants must be TERF Qualified.

Ground/Academic Training IAW MAWTS-1 UH-1 Course Catalog.

DACM-4300 1.5 485 B,R,M (NS) A 1 UH-1Y

Goal Introduce moving target aerial gunnery.

Requirements
Discuss
Weapons capabilities/limitations
Range and lead/lag estimation
Aerial ballistics
Aircrew coordination
Time of flight (TOF)

Introduce
AAG using shadow gunnery or Moving Land Target (MLT)
Aircrew coordination during moving target engagements
Range and lead/lag estimation

Review
Fundamentals of aerial gunnery

Appropriate weapon system characteristics

Performance Standards

Demonstrate detailed knowledge of nomenclature, cycle of operation and SWD.

Demonstrate the ability to safely and effectively employ crew served weapons against moving targets IAW crew served system weapons employment table.

Prerequisites

(2601, 2602 or 2603~DAY, SWD-2605, 2606 or 2607~NS, SWD-2609, 2610 or 2611~LLL ORD based on configuration)

Ordnance 1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm, M240D, or 600 rounds .50 cal GAU-21.

Range Requirement Aerial gunnery range or MLT range

Crew AGI(NSI)/CCUI or AOUI

DACM-4301 1.0 * B,SC D A 1 UH-1Y

Goal Introduce 1 v 1 RWDACM.

Requirements

Discuss

Aircraft limitations
Rotary wing threat aircraft capabilities/limitations
Standard DACM terminology
Aircrew coordination
P_s, V_c, E-M diagrams
Line numbers/DACM training rules

Introduce

Basic defensive maneuvers against RW threats
Lookout procedures and identification of aircraft
Range estimation/optimal engagement distances
Standard DACM terminology
Line numbers

Review

Fundamentals of aerial gunnery
Time of flight (TOF)/aerial ballistics

Performance Standards

Conduct one complete line number sequence (from both friendly and adversary roles).

Execute proper reactions to RW threat attacks.

Prerequisites 4050, 4051, TERFQ, 2402

Ordnance Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.

External Syllabus Support One adversary helicopter and appropriate air-to-air training area

Crew DACMI/CCUI or AOUI

DACM-4302 1.0 485 B,R,M D A 2 H-1

Goal Introduce 2 v 1 RWDACM.

Requirements

Discuss

Standard DACM terminology
Mutual support
Aircrew coordination
Line numbers/DACM training rules
Free and engaged roles and responsibilities

Introduce
- Basic defensive maneuvers
- Section mechanics
- Free and engaged roles

Review
- Fundamentals of aerial gunnery
- Time of flight (TOF)/aerial ballistics
- Basic defensive maneuvers
- Lookout procedures and identification of aircraft
- Range estimation/optimal engagement distances
- Standard DACM terminology

Performance Standards

Conduct one complete line number sequence (from both friendly and adversary roles).

Execute proper reactions to RW threat attacks.

Prerequisite 4301

Ordnance Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.

External Syllabus Support One adversary helicopter and appropriate air-to-air training area

Crew DACMI/CCUI or AOUI

DACM-4304 1.0 * B D A 1 UH-1Y

Goal Introduce 1 v 1 FWDACM.

Requirement

Discuss
- Aircraft limitations
- Lookout procedures and identification of aircraft
- FW threat aircraft capabilities/limitations
- Line numbers/DACM rules
- Standard terminology
- Aircrew coordination
- P_s, V_c, E-M diagrams

Introduce
- Basic defensive maneuvers against FW threats
- Lookout procedures and identification of aircraft
- Range estimation/optimal engagement distances
- Standard terminology
- Line numbers

Review
- Fundamentals of aerial gunnery
- Time of flight (TOF)/aerial ballistics

Performance Standards

Conduct a minimum of one (1) line number sequence.

Execute proper reactions to FW threat attacks.

Prerequisites 4050, 4052, TERFQ, 2402

Ordnance Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.

External Syllabus Support One FW adversary and appropriate air-to-air training area

Crew DACMI/CCUI or AOUI

DACM-4305 1.0 485 B,R,M D A 2 H-1

Goal Introduce 2 v 2 FWDACM.

Requirements

Discuss

Standard DACM terminology
Mutual support
Aircrew coordination
Line numbers/DACM training rules
Free and engaged roles and responsibilities

Introduce

Basic defensive maneuvers
Section mechanics
Free and engaged roles

Review

Fundamentals of aerial gunnery
Time of flight (TOF)/aerial ballistics
Basic defensive maneuvers
Lookout procedures and identification of aircraft
Range estimation/optimal engagement distances
Standard DACM terminology

Performance Standards

Conduct a minimum of one (1) line number sequence.

Execute proper reactions to FW threat attacks.

Prerequisite 4304

Ordnance Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.

External Syllabus Support Two FW adversary and appropriate air-to-air training area

Crew DACMI/CCUI or AOUI

3.13.6 Chemical, Biological, Radiological and Nuclear warfare (CBRN)

Purpose To introduce the CCUI/AOUI to operations while wearing the aviator's CBR protective mask.

General This event is designed to expand the capabilities of the aircrew in CBRN operations.

AOUI requirement 4400

Crew Requirement As listed at the end of each event.

Ground/Academic Training

Review appropriate section of UH-1Y NTRP for information on the aviator’s CBR protective mask prior to flight.

The crewmember will complete protective mask familiarization lecture and aircraft egress with mask.

Discuss capabilities and disadvantages of CBR protective mask, to include protective mask emergency procedures. Review all MOPP conditions.

CBRN-4400 1.0 1095 B,R,M D A 1 UH-1Y

Goal CBR protective mask introduction.

Requirements

Discuss

Protective mask introduction
Physiological effects
Operating in an CBRN environment
Emergency egress

Battery failure
NVD considerations

Introduce Conduct FAM maneuvers while wearing the protective mask.

Performance Standards Demonstrate the ability to perform aircrew responsibilities in the CBRN environment while wearing the protective mask.

Prerequisite 2400

Crew TERFI/CCUI or AOUI

3.14 MISSION PLUS PHASE

Mission Plus Stages

MISSION PLUS (4000 Phase)		
STAGE	**PARAGRAPH NUMBER**	**PAGE NUMBER**
Rapid Insertion/Extraction (RIE)	3.15.1	3-51
Sea-Based Expeditionary Operations (SEA)	3.15.2	3-54

3.15 MISSION PLUS STAGES

3.15.1 Rapid Insertion/Extraction (RIE)

Purpose To develop the ability to perform specialized Rapid Insertion/Extraction missions.

General

Upon completion of each event the aircrew will be considered capable of performing that particular mission.

Prior to conducting HIE a face-to-face brief with the HRST/Helocast/Jump Master is required.

Initial Basic and Transition flight events shall be flown under day conditions.

AOUI requirement Not required

Crew Requirement As listed at the end of each event.

Ground/Academic Training IAW MAWTS-1 UH-1 Course Catalog.

RIE-4100 1.0 * B (NS) A 1 UH-1

Goal Introduce techniques for paradrop operations.

Requirements

Discuss

Aircraft rigging for static line operations
Aircraft rigging for free fall operations
Insertion techniques
Aircrew coordination
Hung jumper emergency procedures
Altitude, airspeed, and weather restrictions

Introduce

Delivery profiles
Static line retrieval
Crew/Jump Master coordination
Aircraft rigging procedures

Review. Passenger briefing

Performance Standards Display proper crew coordination and ability to safely perform paradrop operations.

Prerequisites 2402(NSQ-HLL~NS, NSQ-LLL~LLL), 3200

Range Requirement Drop Zone or authorized paraops area

External Syllabus Support.= Jump Master and two jumpers (Jump master may be one of the jumpers)

Crew TERFI (NSI)/CCUI

RIE-4101 1.0 * B (NS) A 1 UH-1Y

Goal Introduce techniques for water insertion.

Requirements

Discuss

Aircraft rigging for helocast operations
Insertion techniques
Aircrew coordination
Altitude, airspeed, and sea state restrictions
Emergency procedures

Introduce

Delivery profiles
Crew/Helocast Master coordination
Aircraft rigging procedures

Review

Passenger briefing

Performance Standards Display proper crew coordination and the ability to safely perform helocast operations.

Prerequisites 2402(NSQ-HLL~NS, NSQ-LLL~LLL), 3200

Range Requirement Water drop zone or authorized helocast area

External Syllabus Support Helocast Master and two swimmers (Helocast Master may be one of the swimmers)

Crew TERFI (NSI)/CCUI

RIE-4103 1.5 365 B,R,M (NS) A 1 UH-1Y

Goal Introduce techniques for insertion/extraction using the Special Patrol Insertion/Extraction (SPIE) rig or Jacob's Ladder.

Requirements

Discuss

Aircraft rigging SPIE operations
Aircraft rigging for Jacob's ladder operations
Insertion/extraction techniques
Aircrew coordination
Altitude, airspeed, and weather restrictions
"Cut Rope" and emergency procedures

Introduce

Insert/extract profiles
Crew/HRST Master coordination
Aircraft rigging procedures

Review

Passenger briefing

Performance Standards Display proper crew coordination and the ability to safely perform SPIE or Jacob's Ladder operations.

Prerequisites 2402 (NSQ-HLL~NS, NSQ-LLL~LLL), 3200

Range Requirement Drop zone/landing zone or authorized SPIE area

External Syllabus Support HRST Master and two ropers

Crew TERFI (NSI)/CCUI

RIE-4104 1.0 365 B,R,M (NS) A 1 UH-1Y

Goal Perform hoist procedures.

Requirements

Discuss

Aircrew coordination
Hand and arm signals
ICS terminology
hoist limitations/malfunctions
Emergency procedures
Chicago grip, quick splice, and cable cutters
Operational check of hoist

Review

Use of rescue strop and jungle penetrator
Emergency procedures for rescue hoist

Performance standards

Demonstrate proper ICS terminology, hoist operation and installation.

Perform four hoisting operations using a suitable weight.

Prerequisite 2402(NSQ-HLL~NS, NSQ-LLL~LLL), 3200

External Syllabus Support Hoist.

Crew TERFI (NSI)/CCUI

RIE-4105 1.0 365 B,R,M (NS) A 1 UH-1Y

Goal Introduce techniques for insertion using rappel.

Requirements

Discuss

Aircraft rigging
Insertion techniques
Aircrew/HRST master coordination
Aircraft and roper emergencies

Introduce

Aircraft preparation for rappel
Rappel profiles
Communication procedures
“Cut Rope” procedures
HRST briefing

Review

Passenger briefing

Performance Standards

Display proper crew coordination and communications IAW UH-1 NTTP.

Display the ability to safely perform rappel operations.

Prerequisite 2402(NSQ-HLL~NS, NSQ-LLL~LLL), 3200

External Syllabus Support HRST Master and at least two ropers

Crew TERFI (NSI)/CCUI

3.15.2 Sea-Based Expeditionary Operations (SEA)

Purpose To introduce day and night flight operations from a carrier deck or air capable ship.

General

IAW applicable directives, CCUI/AOUI will emphasize proper communication procedures, patterns, and aviation operations in the shipboard environment.

Refer to appropriate NATOPS and appropriate shipboard NATOPS Manuals for carrier operations. CCUI/AOUI shall complete the FCLP stage prior to commencing the CQ stage.

Initial Night Systems Carrier Qualification training shall be accomplished under High Light Level conditions.

Requalification and proficiency training may be accomplished under any light level condition.

Once complete with each stage the CC/AO may be Day CQ, Night CQ or NVD CQ (as appropriate) in writing at the discretion of the commanding officer.

AOUI requirements 4601 through 4605

Crew Requirement As listed at the end of each event.

Ground/Academic Training IAW the MAWTS-1 UH-1 Course Catalog. Review required equipment for shipboard/over-water operations.

SEA-4601 1.0 365 B,R D A 1 UH-1Y

Goal Introduce day FCLP operations.

Requirements

Discuss

- Types of air capable ships
- Shipboard specific crew coordination
- LSE signals
- Emergency and ditching procedures
- Wind limitation charts
- Shipboard terminology
- Alpha, Delta, and Charlie patterns
- High wind start procedures
- Hazards of Electromagnetic Radiation to Ordnance (HERO) conditions
- Passenger procedures for shipboard operations

Introduce

- Shipboard patterns
- Closure rate
- Proper ICS/Radio terminology
- Landing procedures to an FCLP pad
- High wind start procedures

Review

- Ditching procedures
- Required personal and aircraft survival equipment

Performance Standards

Perform a high wind start.

Conduct a minimum of 5 day FCLP landings per the UH-1Y NATOPS and shipboard NATOPS manuals.

Prerequisite 1901

External Syllabus Support FCLP pad

Crew TERFI/CCUI or AOUI

SEA-4602 1.0 365 B,R,M NS,N* A 1 UH-1Y

Goal Introduce night and NVD FCLP operations.

Requirements

Discuss

Night unaided and NVG shipboard lighting
Night unaided and NVG safety considerations
Aircraft lighting configurations
Night unaided and NVG flight over open water
Physiological effects with no horizon

Introduce

Night unaided/NVD patterns
Closure rate and decent rates
Landing procedures to an FCLP pad

Review

Ditching procedures
Required personal and aircraft survival equipment
Alpha, Delta and Charlie patterns
Air capable ships
Shipboard specific crew coordination
LSE signals
Shipboard terminology
Proper ICS/Radio terminology

Performance Standards Conduct a minimum of 5 unaided and 5 NVD landings IAW the UH-1Y NATOPS and shipboard NATOPS manuals

Prerequisite 4601

External Syllabus Support FCLP pad with shipboard lighting

Crew NSI/CCUI or AOUI

SEA-4603 1.0 365 B,R D A 1 UH-1Y

Goal Conduct day shipboard landing qualification.

Requirements

Discuss

Shipboard safety equipment location and marking
Requirements for carrying PAX over water

Introduce

Shipboard patterns
Closure rate
Proper ICS/Radio terminology
Flight deck procedures

Review

Air capable ships
Shipboard specific crew coordination
LSE signals
Emergency and ditching procedures
Wind limitation charts
Shipboard terminology
Alpha, Delta and Charlie patterns
Hazards of Electromagnetic Radiation to Ordnance (HERO) conditions

Performance Standards

Demonstrate the ability to conduct daytime shipboard operations per the UH-1Y NATOPS and shipboard NATOPS manuals.

Demonstrate the ability to conduct a minimum of 5 CQ landings.

Demonstrate the ability to conduct a rotor brake start.

Demonstrate the ability to conduct shipboard refueling.

Prerequisite 4601, TERFQ

External Syllabus Support Landing plEATForm afloat

Crew TERFI/CCUI or AOUI

SEA-4604 1.0 365 B,R,M NS A 1 UH-1Y

Goal. Conduct NVD shipboard landing qualification.

Requirements

Discuss. NVG shipboard lighting

Introduce. Closure rate and decent rates

Review

NVG safety considerations
Aircraft lighting configurations
NVG flight over open water
Physiological effects with no horizon

Performance Standards

Demonstrate the ability to conduct NVD shipboard operations per the UH-1Y NATOPS and shipboard NATOPS manuals.

Demonstrate the ability to conduct a minimum of 5 CQ landings.

Demonstrate the ability to conduct shipboard refueling.

Prerequisite 4602, 4603, NSQ-HLL

External Syllabus Support Landing plEATForm afloat

Crew NSI/CCUI or AOUI

SEA-4605 1.0 365 B,R,M N* A 1 UH-1Y

Goal Conduct night unaided shipboard landing qualification.

Requirements

Discuss

Night unaided shipboard lighting
Night unaided safety considerations
Aircraft lighting configurations

Review

Ditching procedures
Required personal and aircraft survival equipment
Alpha, Delta, and Charlie patterns
Air capable ships
Shipboard specific crew coordination
LSE signals
Shipboard terminology
Proper ICS/Radio terminology

Performance Standards

Demonstrate the ability to conduct night unaided shipboard operations per the UH-1Y NATOPS and shipboard NATOPS manuals.

Demonstrate the ability to conduct a minimum of 5 CQ landings.

Prerequisite 4602, 4603, NSQ-HLL

External Syllabus Support Landing plEATForm afloat

Crew NSI/CCUI or AOUI

3.16 INSTRUCTOR TRAINING PHASE (5000)

Purpose To develop standardized instructor Crew Chiefs with the ability to teach flight skills and knowledge necessary to qualify/designate Crew Chiefs IAW this T&R and the UH-1Y Course Catalog.

General This Phase only covers the FRSI stage in detail. For other instructor designation syllabi refer to the UH-1Y Course Catalog for execution of those POI's.

Instructor Training Stages

INSTRUCTOR TRAINING (5000 Phase)		
STAGE	**PARAGRAPH NUMBER**	**PAGE NUMBER**
Terrain Flight Instructor (TERF)	3.17.1	3-57
Fleet Replacement Squadron Instructor (FRSI)	3.17.2	3-57
Aerial Gunner Instructor (AGI)	3.17.3	3-58
Night Systems Familiarization Instructor (NSFI)	3.17.4	3-59
Defensive Air Combat Maneuvers Instructor (DACMI)	3.17.5	3-59
Night Systems Instructor (NSI)	3.17.6	3-59

3.17 INSTRUCTOR TRAINING STAGES. The following stages are included in the Instructor Phase of training.

3.17.1 Terrain Flight Instructor (TERFI)

Purpose To certify a UH-1 Crew Chief as a Terrain Flight Instructor (TERFI) capable of safely and effectively conducting ground academic and day time airborne instruction of TERF, NAV, CAT, CQ's, FORM, Externals and CBRN.

TERF-5100 1.5 * B (NS) A 1 UH-1Y

Requirement Reference the current UH-1Y Course Catalog for the TERFI POI.

TERF-5101 1.5 * B,R (NS) A 2 H-1

Requirement Reference the current UH-1Y Course Catalog for the TERFI POI.

3.17.2 Fleet Replacement Squadron Instructor (FRSI)

Purpose To certify the IUT as a Fleet Replacement Squadron Instructor capable of instructing 1000 level events.

General

Upon completion of the Fleet Replacement Squadron Instructor (FRSI) stage, the FRSIUT may be designated a FRSI by the FRS squadron commanding officer.

A letter designating the CC as a FRSI shall be placed in the NATOPS jacket and an entry made in the flight log book.

The FRSIUT shall be a TERFI, AGI GAU-21, AGI GAU-17/A, AGI M240D, and NSQ-LLL prior to beginning FRSIUT training.

Crew Requirement As listed at the end of each event.

Ground Training FRSIUT stage lecture.

FRSI-5300 2.0 * B,R D A 1 UH-1Y

Goal FRSIUT will demonstrate techniques of instructing/evaluating normal ground procedures, passenger, and in flight procedures for the Core Skill Introduction phase of training.

Requirements

Review

Standard NATOPS procedures to include hand and arm signals
Aircrew coordination and comfort level

Performance Standards Demonstrate instructional techniques to instruct CCUIs in the Core Skill Introduction phase.

Prerequisites 5421, 5431, and 5441 (Triple AGI)

Crew FRSI/FRSIUT

FRSI-5301 2.0 * B,R D A 1 UH-1Y

Goal Demonstrate techniques of instructing/evaluating external weight and hoist operations and procedures.

Requirements

Review

Aircrew coordination
Lost communication
ICS terminology
Lookout doctrine
Emergency procedures
Load oscillation and load release.

Performance Standards

Instruct at least two hookups, flight, and release operations.

Instruct procedures, signals, and communications for hoist procedures.

Demonstrate instructional techniques to CCUIs during external weight and hoisting procedures.

Prerequisite 5300

External Syllabus Support Appropriate external weight

Crew FRSI/FRSIUT

3.17.3 Aerial Gunner Instructor (AGI)

Purpose To certify a UH-1 Crew Chief as an Aerial Gunner Instructor (AGI) capable of safely and effectively conducting ground academic and day time airborne instruction in the employment of crew served weapons in all aspects of Tactical flight.

AGI-5420 1.5 * B (NS) A 2 H-1

Requirement Reference the current UH-1Y Course Catalog for the AGI POI

AGI-5421 1.5 * B,R NS A 2 H-1

Requirement Reference the current UH-1Y Course Catalog for the AGI POI

AGI-5430 1.5 * B (NS) A 2 H-1

Requirement. Reference the current UH-1Y Course Catalog for the AGI POI

AGI-5431 1.5 * B,R NS A 2 H-1

Requirement Reference the current UH-1Y Course Catalog for the AGI POI

AGI-5440 1.5 * B (NS) A 2 H-1

Requirement Reference the current UH-1Y Course Catalog for the AGI POI

AGI-5441 1.5 * B,R NS A 2 H-1

Requirement Reference the current UH-1Y Course Catalog for the AGI POI

3.17.4 Night Systems Familiarization Instructor (NSFI)

Purpose To certify a UH-1 Fleet Replacement Squadron (FRS) crew chief instructor as a Night Systems Familiarization Instructor (NSFI) capable of safely and effectively conducting ground and airborne instruction of night vision device (NVD) flight during Core Skill Introduction phase under high light level conditions only.

NSFI-5600	**1.5**	*****	**B**	**NS**	**A**	**1**	**UH-1Y**

Requirement Reference the current UH-1Y Course Catalog for the NSFI POI.

NSFI-5601	**1.5**	*****	**B,R**	**NS**	**A**	**1**	**UH-1Y**

Requirement Reference the current UH-1Y Course Catalog for the NSFI POI.

3.17.5 Defensive Air Combat Maneuvers Instructor (DACMI)

Purpose To certify a UH-1 crew chief or aerial observer as a Rotary Wing Defensive Air Combat Maneuvers Instructor (RW DACMI) and Fixed Wing Defensive Air Combat Maneuvers Instructor (FW DACMI) capable of safely and effectively conducting ground academic and airborne instruction of the UH-1Y DACM flight syllabus.

DACMI-5800	**1.5**	*****	**B**	**D**	**A**	**1**	**UH-1Y**

Requirement Reference the current UH-1Y Course Catalog for the RW DACMI POI.

DACMI-5801	**1.5**	*****	**B**	**D**	**A**	**1**	**UH-1Y**

Requirement Reference the current UH-1Y Course Catalog for the FW DACMI POI.

DACMI-5802	**1.5**	*****	**B,R**	**D**	**A**	**2**	**1 UH-1Y & 1 H-1**

Requirement Reference the current UH-1Y Course Catalog for the RW DACMI POI.

DACMI-5803	**1.5**	*****	**B,R**	**D**	**A**	**2**	**1 UH-1Y & 1 H-1**

Requirement Reference the current UH-1Y Course Catalog for the FW DACMI POI.

3.17.6 Night Systems Instructor (NSI)

Purpose To certify a UH-1 crew chief as a Night Systems Instructor (NSI) capable of safely and effectively conducting ground academic and airborne instruction of the UH-1 Night Vision Device (NVD) flight syllabus.

NSI-5902	**1.5**	*****	**B**	**NS**	**A**	**2**	**1 UH-1Y & 1 H-1**

Requirement Reference the current UH-1Y Course Catalog for the NSI POI.

NSI-5904	**1.5**	*****	**B**	**NS**	**A**	**2**	**1 UH-1Y & 1 H-1**

Requirement Reference the current UH-1Y Course Catalog for the NSI POI.

NSI-5905	**2.0**	*****	**B,R**	**NS**	**A**	**2**	**1 UH-1Y & 1 H-1**

Requirement Reference the current UH-1Y Course Catalog for the NSI POI.

3.18 REQUIREMENTS AND QUALIFICATIONS PHASE (6000)

Purpose To outline the requirements for qualifications and designations.

General

Once the flight to attain the qualification/designation is complete, a letter from the squadron commanding officer awarding the qualification/designation shall be placed in the NATOPS before that qualification/designation

can be utilized.

Completion of the NTPS-6101 sortie meets the requirements for the CCUI/AOUI to be NATOPS qualified. At the discretion of the squadron commanding officer a letter assigning the CCUI/AOUI as NATOPS qualified shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of the Aerial Gunner Qualification Stage QUAL-6301 meets the requirements for the CCUI/AOUI to be eligible for the GAU-17 AG qualification. At the discretion of the squadron commanding officer a letter designating the CCUI/AOUI as GAU-17 AG QUAL shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of the Aerial Gunner Qualification Stage QUAL-6302 meets the requirements for the CCUI/AOUI to be eligible for the M240D AG qualification. At the discretion of the squadron commanding officer a letter designating the CCUI/AOUI as M240D AG QUAL shall be placed in the NATOPS jacket and an entry made in the flight log book.

Completion of the Aerial Gunner Qualification Stage QUAL-6303 meets the requirements for the CCUI/AOUI to be eligible for the GAU-21 AG qualification. At the discretion of the squadron commanding officer a letter designating the CCUI/AOUI as GAU-21 AG QUAL shall be placed in the NATOPS jacket and an entry made in the flight log book.

3.19 RCQD STAGES. The following stages are included in the Requirements and Qualifications Phase of training.

3.19.1 NATOPS Qualification

Purpose To certify the CCUI/AOUI as NATOPS qualified in the UH-1Y.

General

The NATOPS qualification is an annual requirement. A designated NATOPS Instructor/Assistant NATOPS Instructor shall evaluate NTPS-6101.

Completion of this stage meets the requirements for the annual NATOPS evaluation.

The NTPS-6101 event may be logged in conjunction with any operational or training flight.

Individuals have 60 days to complete the NATOPS evaluation process from the start of NTPS-6001 to the completion of NTPS-6101.

Documentation of the most recent NATOPS open book, closed book, and EP exams shall be logged in the individual NATOPS Flight Personnel Training/Qualification Jacket in Section III, Part C. In addition to filing the exams in Section III, Part C; NATOPS open book, closed book, and EP examination scores shall be recorded using a 4.0 scale on the CNAFINST 3760/32G examination record form.

Documentation of the annual NATOPS Evaluation Reports shall be filed in the individual NATOPS Flight Personnel Training/Qualification Jacket in Section III, Part D. The Annual NATOPS Evaluation Reports will be retained permanently in the NATOPS Jacket.

NTPS-6001, NTPS-6002 and NTPS-6003 do not require EATFs.

AOUI requirements. 6002, 6003, 6004, 6101

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

Ground/Academic Training. IAW NATOPS.

NTPS-6002 1.5 365 B,R,SC,M G Open Book NATOPS Evaluation

Goal. To evaluate airman's knowledge of normal/emergency procedures, systems and aircraft limitations.

Performance Standards. Achieve a grade of qualified IAW NATOPS.

NTPS-6003 1.0 365 B,R,SC,M G Closed Book NATOPS Evaluation

Goal. To evaluate airman's knowledge of normal/emergency procedures, systems and aircraft limitations.

Performance Standards. Achieve a grade of qualified IAW NATOPS.

NTPS-6004 1.0 365 B,R,SC,M G Oral NATOPS Evaluation

Goal. To evaluate airman's knowledge of normal/emergency procedures, systems and aircraft limitations. The oral examination may be conducted prior to or as part of the flight evaluation.

Performance Standards. Achieve a grade of qualified IAW NATOPS.

NTPS-6101 1.0 365 B,R,SC,M (NS) A 1 UH-1Y

Goal. Conduct an annual NATOPS check.

Requirement. Successfully conduct the evaluation IAW CNAFINST 3710.7 and NATOPS.

Performance Standards. IAW CNAFINST 3710.7 and NATOPS

Prerequisites. Grade of qualified on NTPS-6002, 6003, 6004

Crew. ANI (ANI designated NSI)/CCUI or AOUI

Performance Standards. IAW CNAFINST 3710.7 and NATOPS

3.19.2 Annual Crew Resource Management (CRM) Evaluation

Purpose. Conduct annual CRM ground training and flight evaluation.

General.

Completion of this stage meets the requirements for the annual CRM flight evaluation and ground training.

The CRM-6102 event may be logged in conjunction with any operational or training flight. However, it should be completed in conjunction with the annual NATOPS check, when possible.

CRM training and flight evaluations shall be logged in the individual NATOPS Flight Personnel Training/Qualification Jacket in section II, part C on enclosure (4). In addition to Section II part C entries, CRM flight evaluation shall be commented on in the remarks section of the NATOPS evaluation form when the flight is flown in conjunction with NTPS-6101. Additionally, annual CRM flight evaluations shall be documented in the individual aircrew logbooks.

AOUI requirements. 6005, 6102

Crew Requirements. CRMF (CRMF Designated NSI)/CCUI or AOUI

Ground/Academic Training. IAW CNAFINST 1542.7 series.

CRM-6005 1.0 365 B,R,SC,M G Annual CRM Ground Training

Goal. Receive annual CRM training.

Requirement. IAW CNAFINST 1542.7 series receive instruction in CRM history, Seven Critical Skills, CNAFINST 1542.7 series and a T/M specific case study or scenario.

CRM-6102 0.0 365 B,R,SC,M (NS) A 1 UH-1Y

Goal. Conduct an annual Crew Resource Management evaluation.

Requirement. Successfully conduct the evaluation IAW CNAFINST 3710.7 and NATOPS. The evaluation should be conducted in conjunction with the annual NATOPS evaluation flight, when possible.

Performance Standards. IAW CNAFINST 3710.7 and NATOPS

Prerequisite. CRM-6005

Crew. CRMF (CRMF designated NSI)/CCUI or AOUI

CRM-6103 0.0 * B,R,SC G CRMF Training

Goal. To obtain designation as a Crew Resource Management Facilitator (CRMF).

Requirement. Complete the requirements specified per CNAFINST 1542.7. Completion of this event meets the requirements to be eligible for the CRMF designation. At the discretion of the commanding officer a letter designating the PUI as CRMF shall be placed in the NATOPS jacket and APR.

Performance Standards. IAW CNAFINST 1542.7.

CRM-6104 0.0 * B G CRMI Training

Goal. To obtain designation as a Crew Resource Management Instructor (CRMI).

Requirement. Complete the requirements specified per CNAFINST 1542.7. Completion of this event meets the requirements to be eligible for the CRMI designation. At the discretion of the commanding officer a letter designating the PUI as CRMI shall be placed in the NATOPS jacket and APR.

Performance Standards. IAW CNAFINST 1542.7.

3.19.3 Aerial Gunner Qualification Stage

Purpose. To achieve qualification as an aerial gunner.

General.

Completion of this stage qualifies the CCUI/AOUI for qualification as an aerial gunner on the respective weapons.

Appropriate documentation will be completed for each weapon prior to qualification as an aerial gunner.

A qualification letter shall be placed in the NATOPS Jacket and an entry made in the flight log book.

Initial prerequisite events for a Basic or Transition POI shall not be flown in conjunction with this stage.

Refer to paragraph 3.5.3 for crew served weapons ordnance delivery standards.

AOUI requirements. QUAL-6301 through 6303

Crew Requirement. NSI/CCUI or AOUI

Ground Training. Refer to UH-1Y Course Catalog for applicable required readings. Closed book written examinations shall be administered prior to each individual weapon evaluation flight. LABs should be used to evaluate the CCUI's weapon system knowledge without assessing instructional ability.

QUAL-6301 1.5 1095 B,R,M NS A 2 H-1

Goal. GAU-17/A aerial gunner qualification.

Requirements

Review

SWD principles
Cycle of operation/nomenclature
Weapons checklist usage
Weapons malfunctions and troubleshooting procedures
Laser usage and system knowledge
Airspace Coordination Measures
Tactical aircrew responsibilities
Threat countertactics
Weapon System Switchology
CAT TTPs and responsibilities
CAS TTPs and responsibilities
Escort TTPs and responsibilities

Performance Standards

Demonstrate detailed knowledge in all aspects of SWD, weapon system cycle of operation, inspection, nomenclature, weapon checklist and usage, and troubleshooting procedures under LLL conditions.

Demonstrate understanding of mission brief and HMLA Tactics, Techniques and Procedures.

Demonstrate proficiency in safe and effective employment of the GAU-17/A while using NVDs IAW the crew served weapons matrix under LLL conditions.

Meet or exceed accuracy outlined in crew served weapons engagement standards table.

Prerequisites. 2609, 2405, NSQ-LLL, 3101, 3103, 3203, 3303, 3403, written examination complete

Crew. NSI/CCUI or AOUI

Ordnance. 1,500 rounds 7.62mm

Range Requirement. Aerial gunnery range

QUAL-6302 1.5 1095 B,R,M NS A 2 H-1

Goal. M240D aerial gunner qualification.

Requirements

Review

SWD principles
Cycle of operation/nomenclature
Weapons checklist usage
Weapons malfunctions and troubleshooting procedures
Laser usage and system knowledge
Airspace Coordination Measures
Tactical aircrew responsibilities
Threat countertactics
CAT TTPs and responsibilities
CAS TTPs and responsibilities
Escort TTPs and responsibilities

Performance Standards

Demonstrate detailed knowledge in all aspects of SWD, weapon system cycle of operation, inspection, nomenclature, weapon checklist and usage, and troubleshooting procedures under LLL conditions.

Demonstrate understanding of mission brief and HMLA Tactics, Techniques and Procedures.

Demonstrate proficiency in safe and effective employment of the M240D while using NVDs IAW the crew served weapons matrix under LLL conditions.

Meet or exceed accuracy outlined in crew served weapons engagement standards table.

Prerequisites. 2610, 2405, NSQ-LLL, 3101, 3103, 3203, 3303, 3403, written examination complete

Crew. NSI/CCUI or AOUI

Ordnance. 600 rounds 7.62mm

Range Requirement. Aerial gunnery range

QUAL-6303 1.5 1095 B,R,M NS A 2 H-1

Goal. GAU-21 aerial gunner qualification.

Requirements

Review

SWD principles
Cycle of operation/nomenclature
Weapons checklist usage
Weapons malfunctions and troubleshooting procedures
Laser usage and system knowledge
Airspace Coordination Measures
Tactical aircrew responsibilities
Threat countertactics
CAT TTPs and responsibilities

CAS TTPs and responsibilities
Escort TTPs and responsibilities

Performance Standards

Demonstrate detailed knowledge in all aspects of SWD, weapon system cycle of operation, inspection, nomenclature, weapon checklist and usage, and troubleshooting procedures under LLL conditions.

Demonstrate understanding of mission brief and HMLA Tactics, Techniques and Procedures.

Demonstrate proficiency in safe and effective employment of the GAU-21 while using NVDs IAW the crew served weapons matrix under LLL conditions.

Meet or exceed accuracy outlined in crew served weapons engagement standards table.

Prerequisites 2611, 2405, NSQ-LLL, 3101, 3103, 3203, 3303, 3403, written examination complete

Crew NSI/CCUI or AOUI

Ordnance 600 rounds .50cal

Range Requirement Aerial gunnery range

3.20 MISSION ESSENTIAL TASK (MET) PHASE. N/A for the UH-1Y Crew Chief T&R.

3.21 MISSION ESSENTIAL TASK (MET) STAGES. N/A for the UH-1Y Crew Chief T&R.

3.22 AVIATION CAREER PROGRESSION MODEL (ACPM) PHASE. N/A for the UH-1Y Crew Chief T&R.

3.23 AVIATION CAREER PROGRESSION MODEL (ACPM) STAGES. N/A for the UH-1Y Crew Chief T&R.

3.24 ELECTRONIC AIRCREW TRAINING FORM (EATF) REASON CODES. N/A for the UH-1Y Crew Chief T&R.

3.25 T&R SYLLABUS MATRICES

General: The following matrices are provided in accordance with NAVMC 3500.14.

T&R Chaining

Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events. Only events in a sequence entailing demonstration of equivalent skills shall be chained.

When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged.

Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated:

Night Systems Optional. Chained codes annotated with a tilde after them, e.g. 2101~NS are only chain-updated if the chaining code is flown using night systems.

Light Level Optional. Chained codes annotated with a tilde and an 'NS' after them, e.g. 2101~NS are only chain-updated if the chaining code is flown using night systems during HLL. Chained codes annotated with a tilde and a 'LLL' after them, e.g. 2404~LLL are only chain-updated if the chaining code is flown using night systems during LLL.

3.25.1 UH-1Y CREW CHIEF T&R SYLLABUS MATRIX (1000 & 5000 PHASES)

UH-1Y CREW CHIEF T&R SYLLABUS MATRIX (1000 & 5000 PHASE)																					
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	ACAD #	ACAD TIME	SIM #	SIM TIME	FLIGHT #	FLIGHT TIME	COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EVENT CONVERSION
ACADEMICS (ACAD)																						
ACAD	ACAD	FRS SYLLABUS	1000	X				1.0					(N)	G		*						
ACAD SKILL TOTAL							1	1.0	0	0.0	0	0.0										
FAMILIARIZATION (FAM)																						
FAM	FAM	GROUND PROCEDURES	1100	X								1.5	D	A/S	1	*	1000					
	FAM	PAX/EPS	1101	X		X						1.5	D	A/S	1	*	1100					
	FAM	FAM MANUEVERS	1102	X		X						1.5	D	A/S	1	*	1101					
	FAM	HLL NVD INTRO	1103	X		X						1.5	NS	A/S	1	*	1102,1800					
FAM SKILL TOTAL							0	0.0	0	0.0	4	6.0										
FORMATION (FORM)																						
FORM	FORM	TAC FORM INTRO	1301	X								1.5	D	A	2	*	1102					
	FORM	NVD FORM INTRO	1303	X								1.5	NS	A	2	*	1103,1301					
FORM SKILL TOTAL							0	0.0	0	0.0	2	3.0										
TERRAIN FLIGHT (TERF)																						
TERF	TERF	TERF INTRO	1401	X		X						1.0	D	A	1	*	1102			TERF		
	TERF	NVD TERF INTRO	1403	X								1.0	NS	A	1	*	1103,1401			TERF		
TERF SKILL TOTAL							0	0.0	0	0.0	2	2.0										
NAVIGATION (NAV)																						
NAV	NAV	NAV INTRO	1500	X								1.5	D	A/S	1	*	1102					
NAV SKILL TOTAL							0	0.0	0	0.0	1	1.5										
SPECIFIC WEAPONS DELIVERY (SWD)																						
SWD	SWD	SWD	1600	X						1.5			D	A/S	1	*	1401,1800	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M-240D, or 600 rounds .50 cal GAU-21	Live fire range	If using the Static Weapons Trainer	UH-1Y enlisted aircrew simulator or Static Weapons Trainer.	
	SWD	BCWD INTRO	1601	X								1.5	D	A/S	1	*	1600	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M-240D, or 600 rounds .50 cal GAU-21	Aerial gunnery range			
SWD SKILL TOTAL							0	0.0	1	1.5	1	1.5										

UH-1Y CREW CHIEF T&R SYLLABUS MATRIX (1000 & 5000 PHASE)																						
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	ACAD #	ACAD TIME	SIM #	SIM TIME	FLIGHT #	FLIGHT TIME	COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EVENT CONVERSION
ASSAULT SUPPORT (CAT)																						
CAT	CAT	CAL/HIE INTRO	1800	X								**1.5**	D	A/S	1	*	1102					
	CAT	TAC LANDING INTRO	1801	X		X						**1.5**	D	A/S	1	*	1800					
	CAT	INTRO NS CALS	1802	X		X						**1.5**	NS	A/S	1	*	1103,1801					
	CAT	REVIEW NS CALS	1803	X								**1.5**	NS	A	1	*	1802					
	CAT	EXT/HOIST INTRO	1804	X								**1.5**	D	A/S	1	*	1800				External weight, hoist if available	
CAT SKILL TOTAL							**0**	**0.0**	**0**	**0.0**	**5**	**7.5**										
CORE SKILL INTRODCUTION EVALUATION (CSIX)																						
CSIX	CSIX	CORE SKILL CHECK	1901	X		X						**1.0**	(NS)	A	1	*	1100-1102,1301,1303,1401, 1403,1500,1600,1601, 1800-1804, 6005,6002,6003					
CSIX SKILL TOTAL							**0**	**0.0**	**0**	**0.0**	**1**	**1.0**										
UH-1Y CC 1000 PHASE TOTAL							**1**	**1.0**	**1**	**1.5**	**15**	**21.0**										
FLEET REPLACEMENT STANDARDIZATION INSTRUCTOR (FRSI)																						
FRSI	FRSI	INSTRUCTION OF CORE	5300	X	X							**2.0**	D	A	1	*	5421,5431,5441, Triple AGI					
	FRSI	EXTERNAL/HOIST OPS	5301	X	X							**2.0**	D	A	1	*	5300				Appropriate external load	
FRSI SKILL TOTAL							**0**	**0.0**	**0**	**0.0**	**2**	**4.0**										
NIGHT SYSTEMS FAMILIARIZATION INSTRUCTOR (NSFI)																						
NSFI	NSFI	NSFI IUT	5600	X								**1.5**	NS	A	1	*	FRSI					
	NSFI	NSFI CERT	5601	X	X							**1.5**	NS	A	1	*	5600					
NSFI SKILL TOTAL							**0**	**0.0**	**0**	**0.0**	**2**	**3.0**										

3.25.2 UH-1Y CREW CHIEF T & R SYLLABUS MATRIX (2000-6000 PHASES)

UH-1Y CREW CHIEF T&R SYLLABUS MARTIX (2000-6000 PHASES)																							
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
ACADEMICS (ACAD)																						
ACAD	ACAD	EA TAC AIRCREW	2050	X					1.0					(N)	G		*			X		2050
	ACAD	TERRAIN FLIGHT	2051	X					1.0					(N)	G		*			X		2051
	ACAD	EA NIGHT VISION TRAINING	2052	X					1.0					(N)	G		*			X		2052
	LAB	GAU-17 GUN CLASS	2040	X					1.0					(N)	G		*			X		2040
	LAB	M240D GUN CLASS	2041	X					1.0					(N)	G		*			X		2041
	LAB	GAU-21 GUN CLASS	2042	X					1.0					(N)	G		*			X		2042
	ACAD	AERIAL GUNNERY	2053	X					1.0					(N)	G		*			X		2053
	ACAD	GAU-17	2055	X					1.0					(N)	G		*			X		2055
	ACAD	M240D	2056	X					1.0					(N)	G		*			X		2056
	ACAD	GAU-21	2057	X					1.0					(N)	G		*			X		2057
	ACAD	LASER AIMING DEVICES	2058	X					1.0					(N)	G		*			X		2058
	ACAD	LASER BORESIGHTING	2059	X					1.0					(N)	G		*			X		2059
	ACAD	INSERTS AND RAIDS INTRO	2060	X					1.0					(N)	G		*			X		2060
	ACAD	RIE INTRO	2061	X					1.0					(N)	G		*			X		2061
ACAD SKILL TOTAL								**14**	**14.0**	**0**	**0.0**	**0**	**0.0**									
TERRAIN FLIGHT (TERF)																						
TERF	TERF	Day TERF	2100	X	X		X					**1**	**1.0**	D	A	1	180	2050,2051,1901		X		2100
	TERF	HLL TERF	2101	X	X	X	X					**1**	**1.0**	NS	A	1	180	2052,2100	2100	X		2101
	TERF	LLL TACFORM/TERF	2102	X	X		X					**1**	**1.5**	NS	A	2	180	NSQ-HLL	2100, 2101	X		2702
TERF SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**3**	**3.5**									
RECONNAISSANCE (REC)																						
REC	GREC	INTRO NTIS	2300	X					1.0				**0.0**	(NS)	G	1	*	2050,1901		X		NEW
REC SKILL TOTAL								**1**	**1.0**	**0**	**0.0**	**1**	**0.0**									
COMBAT ASSAULT TRANSPORT (CAT)																						
CAT	CAT	Day TAC Landing	2400	X									**1.5**	D	A	1	*	2050,2060,2061,1901				2400
	CAT	HLL TAC Landing	2401	X									**1.5**	NS	A	1	*	2052,2400				2401
	CAT	Sec TAC Approaches	2402	X	X	X							**1.5**	D	A	2	180	2100,2400		X		2402
	CAT	HLL Sec TAC Approaches	2403	X	X	X	X						**1.5**	NS	A	2	180	TERFQ,2300,2401,2402	2402	X		2403
	CAT	NVD LLL FAM/NAV	2404	X									**2.0**	NS	A	1	*	NSQ-HLL		X		2701
	CAT	NVD LLL SEC Landings	2405	X	X	X	X						**1.5**	NS	A	2	180	2404	2102,2403	X		2703
CAT SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**6**	**9.5**									

UH-1Y CREW CHIEF T&R SYLLABUS MARTIX (2000-6000 PHASES)																						
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
SPECIFIC WEAPONS DELIVERY (SWD)																						
SWD	SWD	INTRO GAU-17	2601	X	X	X							1.5	D	A	1	180	2040,2053,2055,2100,2400	2300, 6301 only after initial 6301	X		2601
	SWD	INTRO M240D	2602	X	X	X							1.5	D	A	1	180	2041,2053,2056,2100,2400	2300, 6302 only after initial 6302	X		2602
	SWD	INTRO GAU-21	2603	X	X	X							1.5	D	A	1	180	2042,2053,2057,2100,2400	2300, 6303 only after initial 6303	X		2603
	SWD	NIGHT GAU-17	2605	X									1.5	NS	A	1	*	2058,2059,2401,2601,TERFQ	2300, 6301 only after initial 6301	X		2605
	SWD	NIGHT M240D	2606	X									1.5	NS	A	1	*	2058,2059,2401,2602,TERFQ	2300, 6302 only after initial 6302	X		2606
	SWD	NIGHT GAU-21	2607	X									1.5	NS	A	1	*	2058,2059,2401,2603,TERFQ	2300, 6303 only after initial 6303	X		2607
	SWD	Rev NS GAU-17	2609	X	X	X	X						2.0	NS	A	2	180	2403,2605,TERFQ	2300,2601,6301 only after initial 6301	X		2609
	SWD	Rev NS M240D	2610	X	X	X	X						2.0	NS	A	2	180	2403,2606,TERFQ	2300,2602,6302 only after initial 6302	X		2610
	SWD	Rev NS GAU-21	2611	X	X	X	X						2.0	NS	A	2	180	2403,2607,TERFQ	2300,2603,6303 only after initial 6303	X		2611
SWD SKILL TOTAL								0	0.0	0	0.0	8	15.0									
FAMILIARIZATION (FAM)																						
FAM	FAM	FAM/INST Prof	2800	X									1.5	(NS)	A	1	*	1901		X		NEW
FAM SKILL TOTAL								0	0.0	0	0.0	1	1.5									
2000 PHASE TOTAL								15	15.0	0	0.0	19	29.5									
ACADEMICS (ACAD)																						
ACAD	ACAD	ESCORT	3050	X					1.0					(N)	G		*			X		3050
	ACAD	CAS/FAC(A)	3053	X					1.0					(N)	G		*			X		3053
	ACAD	CASEVAC	3054	X					1.0					(N)	G		*			X		3054
ACAD SKILL TOTAL								3	3.0	0	0.0	0	0.0									
ESCORT (ESC)																						
ESC	ESC	DAY ESCORT	3100	X									1.5	D	A	2	*	3050,2100,2300,2402,2601~GAU-17, 2602~M240D,2603~GAU-21	2300,2601~GAU-17, 2602~M240D,2603~GAU-21	X		3100
	ESC	NVD ESCORT	3101	X	X		X						1.5	NS	A	2	485	3100,2403,NSQ-HLL,2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300,3100, 2601~GAU-17, 2602~M240D, 2603~GAU-21	X		3101
	ESC	SFC ESC	3103	X	X								1.5	(NS)	A	2	485	3050,2100,2300,2402,NSQ-HLL, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300, 2601~GAU-17, 2602~M240D, 2603~GAU-21	X		3103
		NSQ LLL,2405																				
ESC SKILL TOTAL								0	0.0	0	0.0	3	4.5									
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																						
CAT	GCAT	(G) Utility Prac App	3200	X					1.0					D	G	1	*	2060,2061,3054		X		new
	CAT	Fastrope/Rappel	3201	X	X		X						1.0	D	A	1	365	2060,2061,2402,3200				3200
	CAT	NVD Fastrope/Rappel	3202	X	X		X						1.0	NS	A	1	365	3201,2403,NSQ-HLL,NSQ-LLL	3201			3201
	CAT	Tactical CAT	3203	X	X	X	X						1.5	(NS)	A	2	365	3200,2403,NSQ-LLL, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2609~LLL&GAU-17, 2610~LLL&M240D, 2611~LLL&GAU-21	X		3202
		NSQ LLL,2405																				
CAT SKILL TOTAL								1	1.0	0	0.0	3	3.5									

UH-1Y CREW CHIEF T&R SYLLABUS MARTIX (2000-6000 PHASES)																							
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
CLOSE AIR SUPPORT (CAS)																						
CAS	CAS	Intro CAS	3301	X	X		X						1.5	(NS)	A	2	180	3053,2405,NSQ-LLL , 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300	X		3303
	CAS	Rev CAS	3303	X	X		X						1.5	(NS)	A	2	180	3301, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300,3301			new
		NSQ LLL,2405																				
CAS SKILL TOTAL								0	0.0	0	0.0	3	3.0									
FORWARD AIR CONTROLLER (AIRBORNE) [FAC(A)]																						
FAC(A)	FAC(A)	FAC(A)	3400	X	X		X						2.0	(NS)	A	1	365	3053,3301, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300			3403
		NSQ LLL,2405																				
FAC(A) SKILL TOTAL								0	0.0	0	0.0	0	2.0									
3000 PHASE TOTAL								4	4.0	0	0.0	9	13.0									
ACADEMICS (ACAD)																						
ACAD	ACAD	Intro to DACM	4050	X					1.0					(N)	G		*					4050
	ACAD	RW DACM	4051	X					1.0					(N)	G		*					4051
	ACAD	FW DACM	4052	X					1.0					(N)	G		*					4052
ACAD SKILL TOTAL								3	3.0	0	0.0	0	0.0									
AIRBORNE RAPID INSERTION/EXTRACTION (RIE)																						
RIE	RIE	Para Ops	4100	X									1.0	(NS)	A	1	*	2402,3200, NSQ HLL~NS, NSQ LLL ~LLL				4100
	RIE	Day Water Insertion	4101	X									1.0	(NS)	A	1	*	2402,3200, NSQ HLL~NS, NSQ LLL ~LLL				4101
	RIE	SPIE	4103	X	X		X						1.5	(NS)	A	1	365	2402,3200, NSQ HLL~NS, NSQ LLL ~LLL	2100			4103
	RIE	Hoist Ops	4104	X	X		X						1.0	(NS)	A	1	365	2402,3200, NSQ HLL~NS, NSQ LLL ~LLL	2100			4104
	RIE	Rappel	4105	X	X		X						1.0	(NS)	A	1	365	2402,3200, NSQ HLL~NS, NSQ LLL ~LLL	2100			4105
		NSQ LLL,2405																				
RIE SKILL TOTAL								0	0.0	0	0.0	5	5.5									
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																						
CAT	CAT	MAT	4106	X	X		X						2.0	(NS)	A	1	365	2402, NSQ HLL~NS, NSQ LLL ~LLL		X		4106
		NSQ LLL,2405																				
CAT SKILL TOTAL								0	0.0	0	0.0	1	2.0									
AIR DELIVERY (AD)																						
AD	AD	External Cargo Procedures	4109	X	X	X	X						1.0	(NS)	A	1	730	2100,2400, NSQ HLL~NS, NSQ LLL ~LLL	2100			4109
AD SKILL TOTAL								0	0.0	0	0.0	1	1.0									

UH-1Y CREW CHIEF T&R SYLLABUS MARTIX (2000-6000 PHASES)																						
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
CLOSE AIR SUPPORT (CAS)																						
CAS	CAS	Urban CAS	4203	X	X		X						1.5	(NS)	A	2	365	3053,3303, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	3303			4203
		NSQ LLL,2405																				
CAS SKILL TOTAL								0	0.0	0	0.0	1	1.5									
DEFENSIVE AIR COMBAT MANEUVERING (DACM)																						
DACM	DACM	Moving Target Gunnery	4300	X	X		X						1.5	(NS)	A	1	485	2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2100, 2609~LLL&GAU-17, 2610~LLL&M240D, 2611~LLL&GAU-21	X		4300
	DACM	1v1 RW	4301	X		X							1.0	D	A	1	*	4050,4051,TERFQ,2402	2100	X		4301
	DACM	2v1 RW	4302	X	X		X						1.0	D	A	2	485	4301	2100	X		4302
	DACM	1v1 FW	4304	X									1.0	D	A	1	*	4050,4052,TERFQ,2402	2100	X		4304
	DACM	2v2 FW	4305	X	X		X						1.0	D	A	2	485	4304	2100	X		4305
DACM SKILL TOTAL								0	0.0	0	0.0	5	5.5									
CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR WARFARE (CBRN)																						
CBRN	CBRN	Protective Mask	4400	X	X		X				1.0			D	S/A	1	1095	2400		X		4400
CBRN SKILL TOTAL								0	0.0	1	1.0	0	0.0									
SEA-BASED EXPEDITIONARY OPERATIONS (SEA)																						
SEA	SEA	Day FCLP	4601	X	X								1.0	D	A	1	365	1901		X		2501
	SEA	Night FCLP	4602	X	X		X						1.0	NS,N*	A	1	365	4601	4601	X		2502
	SEA	Day CQ	4603	X	X								1.0	D	A	1	365	4601,TERQ	4601	X		4600
	SEA	NVD CQ	4604	X	X		X						1.0	NS	A	1	365	4602,4603,NSQ-HLL	4601,4602,4603,4605	X		4601
	SEA	Unaided CQ	4605	X	X		X						1.0	N*	A	1	365	4602,4603,NSQ-HLL	4601,4602,4603	X		4602
		NSQ LLL,2405																				
SEA SKILL TOTAL								0	0.0	0	0.0	3	3.0									
TERRAIN FLIGHT INSTRUCTOR (TERFI)																						
TERFI	TERFI	Intro TERFI	5100	X									1.5	(NS)	A	1	*	6301,6302,6303, ACAD Comp	2100			5100
	TERFI	TERFI	5101	X	X								1.5	(NS)	A	2	*	5100	2100			5101
TERFI SKILL TOTAL								0	0.0	0	0.0	1	3.0									
AIR-TO-GROUND INSTRUCTOR (AGI)																						
AGI	AGI	Intro GAU-17 Instruction	5420	X									1.5	(NS)	A	2	*	TERFI,3303,GAU-17 QUAL, M240D QUAL, GAU-21 QUAL	2300,2601, 2609~LLL			5420
	AGI	Rev GAU-17 Instruction	5421	X	X								1.5	NS	A	2	*	5420, GAU-17 QUAL, M240D QUAL, GAU-21 QUAL	2300,2601, 2609~LLL			5421
	AGI	Intro M240D Instruction	5430	X									1.5	(NS)	A	2	*	TERFI,3303,GAU-17 QUAL, M240D QUAL, GAU-21 QUAL	2300,2602, 2610~LLL			5430
	AGI	Rev M240D Instruction	5431	X	X								1.5	NS	A	2	*	5430, GAU-17 QUAL, M240D QUAL, GAU-21 QUAL	2300,2602, 2610~LLL			5431
	AGI	Intro GAU-21 Instrution	5440	X									1.5	(NS)	A	2	*	TERFI,3303,GAU-17 QUAL, M240D QUAL, GAU-21 QUAL	2300,2603,2611~LLL			5440
	AGI	Rev GAU-21 Instrution	5441	X	X								1.5	NS	A	2	*	5440, GAU-17 QUAL, M240D QUAL, GAU-21 QUAL	2300,2603,2611~LLL			5441
AGI SKILL TOTAL								0	0.0	0	0.0	6	9.0									

UH-1Y CREW CHIEF T&R SYLLABUS MARTIX (2000-6000 PHASES)																								
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
DEFENSIVE AIR COMBAT MANEUVERING INSTRUCTO (DACM I)																						
DACM(I)	DACM(I)	1v1/2v1 RW IUT	5800	X									1.5	D	A	1	*	RW DACM, AGI, ACAD Comp	2100,4302			5800
	DACM(I)	1v1/2v1 FW IUT	5801	X									1.5	D	A	1	*	FW DACM, AGI, ACAD Comp	2100,4305			5801
	DACM(I)	RW IUT Check	5802	X	X								1.5	D	A	2	*	5800	2100,4302			5802
	DACM(I)	FW IUT Check	5803	X	X								1.5	D	A	2	*	5801	2100,4305			5803
DACM(I) SKILL TOTAL								0	0.0	0	0.0	4	6.0									
NIGHT SYSTEMS INSTRUCTOR (NSI)																						
NSI	NSI	NSI SWD/CAT	5902	X									1.5	NS	A	2	*	AGI, 90 Hrs NVG, 40 Hours LLL, ACAD Comp	2101,2405, 2601~GAU-17, 2602~M240D,2603~GAU-21			5900
	NSI	NSI OAS/CAT	5904	X									1.5	NS	A	2	*	AGI, 90 Hrs NVG, 40 Hours LLL, ACAD Comp	2102,2300,2405,3303, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2609~LLL&GAU-17, 2610~LLL&M240D, 2611~LLL&GAU-21			5901
	NSI	NSI Evaluation	5905	X	X								2.0	NS	A	2	*	5904,5902, (Designated AGI GAU-21, GAU-17/A, and M240D for a minimum of 60 days, successful class presentation, written exam completion, and successful weapon class.)	2102,2300,2405,3303, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2609~LLL&GAU-17, 2610~LLL&M240D, 2611~LLL&GAU-22			5904
NSI SKILL TOTAL								0	0.0	0	0.0	4	5.0									
NATOPS (NTPS)																						
NTPS	NTPS	Open Book NATOPS	6002	X	X	X	X		1.5					(N)	G		365			X	X	6002
	NTPS	Closed Book NATOPS	6003	X	X	X	X		1.0					(N)	G		365			X	X	6003
	NTPS	Oral NATOPS Exam	6004	X	X	X	X		1.0					(N)	G		365			X	X	6004
	NTPS	NATOPS Check	6101	X	X	X	X						1.0	(NS)	A	1	365	6002,6003,6004	2800	X	X	6101
NTPS SKILL TOTAL								3	3.5	0	0.0	1	1.0									
CREW RESOURCE MANAGEMENT (CRM)																						
CRM	CRM	CRM Ground Trng	6005	X	X	X	X		1.0					(N)	G		365			X	X	6005
	CRM	CRM Eval Trk Code	6102	X	X	X	X					1	0.0	(NS)	A	1	365			X	X	6102
	CRM	CRMF Training	6103	X	X	X								(N)	G		*					
	CRM	CRMI Training	6104	X										(N)	G		*					
CRM SKILL TOTAL								1	1.0	0	0.0	1	0.0									
QUALIFICATION (QUAL)																						
QUAL	QUAL	GAU-17 Qual	6301	X	X		X						1.5	NS	A	2	1095	NSQ-LLL,2405,2609,3101,3103,3203,3303,3403, written examination complete	2300,2609	X		6301
	QUAL	M240D Qual	6302	X	X		X						1.5	NS	A	2	1095	NSQ-LLL,2405,2610,3101,3103,3203,3303,3403, written examination complete	2300,2610	X		6302
	QUAL	GAU-21 Qual	6303	X	X		X						1.5	NS	A	2	1095	NSQ-LLL,2405,2611,3101,3103,3203,3303,3403, written examination complete	2300,2611	X		6304
QUAL SKILL TOTAL								0	0.0	0	0.0	3	4.5									

3.25.3 UH-1Y CREW CHIEF RANGE AND ORDNANCE MATRIX (2000-6000 PHASES)

UH-1Y CREW CHIEF RANGE AND ORDNANCE MATRIX (2000-6000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	TYPE	# A/C	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS NOTES	AO Event
				B	R	SC											
TERRAIN FLIGHT (TERF)																	
TERF	TERF	Day TERF	2100	X	X		X	1.0	D	A	1	180			Authorized TERF route		X
	TERF	HLL TERF	2101	X	X	X	X	1.0	NS	A	1	180			Authorized TERF route		X
	TERF	LLL TACFORM/TERF	2102	X	X		X	1.5	NS	A	2	180			Authorized TERF area and route		X
SPECIFIC WEAPONS DELIVERY (SWD)																	
SWD	SWD	INTRO GAU-17	2601	X	X	X		1.5	D	A	1	180	(1500) 7.62MM		Aerial gunnery range		X
	SWD	INTRO M240D	2602	X	X	X		1.5	D	A	1	180	(600) 7.62MM		Aerial gunnery range		X
	SWD	INTRO GAU-21	2603	X	X	X		1.5	D	A	1	180	(600) .50CAL		Aerial gunnery range		X
	SWD	NIGHT GAU-17	2605	X				1.5	NS	A	1	*	(1500) 7.62MM		Aerial gunnery range		X
	SWD	NIGHT M240D	2606	X				1.5	NS	A	1	*	(600) 7.62MM		Aerial gunnery range		X
	SWD	NIGHT GAU-21	2607	X				1.5	NS	A	1	*	(600) .50CAL		Aerial gunnery range		X
	SWD	Rev NS GAU-17	2609	X	X	X	X	2.0	NS	A	2	180	(1500) 7.62MM		Aerial gunnery range		X
	SWD	Rev NS M240D	2610	X	X	X	X	2.0	NS	A	2	180	(600) 7.62MM		Aerial gunnery range		X
	SWD	Rev NS GAU-21	2611	X	X	X	X	2.0	NS	A	2	180	(600) .50CAL		Aerial gunnery range		X
ESCORT (ESC)																	
ESC	ESC	DAY ESCORT	3100	X				1.5	D	A	2	*	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.	Optional.	Aerial gunnery range (if required)	One of more Combat Assault Transport aircraft	X
	ESC	NVD ESCORT	3101	X	X		X	1.5	NS	A	2	485	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.	Optional.	Aerial gunnery range (if required)	One of more Combat Assault Transport aircraft	X
	ESC	SFC ESC	3103	X	X			1.5	(NS)	A	2	485	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.	Optional.	Aerial gunnery range (if required)	One surface Ground Combat Element	X
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																	
CAT	GCAT	(G) Utility Prac App	3200	X					D	G	1	*	Crew Served Weapons	no ordnance		Troops embarked (6 preferred) and actual cargo	X
	CAT	Fastrope/Rappel	3201	X	X		X	1.0	D	A	1	365			Simulated/actual rooftop or landing point (authorized fastrope/rappel site)	HRST Master and at least two ropers	
	CAT	NVD Fastrope/Rappel	3202	X	X		X	1.0	NS	A	1	365			Simulated/actual rooftop or landing point (authorized fastrope/rappel site)	HRST Master and at least two ropers	
	CAT	Tactical CAT	3203	X	X	X	X	1.5	(NS)	A	2	365	1,500 rounds 7.62mm GAU-17/A, or 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21		Aerial gunnery range		X
CLOSE AIR SUPPORT (CAS)																	
CAS	CAS	Intro CAS	3301	X	X		X	1.5	(NS)	A	2	180	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21		Aerial gunnery range		X
	CAS	Rev CAS	3303	X	X		X	1.5	(NS)	A	2	180	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21		Aerial gunnery range		

UH-1Y CREW CHIEF RANGE AND ORDNANCE MATRIX (2000-6000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	TYPE	# A/C	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS NOTES	AO Event
				B	R	SC											
FORWARD AIR CONTROLLER (AIRBORNE) [FAC(A)]																	
FAC(A)	FAC(A)	FAC(A)	3400	X	X		X	2.0	(NS)	A	1	365	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21	Optional.	Aerial gunnery range	1 CAS Asset	
AIRBORNE RAPID INSERTION/EXTRACTION (RIE)																	
RIE	RIE	Para Ops	4100	X				1.0	(NS)	A	1	*			Drop Zone or authorized paraops area	Jump Master and two jumpers (jump master may be one of the jumpers)	
	RIE	Day Water Insertion	4101	X				1.0	(NS)	A	1	*			Water drop zone or authorized helocast area	Helocast Master and two swimmers (Helocast Master may be one of the swimmers)	
	RIE	SPIE	4103	X	X		X	1.5	(NS)	A	1	365			Drop zone/landing zone or authorized SPIE area	HRST Master and two ropers	
	RIE	Hoist Ops	4104	X	X		X	1.0	(NS)	A	1	365				Hoist	
	RIE	Rappel	4105	X	X		X	1.0	(NS)	A	1	365				HRST Master and at least two ropers	
AIR DELIVERY (AD)																	
AD	AD	Ext Cargo Procedures	4109	X	X	X	X	1.0	(NS)	A	1	730				Appropriate external load	
CLOSE AIR SUPPORT (CAS)																	
CAS	CAS	Urban CAS	4203	X	X		X	1.5	(NS)	A	2	365	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.		Aerial gunnery range	JTAC with appropriate marking devices (if available), suitable urban environment or MOUT facility	
DEFENSIVE AIR COMBAT MANEUVERING (DACM)																	
DACM	DACM	Moving Target Gunnery	4300	X	X		X	1.5	(NS)	A	1	485	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.		Aerial gunnery range or MLT range		X
	DACM	1v1 RW	4301	X		X		1.0	D	A	1	*		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		One adversary helicopter and appropriate air-to-air training area	X
	DACM	2v1 RW	4302	X	X		X	1.0	D	A	2	485		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		One adversary helicopter and appropriate air-to-air training area	X
	DACM	1v1 FW	4304	X				1.0	D	A	1	*		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		One FW adversary and appropriate air-to-air training area	X
	DACM	2v2 FW	4305	X	X		X	1.0	D	A	2	485		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		Two FW adversary and appropriate air-to-air training area	X
SEA-BASED EXPEDITIONARY OPERATIONS (SEA)																	
SEA	SEA	Day FCLP	4601	X	X			1.0	D	A	1	365				FCLP pad	X
	SEA	Night FCLP	4602	X	X		X	1.0	N	A	1	365				FCLP pad with shipboard lighting	X
	SEA	Day CQ	4603	X	X			1.0	D	A	1	365				Landing plEATForm afloat	X
	SEA	NVD CQ	4604	X	X		X	1.0	NS	A	1	365				Landing plEATForm afloat	X
	SEA	Unaided CQ	4605	X	X		X	1.0	N*	A	1	365				Landing plEATForm afloat	X

UH-1Y CREW CHIEF RANGE AND ORDNANCE MATRIX (2000-6000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	TYPE	# A/C	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS NOTES	AO Event
				B	R	SC											
TERRAIN FLIGHT INSTRUCTOR (TERFI)																	
TERFI	TERFI	Intro TERFI	5100	X				1.5	(NS)	A	1	*				Authorized TERF route	
	TERFI	TERFI	5101	X	X			1.5	(NS)	A	2	*	1500 rounds 7.62mm (GAU-17/A), 600 rounds 7.62mm (M240D), or 600 rounds .50 cal (GAU-21).	Optional.	Aerial gunnery range.	Authorized TERF route	
AIR-TO-GROUND INSTRUCTOR (AGI)																	
AGI	AGI	Intro GAU-17 Instruction	5420	X				1.5	(NS)	A	2	*	(1500) 7.62mm		Aerial gunnery range		
	AGI	Rev GAU-17 Instruction	5421	X	X			1.5	NS	A	2	*	(1500) 7.62mm		Aerial gunnery range		
	AGI	Intro M240D Instruction	5430	X				1.5	(NS)	A	2	*	(600) 7.62mm		Aerial gunnery range		
	AGI	Rev M240D Instruction	5431	X	X			1.5	NS	A	2	*	(600) 7.62mm		Aerial gunnery range		
	AGI	Intro GAU-21 Instrution	5440	X				1.5	(NS)	A	2	*	(600) .50cal		Aerial gunnery range		
	AGI	Rev GAU-21 Instrution	5441	X	X			1.5	NS	A	2	*	(600) .50cal		Aerial gunnery range		
DEFENSIVE AIR COMBAT MANEUVERING INSTRUCTO (DACM I)																	
DACM(I)	DACM(I)	1v1/2v1 RW IUT	5800	X				1.5	D	A	1	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	One rotary wing aggressor	
	DACM(I)	1v1/2v1 FW IUT	5801	X				1.5	D	A	1	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	Two fixed wing aggressors	
	DACM(I)	RW IUT Check	5802	X	X			1.5	D	A	2	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	One rotary wing aggressor	
	DACM(I)	FW IUT Check	5803	X	X			1.5	D	A	2	*	(60) flares and TCTS pod (optional)		Air-to-air training area suitable for expendables, TACTS range, if available	Two fixed wing aggressors	
NIGHT SYSTEMS INSTRUCTOR (NSI)																	
NSI	NSI	NSI SWD/CAT	5902	X				1.5	NS	A	2	*	1500 rounds 7.62mm (GAU-17/A), 600 rounds 7.62mm (M240D), or 600 rounds .50 cal (GAU-21).		Aerial gunnery range		
	NSI	NSI OAS/CAT	5904	X				1.5	NS	A	2	*	1500 rounds 7.62mm (GAU-17/A), 600 rounds 7.62mm (M240D), or 600 rounds .50 cal (GAU-21).		Aerial gunnery range		
	NSI	NSI Evaluation	5905	X	X			2.0	NS	A	2	*	1500 rounds 7.62mm (GAU-17/A), 600 rounds 7.62mm (M240D), or 600 rounds .50 cal (GAU-21).		Aerial gunnery range & Approved LZ	TACP and MACCS (live or notional)	
QUALIFICATION (QUAL)																	
QUAL	QUAL	GAU-17 Qual	6301	X	X		X	1.5	NS	A	2	1095	(1500) 7.62mm		Aerial gunnery range		X
	QUAL	M240D Qual	6302	X	X		X	1.5	NS	A	2	1095	(600) 7.62mm		Aerial gunnery range		X
	QUAL	GAU-21 Qual	6303	X	X		X	1.5	NS	A	2	1095	(600) .50cal		Aerial gunnery range		X

3,25.4 UH-1Y AERIAL OBSERVER / GUNNER T&R SYLLABUS MATRIX (1000 PHASE)

UH-1Y AERIAL OBSERVER / GUNNER T&R SYLLABUS MATRIX (1000 PHASE)																				
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	BASIC	REFRESHER	SER CONV	SIM #	SIM TIME	FLIGHT #	FLIGHT TIME	COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	ORDNANCE QUANITY	RANGE	RANGE NOTES	AO EVENT	EVENT CONVERSION
FAMILIARIZATION (FAM)																				
FAM	FAM	GROUND PROCEDURES	1100	X						**1.5**	D	A/S	1	*					X	
	FAM	FAM MANUEVERS	1102	X		X				**1.5**	D	A/S	1	*	1101				X	
	FAM	HLL NVD INTRO	1103	X		X				**1.5**	NS	A/S	1	*	1102				X	
FAM SKILL TOTAL							**0**	**0.0**	**3**	**4.5**										
FORMATION (FORM)																				
FORM	FORM	TAC FORM INTRO	1301	X						**1.5**	D	A	2	*	1102				X	
FORM SKILL TOTAL							**0**	**0.0**	**1**	**1.5**										
TERRAIN FLIGHT (TERF)																				
TERF	TERF	TERF INTRO	1401	X		X				**1.0**	D	A	1	*	1102		TERF		X	
	TERF	NVD TERF INTRO	1403	X						**1.0**	NS	A	1	*	1103,1401		TERF		X	
TERF SKILL TOTAL							**0**	**0.0**	**2**	**2.0**										
SPECIFIC WEAPONS DELIVERY (SWD)																				
SWD	SWD	SWD	1600	X						**1.5**	D	A/S	1	*	1401,1800	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M-240D, or 600 rounds .50 cal GAU-21	Live fire range	UH-1Y enlisted aircrew simulator or Static Weapons Trainer.	X	
	SWD	BCWD INTRO	1601	X						**1.5**	D	A/S	1	*	1600	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M-240D, or 600 rounds .50 cal GAU-21	Aerial gunnery range		X	
SWD SKILL TOTAL							**0**	**0.0**	**2**	**3.0**										
COMBAT ASSAULT SUPPORT (CAT)																				
CAT	CAT	TAC LANDING INTRO	1801	X		X				**1.5**	D	A/S	1	*	1102				X	
	CAT	INTRO NS CALS	1802	X		X				**1.5**	NS	A/S	1	*	1103,1801				X	
CAT SKILL TOTAL							**0**	**0.0**	**2**	**3.0**										
CORE SKILL INTRODCUTION EVALUATION (CSIX)																				
CSIX	CSIX	CORE SKILL CHECK	1901	X		X				**1.0**	(NS)	A	1	*	1100-1103,1301,1401,1403, 1600, 1601, 1801, 1802,6005,6002,6003				X	
CSIX SKILL TOTAL							**0**	**0.0**	**1**	**1.0**										
AO/G 1000 PHASE TOTAL							**0**	**0.0**	**11**	**15.0**										

3.25.5 UH-1Y AERIAL OBSERVER / GUNNER T&R SYLLABUS MATRIX (2000-6000 PHASES)

UH-1Y AERIAL OBSERVER / GUNNER T&R SYLLABUS MARTIX (2000-6000 PHASES)																						
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
ACADEMICS (ACAD)																						
ACAD	ACAD	EA TAC AIRCREW	2050	X					1.0					(N)	G		*			X		2050
	ACAD	TERRAIN FLIGHT	2051	X					1.0					(N)	G		*			X		2051
	ACAD	EA NIGHT VISION TRAINING	2052	X					1.0					(N)	G		*			X		2052
	LAB	GAU-17 GUN CLASS	2040	X					1.0					(N)	G		*			X		2040
	LAB	M240D GUN CLASS	2041	X					1.0					(N)	G		*			X		2041
	LAB	GAU-21 GUN CLASS	2042	X					1.0					(N)	G		*			X		2042
	ACAD	AERIAL GUNNERY	2053	X					1.0					(N)	G		*			X		2053
	ACAD	GAU-17	2055	X					1.0					(N)	G		*			X		2055
	ACAD	M240D	2056	X					1.0					(N)	G		*			X		2056
	ACAD	GAU-21	2057	X					1.0					(N)	G		*			X		2057
	ACAD	LASER AIMING DEVICES	2058	X					1.0					(N)	G		*			X		2058
	ACAD	LASER BORESIGHTING	2059	X					1.0					(N)	G		*			X		2059
	ACAD	INSERTS AND RAIDS INTRO	2060	X					1.0					(N)	G		*			X		2060
	ACAD	RIE INTRO	2061	X					1.0					(N)	G		*			X		2061
ACAD SKILL TOTAL								**14**	**14.0**	**0**	**0.0**	**0**	**0.0**									
TERRAIN FLIGHT (TERF)																						
TERF	TERF	Day TERF	2100	X	X		X					**1**	**1.0**	D	A	1	180	2050,2051,1901		X		2100
	TERF	HLL TERF	2101	X	X	X	X					**1**	**1.0**	NS	A	1	180	2052,2100	2100	X		2101
	TERF	LLL TACFORM/TERF	2102	X	X		X					**1**	**1.5**	NS	A	2	180	NSQ-HLL	2100, 2101	X		2702
TERF SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**3**	**3.5**									
RECONNAISSANCE (REC)																						
REC	GREC	INTRO NTIS	2300	X					1.0				**0.0**	(NS)	G	1	*	2050,1901		X		NEW
REC SKILL TOTAL								**1**	**1.0**	**0**	**0.0**	**1**	**0.0**									
COMBAT ASSAULT TRANSPORT (CAT)																						
	CAT	Sec TAC Approaches	2402	X	X	X							**1.5**	D	A	2	180	2100		X		2402
	CAT	HLL Sec TAC Approaches	2403	X	X	X	X						**1.5**	NS	A	2	180	TERFQ,2300,2402	2402	X		2403
	CAT	NVD LLL FAM/NAV	2404	X									**2.0**	NS	A	1	*	NSQ-HLL		X		2701
	CAT	NVD LLL SEC Landings	2405	X	X	X	X						**1.5**	NS	A	2	180	2404	2102,2403	X		2703
#REF!								**0**	**0.0**	**0**	**0.0**	**4**	**6.5**									
SPECIFIC WEAPONS DELIVERY (SWD)																						
SWD	SWD	INTRO GAU-17	2601	X	X	X							**1.5**	D	A	1	180	2040,2053,2055,2100.2402	2300, 6301 only after initial 6301	X		2601
	SWD	INTRO M240D	2602	X	X	X							**1.5**	D	A	1	180	2041,2053,2056,2100,2402	2300, 6302 only after initial 6302	X		2602
	SWD	INTRO GAU-21	2603	X	X	X							**1.5**	D	A	1	180	2042,2053,2057,2100,2402	2300, 6303 only after initial 6303	X		2603
	SWD	NIGHT GAU-17	2605	X									**1.5**	NS	A	1	*	2058,2059,2402,2601,TERFQ	2300, 6301 only after initial 6301	X		2605
	SWD	NIGHT M240D	2606	X									**1.5**	NS	A	1	*	2058,2059,2402,2602,TERFQ	2300, 6302 only after initial 6302	X		2606
	SWD	NIGHT GAU-21	2607	X									**1.5**	NS	A	1	*	2058,2059,2402,2603,TERFQ	2300, 6303 only after initial 6303	X		2607
	SWD	Rev NS GAU-17	2609	X	X	X	X						**2.0**	NS	A	2	180	2403,2605,TERFQ	2300,2601,6301 only after initial 6301	X		2609
	SWD	Rev NS M240D	2610	X	X	X	X						**2.0**	NS	A	2	180	2403,2606,TERFQ	2300,2602,6302 only after initial 6302	X		2610
	SWD	Rev NS GAU-21	2611	X	X	X	X						**2.0**	NS	A	2	180	2403,2607,TERFQ	2300,2603,6303 only after initial 6303	X		2611
SWD SKILL TOTAL								**0**	**0.0**	**0**	**0.0**	**8**	**15.0**									

UH-1Y AERIAL OBSERVER / GUNNER T&R SYLLABUS MARTIX (2000-6000 PHASES)																							
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
FAMILIARIZATION (FAM)																						
FAM	FAM	FAM/INST Prof	2800	X									1.5	(NS)	A	1	*	1901		X		NEW
FAM SKILL TOTAL								0	0.0	0	0.0	1	1.5									
2000 PHASE TOTAL								15	15.0	0	0.0	17	26.5									
ACADEMICS (ACAD)																						
ACAD	ACAD	ESCORT	3050	X					1.0					(N)	G		*			X		3050
	ACAD	CAS/FAC(A)	3053	X					1.0					(N)	G		*			X		3053
	ACAD	CASEVAC	3054	X					1.0					(N)	G		*			X		3054
ACAD SKILL TOTAL								3	3.0	0	0.0	0	0.0									
ESCORT (ESC)																						
ESC	ESC	DAY ESCORT	3100	X									1.5	D	A	2	*	3050,2100,2300,2402,2601~GAU-17, 2602~M240D,2603~GAU-21	2300,2601~GAU-17, 2602~M240D,2603~GAU-21	X		3100
	ESC	NVD ESCORT	3101	X	X		X						1.5	NS	A	2	485	3100,2403,NSQ-HLL,2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300,3100, 2601~GAU-17, 2602~M240D, 2603~GAU-21	X		3101
	ESC	SFC ESC	3103	X	X								1.5	(NS)	A	2	485	3050,2100,2300,2402,NSQ-HLL, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300, 2601~GAU-17, 2602~M240D, 2603~GAU-21	X		3103
ESC SKILL TOTAL								0	0.0	0	0.0	3	4.5									
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																						
CAT	GCAT	(G) Utility Prac App	3200	X					1.0					D	G	1	*	2060,2061,3054		X		new
	CAT	Tactical CAT	3203	X	X	X	X						1.5	(NS)	A	2	365	3200,2403,NSQ-LLL, 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2609~LLL&GAU-17, 2610~LLL&M240D, 2611~LLL&GAU-21	X		3202
CAT SKILL TOTAL								1	1.0	0	0.0	1	1.5									
CLOSE AIR SUPPORT (CAS)																						
CAS	CAS	Intro CAS	3301	X	X		X						1.5	(NS)	A	2	180	3053,2405,NSQ-LLL , 2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2300	X		3303
CAS SKILL TOTAL								0	0.0	0	0.0	3	1.5									
3000 PHASE TOTAL								4	4.0	0	0.0	7	7.5									
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																						
CAT	CAT	MAT	4106	X	X		X						2.0	(NS)	A	1	365	2402, NSQ HLL~NS, NSQ LLL ~LLL		X		4106
CAT SKILL TOTAL								0	0.0	0	0.0	1	2.0									
DEFENSIVE AIR COMBAT MANEUVERING (DACM)																						

UH-1Y AERIAL OBSERVER / GUNNER T&R SYLLABUS MARTIX (2000-6000 PHASES)																							
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD		SIM		FLIGHT		COND	TYPE	# A/C or Sim	REFLY	PREREQUISITE	CHAINING	AO Event	EOM	EVENT CONV
				B	R	SC		#	TIME	#	TIME	#	TIME									
DACM	DACM	Moving Target Gunnery	4300	X	X		X						1.5	(NS)	A	1	485	2601~GAU-17, 2602~M240D,2603~GAU-21, 2605~NS & GAU-17, 2606~NS & M240D, 2607~NS & GAU-21 2609~LLL & GAU-17, 2608~LLL & M240D, 2609~LLL & GAU-21	2100, 2609~LLL&GAU-17, 2610~LLL&M240D, 2611~LLL&GAU-21	X		4300
	DACM	1v1 RW	4301	X		X							1.0	D	A	1	*	4050,4051,TERFQ,2402	2100	X		4301
	DACM	2v1 RW	4302	X	X		X						1.0	D	A	2	485	4301	2100	X		4302
	DACM	1v1 FW	4304	X									1.0	D	A	1	*	4050,4052,TERFQ,2402	2100	X		4304
	DACM	2v2 FW	4305	X	X		X						1.0	D	A	2	485	4304	2100	X		4305
DACM SKILL TOTAL								0	0.0	0	0.0	5	5.5									
CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR WARFARE (CBRN)																						
CBRN	CBRN	Protective Mask	4400	X	X		X				1.0			D	S/A	1	1095	2400		X		4400
CBRN SKILL TOTAL								0	0.0	1	1.0	0	0.0									
SEA-BASED EXPEDITIONARY OPERATIONS (SEA)																						
SEA	SEA	Day FCLP	4601	X	X								1.0	D	A	1	365	1901		X		2501
	SEA	Night FCLP	4602	X	X		X						1.0	NS,N*	A	1	365	4601	4601	X		2502
	SEA	Day CQ	4603	X	X								1.0	D	A	1	365	4601,TERQ	4601	X		4600
	SEA	NVD CQ	4604	X	X		X						1.0	NS	A	1	365	4602,4603,NSQ-HLL	4601,4602,4603,4605	X		4601
	SEA	Unaided CQ	4605	X	X		X						1.0	N*	A	1	365	4602,4603,NSQ-HLL	4601,4602,4603	X		4602
SEA SKILL TOTAL								0	0.0	0	0.0	3	3.0									
NATOPS (NTPS)																						
NTPS	NTPS	Open Book NATOPS	6002	X	X	X	X		1.5					(N)	G		365			X	X	6002
	NTPS	Closed Book NATOPS	6003	X	X	X	X		1.0					(N)	G		365			X	X	6003
	NTPS	Oral NATOPS Exam	6004	X	X	X	X		1.0					(N)	G		365			X	X	6004
	NTPS	NATOPS Check	6101	X	X	X	X						1.0	(NS)	A	1	365	6002,6003,6004	2800	X	X	6101
NTPS SKILL TOTAL								3	3.5	0	0.0	1	1.0									
CREW RESOURCE MANAGEMENT (CRM)																						
CRM	CRM	CRM Ground Trng	6005	X	X	X	X		1.0					(N)	G		365			X	X	6005
	CRM	CRM Eval Trk Code	6102	X	X	X	X					1	0.0	(NS)	A	1	365			X	X	6102
CRM SKILL TOTAL								1	1.0	0	0.0	1	0.0									
QUALIFICATION (QUAL)																						
QUAL	QUAL	GAU-17 Qual	6301	X	X		X						1.5	NS	A	2	1095	NSQ-LLL,2405,2609,3101,3103,3203,3303,3403, written examination complete	2300,2609	X		6301
	QUAL	M240D Qual	6302	X	X		X						1.5	NS	A	2	1095	NSQ-LLL,2405,2610,3101,3103,3203,3303,3403, written examination complete	2300,2610	X		6302
	QUAL	GAU-21 Qual	6303	X	X		X						1.5	NS	A	2	1095	NSQ-LLL,2405,2611,3101,3103,3203,3303,3403, written examination complete	2300,2611	X		6304
QUAL SKILL TOTAL								0	0.0	0	0.0	3	4.5									

4.25.6 UH-1Y AERIAL OBSERVER / GUNNER RANGE & ORDNANCE MATRIX (2000-6000)

UH-1Y AERIAL OBSERVER / GUNNER RANGE & ORDNANCE MATRIX (2000-6000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	TYPE	# A/C	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS NOTES	AO Event
				B	R	SC											
TERRAIN FLIGHT (TERF)																	
TERF	TERF	Day TERF	2100	X	X		X	1.0	D	A	1	180			Authorized TERF route		X
	TERF	HLL TERF	2101	X	X	X	X	1.0	NS	A	1	180			Authorized TERF route		X
	TERF	LLL TACFORM/TERF	2102	X	X		X	1.5	NS	A	2	180			Authorized TERF area and route		X
SPECIFIC WEAPONS DELIVERY (SWD)																	
SWD	SWD	INTRO GAU-17	2601	X	X	X		1.5	D	A	1	180	(1500) 7.62MM		Aerial gunnery range		X
	SWD	INTRO M240D	2602	X	X	X		1.5	D	A	1	180	(600) 7.62MM		Aerial gunnery range		X
	SWD	INTRO GAU-21	2603	X	X	X		1.5	D	A	1	180	(600) .50CAL		Aerial gunnery range		X
	SWD	NIGHT GAU-17	2605	X				1.5	NS	A	1	*	(1500) 7.62MM		Aerial gunnery range		X
	SWD	NIGHT M240D	2606	X				1.5	NS	A	1	*	(600) 7.62MM		Aerial gunnery range		X
	SWD	NIGHT GAU-21	2607	X				1.5	NS	A	1	*	(600) .50CAL		Aerial gunnery range		X
	SWD	Rev NS GAU-17	2609	X	X	X	X	2.0	NS	A	2	180	(1500) 7.62MM		Aerial gunnery range		X
	SWD	Rev NS M240D	2610	X	X	X	X	2.0	NS	A	2	180	(600) 7.62MM		Aerial gunnery range		X
	SWD	Rev NS GAU-21	2611	X	X	X	X	2.0	NS	A	2	180	(600) .50CAL		Aerial gunnery range		X
ESCORT (ESC)																	
ESC	ESC	DAY ESCORT	3100	X				1.5	D	A	2	*	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.	Optional.	Aerial gunnery range (if required)	One of more Combat Assault Transport aircraft	X
	ESC	NVD ESCORT	3101	X	X		X	1.5	NS	A	2	485	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.	Optional.	Aerial gunnery range (if required)	One of more Combat Assault Transport aircraft	X
	ESC	SFC ESC	3103	X	X			1.5	(NS)	A	2	485	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.	Optional.	Aerial gunnery range (if required)	One surface Ground Combat Element	X
COMBAT ASSAULT TRANSPORT OPERATIONS (CAT)																	
CAT	GCAT	(G) Utility Prac App	3200	X					D	G	1	*	Crew Served Weapons	no ordnance		Troops embarked (6 preferred) and actual cargo	X
	CAT	Tactical CAT	3203	X	X	X	X	1.5	(NS)	A	2	365	1,500 rounds 7.62mm GAU-17/A, or 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21		Aerial gunnery range		X
CLOSE AIR SUPPORT (CAS)																	
CAS	CAS	Intro CAS	3301	X	X		X	1.5	(NS)	A	2	180	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21		Aerial gunnery range		X

UH-1Y AERIAL OBSERVER / GUNNER RANGE & ORDNANCE MATRIX (2000-6000 PHASES)																	
SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	FLIGHT TIME	COND	TYPE	# A/C	REFLY	ORDNANCE QUANITY	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS NOTES	AO Event
				B	R	SC											
DEFENSIVE AIR COMBAT MANEUVERING (DACM)																	
DACM	DACM	Moving Target Gunnery	4300	X	X		X	1.5	(NS)	A	1	485	1,500 rounds 7.62mm GAU-17/A, 600 rounds 7.62mm M240D, or 600 rounds .50 cal GAU-21.		Aerial gunnery range or MLT range		X
	DACM	1v1 RW	4301	X		X		1.0	D	A	1	*		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		One adversary helicopter and appropriate air-to-air training area	X
	DACM	2v1 RW	4302	X	X		X	1.0	D	A	2	485		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		One adversary helicopter and appropriate air-to-air training area	X
	DACM	1v1 FW	4304	X				1.0	D	A	1	*		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		One FW adversary and appropriate air-to-air training area	X
	DACM	2v2 FW	4305	X	X		X	1.0	D	A	2	485		Any empty Crew Served Weapon, GAU-17/A with blank 7.62, or M240D with blank 7.62 and BFA.		Two FW adversary and appropriate air-to-air training area	X
SEA-BASED EXPEDITIONARY OPERATIONS (SEA)																	
SEA	SEA	Day FCLP	4601	X	X			1.0	D	A	1	365				FCLP pad	X
	SEA	Night FCLP	4602	X	X		X	1.0	N	A	1	365				FCLP pad with shipboard lighting	X
	SEA	Day CQ	4603	X	X			1.0	D	A	1	365				Landing plEATForm afloat	X
	SEA	NVD CQ	4604	X	X		X	1.0	NS	A	1	365				Landing plEATForm afloat	X
	SEA	Unaided CQ	4605	X	X		X	1.0	N*	A	1	365				Landing plEATForm afloat	X
QUALIFICATION (QUAL)																	
QUAL	QUAL	GAU-17 Qual	6301	X	X		X	1.5	NS	A	2	1095	(1500) 7.62mm		Aerial gunnery range		X
	QUAL	M240D Qual	6302	X	X		X	1.5	NS	A	2	1095	(600) 7.62mm		Aerial gunnery range		X
	QUAL	GAU-21 Qual	6303	X	X		X	1.5	NS	A	2	1095	(600) .50cal		Aerial gunnery range		X

3.26 T&R QUICK REFERENCE GUIDE

UH-1Y CC / AO T&R CODES QUICK REFERENCE					
TERF	2100*	DAY TERF	CBRN	4400*	PROTECTIVE MASK FAM
	2101*	NVD TERF (TERF Q)	SEA	4601*	DAY FCLP
	2102*	LLL NVD FORM/TERF		4602*	NVD FCLP
REC	2300	SENSOR FAM (GROUND) (2)		4603*	DAY CQ\
CAT	2400	TAC LANDINGS		4604*	NVD CQ
	2401	~NS NVD TAC LANDINGS		4605*	UNAIDED CQ
	2402*	SECTION TAC LANDINGS	TERFI	5100	TERFI IUT (2) (3)
	2403*	~NS NVD SECTION TAC LAND		5101	TERFI CERT (2) (3)
	2404*	LLL NVD LANDINGS	FRSI	5300	FRS INSTRUCTOR EVALUATION (3)
	2405*	LLL NVD SEC TAC LANDINGS		5301	FRS INSTRUCTOR EVALUATION (3)
SWD	2601*	GAU-17/A INTRO	AGI	5420	GAU-17/A IUT (2) (3)
	2602*	M-240D INTRO		5421	GAU-17/A CERT (3)
	2603*	GAU-21 INTRO		5430	M240D IUT (2) (3)
	2605*	NVD GAU-17/A INTRO (3)		5431	M240D CERT (3)
	2606*	NVD M-240D INTRO (3)		5440	GAU-21 IUT (2) (3)
	2607*	NVD GAU-21 INTRO (3)		5441	GAU-21 CERT (3)
	2609*	NVD GAU-17/A INTRO (3)	NSFI	5600	NSFI IUT
	2610*	NVD M-240D INTRO		5601	NSFI CERT
	2611*	NVD GAU-21 INTRO	DACMI	5800	DACMI RW IUT
ESC	3100*	CAT ESCORT (1)		5801	DACMI FW IUT
	3101*	NIGHT CAT ESCORT (1) (3)		5802	DACMI RW CERT
	3103*	SURFACE ESCORT (1) (2) (3)		5803	DACMI FW CERT
CAT	3200	TACTICAL LOADING (GROUND)	NSI	5902	NSI TERF/TAC LANDING IUT (3)
	3201	FASTROPE		5904	NSI TAC ORD DELIVERY IUT (3)
	3202	NVD FASTROPE (3)		5905	NSI CERT
	3203*	WEAPONS (2) (3)	NTPS	6002*	NATOPS OPEN BOOK
CAS	3301*	CAS (2) (3)		6003*	NATOPS CLOSED BOOK
	3303*	CAS (2) (3)		6004*	NATOPS ORAL EXAM
FAC(A)	3400	FAC(A) (2) (3)		6101*	NATOPS CHECK (2) (3)
RIE	4100	PARADROP INTRO (2) (3)	CRM	6005*	CRM GROUND
	4101	HELOCAST INTRO (2) (3)		6102*	CRM FLT (2) (3)
	4103	SPIE INTRO (2) (3)		6103	CRMF TRAINING
	4104	HOIST (2) (3)		6104	CRMI TRAINING
	4105	RAPPEL (2) (3)	QUAL	6301*	GAU-17/A GUNNER QUAL
CAT	4106*	MNT AREA		6302*	M-240D GUNNER QUAL
AD	4109	EXTERNALS (2) (3)		6303*	GAU-21 GUNNER QUAL
CAS	4203*	URBAN CAS (2) (3)		1	Ordn Optional
DACM	4300*	AIR-TO-AIR GUNNERY (2)(3)		2	Night Optional
	4301*	1V1 RW		3	HLL/LLL Optional
	4302*	2V1 RW		*	Events Required for Aerial Observers
	4304*	1V1 FW			
	4305*	2V2 FW			