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Encl: (1) AH-1Z T&R Manual

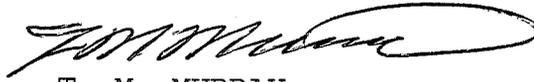
1. Purpose. In accordance with reference (a), enclosure (1) contains revised standards and regulations regarding the training of AH-1Z aircrew.
2. Cancellation. NAVMC 3500.104
3. Scope. Highlights of major Training and Readiness (T&R) planning considerations included in this AH-1Z T&R Manual are as follows:
  - a. Programs of Instruction (POIs) have been aligned with the AH-1W and UH-1Y Pilot and Crew Chief POIs to the maximum extent possible.
  - b. Flight leadership syllabi have been revamped, with increased emphasis on academic and briefing requirements.
  - c. Emerging weapon systems and sensors were incorporated into syllabus events.
  - d. Added a new planning metric, the Core Model Training Standard, used to reflect the optimum number of aircrew required to execute each Stage of flight.
4. Information. Recommended changes to this Manual should be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General (CG), Training and Education Command (TECOM), Marine Air Ground Task Force Training and

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distribution is unlimited.

Education Standards Division (MTESD) (C 466), Aviation Combat Element Standards Branch using standard Naval correspondence or the Automated Message Handling System plain language address: CG TECOM MTESD.

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

6. Certification. Reviewed and approved this date.



T. M. MURRAY  
By direction

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CHAPTER 1

AH-1Z TRAINING AND READINESS UNIT REQUIREMENTS

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CHAPTER 1

AH-1Z TRAINING AND READINESS UNIT REQUIREMENTS

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

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

1.2 AH-1Z 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 AH-1Z units. As of this publication date, AH-1Z units are authorized:

HMLA AH-1Z Tactical Squadrons				
Category	Squadron	Squadron(-)	Detachment	Reserves (3 Detachments)
	AH-1Z	AH-1Z	AH-1Z	AH-1Z
Aircraft	15	10	5	5
Pilots	36	24	12	12
Fleet Replacement Squadron HMLAT-303 AH-1Z				
Aircraft				18
Pilots				25

1.3 SIX FUNCTIONS OF MARINE AVIATION

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

1.4 ABBREVIATIONS

Skill/Stage Abbreviations	
ANSQ	Advanced Night Systems Qualification
ESC	Aerial Escort
AAD	Active Air Defense
AHC	Attack Helicopter Commander
AI	Air Interdiction
AMC	Air Mission Commander
BIP	Basic Instructor Pilot
CAS	Close Air Support
CQ	Carrier Qualification
CSI	Contract Simulator Instructor
CSIX	Core Skill Introduction Check
DACM	Defensive Air Combat Maneuvering
DACMI	Defensive Air Combat Maneuvering Instructor
DESG	Designation
DFORM	Division Form

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
FL	Flight Leader
FLSE	Flight Leadership Standardization Evaluator
FORM	Formation
FRSI	Fleet Replacement Squadron Instructor
FWDACM	Fixed Wing Defensive Air Combat Maneuvering
INST	Instruments
NATOPS	Naval Aviation Training and Operating Procedures Standardization
NI/ANI	NATOPS Instructor / Assistant NI
NAV	Navigation
CBRN	Chemical Biological Radiological Nuclear
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)
NFAM	NVD Fam
NFORM	NVD Form
NNAV	NVD Nav
NTERF	NVD TERF
OAAW	Offensive Anti-air Warfare
OAS	Offensive Air Support
PQM	Pilot Qualified in Model
PFLT	Preflight
QUAL	Qualification
RECCE	Reconnaissance
RQD	Requirements Qualifications Designation
RWDACM	Rotary Wing Defensive Air Combat Maneuvering
SIM	Simulator
SCAR	Strike Coordination and Reconnaissance
SL	Section Leader
SOTC	Specific Operations Tracking Codes
SWD	Specific Weapons Delivery
SI/ASI	Standardization Instructor / Assistant SI
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
TSI	Tactical Simulator Instructor
WTI	Weapons and Tactics Instructor
WTO	Weapons Training Officer
WTTP	Weapons and Tactics Training Program

1.5 DEFINITIONS

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

1.6 MISSION ESSENTIAL TASK LIST (METL). The METL is a list of specified tasks a unit is expected to execute. Core METs are drawn from the Marine Corps Task List (MCTL), are standardized by type unit, and are used for reporting Core squadron readiness in DRRS-MC. Core Plus METs reflect additional capabilities to support missions or plans which are limited in scope, theater specific, or have a lower probability of execution. Core Plus METs may be included in readiness reporting when contained within an Assigned Mission METL. An Assigned Mission METL consists of only selected METs (drawn from Core and Core Plus METs) necessary for that Assigned Mission. Chapter 7 of the Aviation T&R Program Manual provides additional information on Aviation Training Readiness policy.

HMLA AH-1		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	ABBREVIATION	MCT DESCRIPTION
MCT 1.3.3.3.2	EXP	Conduct Aviation Operations From Expeditionary Shore-Based Sites
MCT 3.2.3.1.1	CAS	Conduct Close Air Support
MCT 3.2.3.1.2.1	AI	Conduct Air Interdiction
MCT 3.2.3.1.2.2	AR	Conduct Armed Reconnaissance
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance
MCT 3.2.5.4	FAC (A)	Conduct Forward Air Control (Airborne)
MCT 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
CORE PLUS		
MET	ABBREVIATION	MCT DESCRIPTION
MCT 1.3.3.3.1	CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 3.2.3.2	OAAW	Conduct Offensive Anti-air Warfare
MCT 6.1.1.8	AAD	Conduct Active Air Defense

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

HMLA AH-1							
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION							
CORE							
MET	ABBREVIATION	SIX FUNCTIONS OF MARINE AVIATION					
		OAS	ASPT	AAW	EW	CoA&M	AerRec
MCT 1.3.3.3.2	EXP	X		X			X
MCT 3.2.3.1.1	CAS	X					X
MCT 3.2.3.1.2.1	AI	X					
MCT 3.2.3.1.2.2	AR	X					X
MCT 3.2.3.1.2.3	SCAR	X					X
MCT 3.2.5.4	FAC (A)	X					X
MCT 6.2.1.1	TRAP	X					
MCT 6.1.1.11	ESC	X					
CORE PLUS							
MCT 1.3.3.3.1	CQ	X		X			X
MCT 3.2.3.2	OAAW			X			
MCT 6.1.1.8	AAD			X			



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

<b>HMLA AH-1Z</b>			
<b>MET Output Standards</b>			
<b>Squadron/Squadron(-)/Detachment (15/10/5 Aircraft)</b>			
<b>MCT</b>	<b>MET</b>	<b>OUTPUT STANDARD</b>	
		<b>MAXIMUM DAILY SORTIES*</b>	<b>MAXIMUM MCT SORTIES</b>
MCT 1.3.3.3.2 <b>EXP</b>	Conduct Aviation Operations From Expeditionary Shore-Based Sites	20/16/8	20/16/8
MCT 3.2.3.1.1 <b>CAS</b>	Conduct Close Air Support		20/16/8
MCT 3.2.3.1.2.1 <b>AI</b>	Conduct Air Interdiction		20/16/8
MCT 3.2.3.1.2.2 <b>AR</b>	Conduct Armed Reconnaissance		20/16/8
MCT 3.2.3.1.2.3 <b>SCAR</b>	Conduct Strike Coordination and Reconnaissance		20/16/8
MCT 3.2.5.4 <b>FAC (A)</b>	Conduct Forward Air Control (Airborne)		12/8/4
MCT 6.2.1.1 <b>TRAP</b>	Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel		20/16/8
MCT 6.1.1.11 <b>ESC</b>	Conduct Aerial Escort		20/16/8
<b>Core Plus MET Output Standards</b>			
<b>MCT</b>	<b>MET</b>	<b>OUTPUT STANDARD</b>	
		<b>MAXIMUM DAILY SORTIES*</b>	<b>MAXIMUM MCT SORTIES</b>
MCT 1.3.3.3.1 <b>CQ</b>	Conduct Aviation Operations From Expeditionary Sea-Based Sites	20/16/8	20/16/8
MCT 3.2.3.2 <b>OAAW</b>	Conduct Offensive Anti-air Warfare		10/6/4
MCT 6.1.1.8 <b>AAD</b>	Conduct Active Air Defense		10/6/4

\* A 15/10/5 plane Mission Capable HMLA(AH-1Z) Squadron/Squadron(-)/Detachment is able to execute 20/16/8 total overall sorties on a daily (24 hour period) basis during contingency/combat operations.

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

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

HMLA AH-1Z					
AH-1Z MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY Squadron/Squadron(-)/Detachment (15/10/5 Aircraft)					
CORE METS	CREW POSITION		CREWS REQUIRED PER MET (CREW CMMR)		
	PILOT	COPILOT	SQD (15)	SQD (-) (10)	DET (5)
MCT					
1.3.3.3.2 (EXP)	MSP, AHC	ANSQ	12	8	4
3.2.3.1.1 (CAS)	MSP, AHC	ANSQ	12	8	4
3.2.3.1.2.1 (AI)	MSP, AHC	ANSQ	12	8	4
3.2.3.1.2.2 (AR)	MSP, AHC	ANSQ	12	8	4
3.2.3.1.2.3 (SCAR)	MSP, AHC	ANSQ	12	8	4
3.2.5.4 (FAC (A) ) *	MSP, AHC, FAC (A)	ANSQ	6	4	2
6.2.1.1 (TRAP)	MSP, AHC	ANSQ	12	8	4
6.1.1.11 (ESC)	MSP, AHC	ANSQ	12	8	4
CORE PLUS METS	CREW POSITION		SQD	SQD (-)	DET
1.3.3.3.1 (CQ)	MSP, AHC, CQ	ANSQ, CQ	12	8	4
3.2.3.2 (OAW)	MSP, AHC, DACM	ANSQ, DACM	5	3	2
6.1.1.8 (AAD)	MSP, AHC, DACM	ANSQ, DACM	5	3	2
COMBAT LEADERSHIP Squadron/Squadron (-)/Detachment (15/10/5 Aircraft)					
DESIGNATION		PILOTS			
Attack Helicopter Commander (AHC)		12/8/4			
Section Leader (SL)		6/4/2			
Division Leader (DL)		3/2/1			
Flight Leader (FL)**		4/3/1			
Air Mission Commander (AMC)**		4/3/1			
* A FAC(A) capable crew requires 1 FAC(A) per aircraft.					
** Flight Leader and AMC Combat Leader requirements apply to HMLA squadron, not individual aircraft models (may be filled by UH or AH pilot).					
Note: Crew definitions for training are identified within each T&R event.					

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

HMLA AH-1Z	
CORE MODEL TRAINING STANDARD (CMTS)	
Squadron/Squadron(-)/Detachment (15/10/5 Aircraft)	
CORE SKILLS (2000 PHASE)	
STAGE	PILOTS
TERF	30/20/10
TCT	30/20/10
REC	30/20/10
FCLP	26/20/10
SWD	26/20/10
ANSQ	26/20/10
FAM	30/20/10
CORE MISSIONS (3000 PHASE)	
STAGE	PILOTS
EXP	24/18/10
CAS	24/18/10
AI	24/18/10
AR	24/18/10
SCAR	24/18/10
FAC (A)	6/4/2
ESC	24/18/10
TRAP	24/18/10
CORE PLUS SKILLS (4000 PHASE) <sup>1</sup>	
STAGE	PILOTS
ESC	3/12 2/9 1/5
CAS	3/12 2/9 1/5
AR	3/12 2/9 1/5
AI	3/12 2/9 1/5
SCAR	3/12 2/9 1/5
OAAW (FW/RW) DACM	4/16 2/10 2/8
CBRN	2/36 1/24 1/12
CORE PLUS MISSIONS (4000 PHASE) <sup>1</sup>	
STAGE	PILOTS
CQ	4/24 2/18 2/10
OAAW	4/14 2/8 2/6
AAD	4/14 2/8 2/6
Note <sup>1</sup> : In the Core Plus METS the first number represents the number of individuals the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET capable individuals the squadron is recommended to train if that MET becomes required within an Assigned Mission/Directed Mission Set.	

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

<b>HMLA AH-1Z</b>	
<b>Squadron/Squadron(-)/Detachment (15/10/5 Aircraft)</b>	
<b>INSTRUCTOR TRAINING (5000 PHASE)</b>	
<b>DESIGNATION</b>	<b>PILOTS</b>
BIP	9/6/2
TERF I	9/6/2
WTO	9/6/2
TSI	6/4/-
NSI	6/4/2
NSFI	-/-/-
WTI	3/2/1
FAC(A) I	3/2/1
DACM I	3/2/1
FLSE*	3/2/1
*FLSEs are Designated by the Group CO.	

<b>HMLAT-303 AH-1Z</b>	
<b>FRS Squadron (18 Aircraft)</b>	
<b>INSTRUCTOR TRAINING (5000 PHASE)</b>	
<b>DESIGNATION</b>	<b>PILOTS</b>
BIP	25
TERF I	25
WTO	25
IP/FRSI	25
NS/FRSI	13
SI/ASI	13
NI/ANI	8
NSFI	8*
NSI	-
WTI	-
FAC(A) I	-
DACM I	-
FLSE	-
* HMLAT-303 NS Instructor requirement may include NSIs as well as NSFIs	

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

1.13.1 Tactical Squadron

<b>HMLA AH-1Z</b>	
<b>Squadron/Squadron(-)/Detachment (15/10/5 Aircraft)</b>	
<b>DESIGNATIONS (6000 PHASE)</b>	
<b>DESIGNATIONS</b>	<b>PILOTS</b>
Functional Check Pilot (FCP)	5/3/2

1.13.2 Fleet Replacement Squadron HMLAT-303

HMLAT-303	
FRS Squadron (18 Aircraft)	
FLIGHT LEADERSHIP (6000 PHASE)	
DESIGNATIONS	PILOTS
Attack Helicopter Commander (AHC)	25
Section Leader (SL)	25
Division Leader (DL)	6
Flight Leader (FL)*	3
Functional Check Pilot (FCP)	6

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

1.14 ORDNANCE REQUIREMENTS

1.14.1 General

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

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

1.14.2 Ground Ordnance  
BASIC/TRANSITION/CONVERSION

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

**NOTES:**

- (1) 1000-3000 phases only.
- (2) Numbers include MAWTS-1 Course Catalog IUT syllabi.
- (3) 2000-3000 phases only.
- (4) Annual ordnance requirements to maintain aircrew proficiency derived from MAINTAIN table and refly interval

1.14.3 Ordnance Tables

AH-1Z ORDNANCE ROLL-UP TABLE BY PROGRAM OF INSTRUCTION (POI) AND DESIGNATION														
BASIC POI														
Ordnance Requirements By Phase (per pilot)							Ordnance Requirements By Syllabus (per pilot)							
PHASE	1000	2000	3000	4000	5000	6000	POI	ANSQ <sup>2</sup>	AHC <sup>3</sup>	FAC (A)	SL	DL	WTO	NSI
ORDNANCE							ORDNANCE							
20mm	600	2,600	5,300	1,300	1,800	2,400	20mm	1,400	3,800	1,500	900	900	600	600
2.75 " HE	14	54	84	35	28	56	2.75 " HE	28	77	7	21	21	14	14
2.75" RP	0	0	28	0	14	0	2.75" RP	0	0	28	0	0	0	0
APKWS	0	0 <sup>1</sup>	4	0	0	0	APKWS	0	4	0	0	0	0	0
Illum	0	0	4	0	0	0	Illum	0	4	0	0	0	0	0
Flechette	0	0	4	0	0	0	Flechette	0	4	0	0	0	0	0
HF	0	1	0	0	0	0	HF	0	0	0	0	0	0	0
Chaff	0	90	360	150	150	240	Chaff	90	330	30	90	90	30	60
Flare	0	90	360	330	390	240	Flare	90	330	30	90	90	30	60
Note 1: SWD-2601 is a S/A event, if flown in aircraft requires 2 APKWS.							Note 2: Includes required NSQ and ANSQ Core Skills events.							
							Note 3: Only includes Mission Skills events through TRAP-3308.							
REFRESHER POI														
Ordnance Requirements By Phase (per pilot)							Ordnance Requirements By Syllabus (per pilot)							
PHASE	1000	2000	3000	4000	5000	6000	POI	ANSQ	AHC	FAC (A)	SL	DL	WTO	NSI
ORDNANCE							ORDNANCE							
20mm	300	2,300	4,500	1,300	900	1,200	20mm	1,100	3,000	1,500	300	300	300	300
2.75 " HE	7	47	70	35	14	28	2.75 " HE	21	63	7	7	7	7	7
2.75" RP	0	0	28	0	7	0	2.75" RP	0	0	28	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
HF	0	1	0	0	0	0	HF	0	0	0	0	0	0	0
Chaff	0	60	300	150	75	120	Chaff	60	270	30	30	30	15	30
Flare	0	60	300	240	195	120	Flare	60	270	30	30	30	15	30
SERIES CONVERSION POI														
Ordnance Requirement (per pilot)														
POI	AHC	Full T&R												
ORDNANCE														
20mm	2,700	3,300												
2.75 " HE	68	82												
2.75" RP	0	0												
APKWS	0	0												
Illum	0	0												
Flechette	0	0												
HF	0	0												
Chaff	180	225												
Flare	180	285												

AH-1Z YEARLY CURRENCY ORDNANCE REQUIREMENT (PER PILOT)			
DESIGNATION	AHC	FAC (A)	CPSP
ORDNANCE			
20 mm	7,200	1,500	650
2.75 " HE	150	7	18
2.75" RP	0	28	0
APKWS	0	0	0
Illum	0	0	0
Flechette	0	0	0
HF	0.5	0	0
Chaff	450	30	75
Flare	450	30	143

HMLA (AH-1Z) YEARLY ORDNANCE REQUIREMENT									
POI & DESIGNATION	BASIC POI (ATTAIN) <sup>4</sup>					REFRESHER POI	MAINTAIN		Total
	2000	AHC	FAC (A)	SL	DL		AHC	Full T&R	
ORDNANCE									
20mm	23,400	34,200	3,000	3,600	1,800	25,900	57,600	56,100	205,600
2.75 " HE	486	693	14	84	42	490	1,200	1,050	4,059
2.75" RP	0	0	56	0	0	56	0	168	280
APKWS	0	36	0	0	0	0	0	0	36
Illum	0	36	0	0	0	0	0	0	36
Flechette	0	36	0	0	0	0	0	0	36
HF	9	0	0	0	0	0	4	3	16
Chaff	810	2,970	60	360	180	1,920	3,600	3,330	13,230
Flare	810	2,970	60	360	180	1,920	3,600	3,738	13,638

Note 4: Totals based on the following assumptions, a T/O squadron broken down as follows: 9 pilots in the basic POI for CSP, 9 pilots in basic POI for AHC, 8 pilots maintaining the AHC qual and 6 pilots maintaining all T&R events. Of the pilots maintaining AHC, 2 are in the basic POI for FAC(A), 4 are in the basic POI for SL and 2 are in the basic POI for DL. 3 pilots are in the AHC refresher syllabus and 2 pilots are in the full T&R refresher syllabus.

HMLAT-303 (AH-1Z) YEARLY ORDNANCE REQUIREMENT				
POI & DESIGNATION	BASIC POI <sup>5</sup>		REFRESHER POI <sup>3</sup>	SQUADRON TOTAL (PER YEAR) <sup>6</sup>
	RAC	FRSI		
ORDNANCE				
20mm	600	300	300	15,900
2.75 " HE	14	7	7	371
2.75" RP	0	0	0	0
APKWS	0	0	0	0
Illum	0	0	0	0
Flechette	0	0	0	0
HF	0	0	0	0
Chaff	0	0	0	0
Flare	0	0	0	0

Note 5: Ordnance totals per pilot.

Note 6: Based on producing 20 RACs, 5 refreshers and 8 new FRSIs per year.

1.15 HMLA TRAINING RESOURCE REQUIREMENTS

1.15.1 General. The range requirements listed below are based on event requirements listed in the individual event descriptions. Units should make every effort to adhere to the requirements listed in the event descriptions, but commanding officers may waive requirements based on existing range capabilities and limitations.

1.15.1.1 Threat Counter-Tactics (TCT). Threat emitter and expendable usage

1.15.1.2 Specific Weapons Delivery (SWD), Advanced Night Systems Qual stage (ANSQ)

- (1) All rotary-wing air to ground ordnance permitted.
- (2) Expendable usage.
- (3) Lasers permitted (CLDR, IR pointer).
- (4) Scored or raked range (SWD-2605).

1.15.1.3 Offensive Air Support (OAS)

- (1) All rotary-wing air to ground ordnance permitted.
- (2) Expendable usage.
- (3) Lasers permitted (CLDR, IR pointer).
- (4) Supports all three types of Terminal control. Allows JTAC personnel to operate in range.

1.15.1.4 Forward Air Controller (Airborne) {FAC(A)}

- (1) All rotary-wing air to ground ordnance permitted.
- (2) All fixed-wing air to ground ordnance permitted.
- (3) Expendable usage.
- (4) Lasers permitted (CLDR, IR pointer).
- (5) Supports all three types of Terminal control. Allows JTAC personnel to operate in range.
- (6) Ground indirect fire systems permitted (artillery/mortars).

1.15.1.5 Defensive Air Combat Maneuvering (DACM)

- (1) Air Combat Maneuvering (ACM) permitted both fixed-wing and rotary-wing.
- (2) Expendable usage.
- (3) Tactical Air Combat Training System (TACTS), Tactical Combat Training System (TCTS) or comparable system compatible.
- (4) Air to Air Missile firing capable, if applicable.

## HMLA (AH-1)

### Core METL

- MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)
- MCT 3.2.3.1.1 Conduct Close Air Support (CAS)
- MCT 3.2.3.1.2.1 Conduct Air Interdiction (AI)
- MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)
- MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)
- MCT 3.2.5.4 Conduct Forward Air Control (Airborne) [FAC(A)]
- MCT 6.2.1.1 Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)
- MCT 6.1.1.11 Conduct Aerial Escort (ESC)

### Core Plus

- MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites (CQ)
- MCT 3.2.3.2 Conduct Offensive Anti-air Warfare (OAAW)
- MCT 6.1.1.8 Conduct Active Air Defense (AAD)

**MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites**

**Conditions:**

**C 1.1.1.2 Terrain Elevation**

Height of immediate terrain in reference to sea level.

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

**C 1.3.2.1 Light**

Light available to illuminate objects from natural or manmade sources.

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

**C 1.3.1.3.1 Air Temperature**

Atmospheric temperature at ground level (degrees Fahrenheit).

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

**C 2.7.2 Air Superiority**

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

**Standards:**

AH-1W Squadron (18)/Squadron(-)(12)/Detachment (6) {18/12/6} Aircraft

AH-1Z Squadron (15)/Squadron(-)(10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 12/8/4 AH-1W aircraft
  - 10/7/3 AH-1Z aircraft

OR

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

- Operational support equipment fully supports MCT

**Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements
- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat
- 20/16/8 AH-1Z 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:**

AH-1W Squadron (18)/Squadron(-) (12)/Detachment (6) {18/12/6} Aircraft

AH-1Z Squadron (15)/Squadron(-) (10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 12/8/4 AH-1W aircraft
  - 10/7/3 AH-1Z aircraft

OR

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

- Operational support equipment fully supports MCT

**Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements
- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat
- 20/16/8 AH-1Z sorties daily sustained during contingency/combat

### **MCT 3.2.3.1.2.1 Conduct Air Interdiction**

#### **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:**

AH-1W Squadron (18)/Squadron(-) (12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-) (10)/Detachment (5) {15/10/5} Aircraft

#### **Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

#### **Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 12/8/4 AH-1W aircraft
    - 10/7/3 AH-1Z aircraft
- OR

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

- Operational support equipment fully supports MCT

#### **Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements
- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

#### **Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat

- 20/16/8 AH-1Z sorties daily sustained during contingency/combat

### **MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance**

#### **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:**

AH-1W Squadron (18)/Squadron(-) (12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-) (10)/Detachment (5) {15/10/5} Aircraft

#### **Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

#### **Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 12/8/4 AH-1W aircraft
    - 10/7/3 AH-1Z aircraft
- OR

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

- Operational support equipment fully supports MCT

#### **Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements
- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

#### **Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat
- 20/16/8 AH-1Z 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:**

AH-1W Squadron (18)/Squadron(-) (12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-) (10)/Detachment (5) {15/10/5} Aircraft

#### **Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

#### **Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 12/8/4 AH-1W aircraft
    - 10/7/3 AH-1Z aircraft
- OR

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

- Operational support equipment fully supports MCT

#### **Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements
- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat
- 20/16/8 AH-1Z 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:**

AH-1W Squadron (18)/Squadron(-)(12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-)(10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 12/8/4 AH-1W aircraft
    - 10/7/3 AH-1Z aircraft
- OR

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

- Operational support equipment fully supports MCT

**Training:**

- 8/6/2 AH-1W aircrews MET-capable IAW T&R requirements
- 6/4/2 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 12/8/4 AH-1W sorties daily sustained during contingency/combat
- 12/8/4 AH-1Z 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:**

AH-1W Squadron (18)/Squadron(-)(12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-)(10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 12/8/4 AH-1W aircraft
    - 10/7/3 AH-1Z aircraft
- OR

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

- Operational support equipment fully supports MCT

**Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements

- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat
- 20/16/8 AH-1Z sorties daily sustained during contingency/combat

**MCT 6.1.1.11 Conduct Aerial Escort Operations**

**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:**

AH-1W Squadron (18)/Squadron(-)(12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-)(10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
    - 12/8/4 AH-1W aircraft
    - 10/7/3 AH-1Z aircraft
- OR

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

- Operational support equipment fully supports MCT

**Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements

- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat
- 20/16/8 AH-1Z sorties daily sustained during contingency/combat

**Core Plus**

**MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites**

**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:**

AH-1W Squadron (18)/Squadron(-) (12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-) (10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 12/8/4 AH-1W aircraft
  - 10/7/3 AH-1Z aircraft

OR

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

- Operational support equipment fully supports MCT

**Training:**

- 12/8/4 AH-1W aircrews MET-capable IAW T&R requirements
- 12/8/4 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 24/16/8 AH-1W sorties daily sustained during contingency/combat
- 20/16/8 AH-1Z sorties daily sustained during contingency/combat

**MCT 3.2.3.2 Conduct Offensive Anti-air Warfare (OAAW)**

**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:**

AH-1W Squadron (18)/Squadron(-)(12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-)(10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 12/8/4 AH-1W aircraft
  - 10/7/3 AH-1Z aircraft

OR

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

- Operational support equipment fully supports MCT

**Training:**

- 6/4/2 AH-1W aircrews MET-capable IAW T&R requirements
- 5/3/2 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 12/8/4 AH-1W sorties daily sustained during contingency/combat
- 10/6/4 AH-1Z sorties daily sustained during contingency/combat

**MCT 6.1.1.8 Conduct Active Air Defense**

**Conditions:**

**C.1.3.2.3 Aviation Meteorological Conditions**

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

**C 1.3.2 Visibility**

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

**C 1.3.2.1 Light**

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

**C 2.7.2 Air Superiority**

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

**Standards:**

AH-1W Squadron (18)/Squadron(-) (12)/Detachment (6) {18/12/6} Aircraft  
AH-1Z Squadron (15)/Squadron(-) (10)/Detachment (5) {15/10/5} Aircraft

**Personnel:**

- 19/13/6 AH-1W aircrews formed
- 16/11/5 AH-1Z aircrews formed
- 90% of squadron T/O personnel MOS qualified and deployable
  - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

**Equipment:**

- 70% Full Mission Capable (FMC) aircraft of PAA
  - 12/8/4 AH-1W aircraft
  - 10/7/3 AH-1Z aircraft

OR

Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.  
• Operational support equipment fully supports MCT

**Training:**

- 6/4/2 AH-1W aircrews MET-capable IAW T&R requirements
- 5/3/2 AH-1Z aircrews MET-capable IAW T&R requirements

**Output Standards:**

- 12/8/4 AH-1W sorties daily sustained during contingency/combat
- 10/6/4 AH-1Z sorties daily sustained during contingency/combat

CHAPTER 2  
AH-1Z PILOT

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

### 2.3 INDIVIDUAL CORE SKILL PROFICIENCY REQUIREMENTS

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

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

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

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

**\*Note\***

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

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

AH-1Z ATTAIN AND MAINTAIN PROFICIENCY TABLE						
CORE SKILLS (2000 Phase)						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN PROFICIENCY
			BASIC	REFRESHER	SERIES CONV	
TERF	TERF	Rev TERF	2100R	2100R		
	TERF	Rev NVD TERF	2101R	2101R	2101R	2101R
TCT	STCT	Intro ASE RADAR/IR	S2200			
	STCT	Tactical ASE Employ	S2201R	S2201R	S2201R	S2201R
REC	SREC	Intro Day RECCE	S2300			
	REC	Intro NVD RECCE	2301R	2301R	2301R	2301R
FCLP	SFCLP	Intro FCLP	S2500			
	FCLP	Day FCLP	2501R	2501R		
	FCLP	Night FCLP	2502R	2502R		2502R
SWD	SSWD	Intro Hellfire	S2600			
	SSWD	Review Hellfire/Intro APKWS	S2601R	S2601R		S2601R
	SWD	Live Hellfire & 20mm	2602R	2602R		2602R
	SSWD	RKT/Gun Del Prof	S2603		S2603	
	SWD	RKT/Gun Del Prof	2604R	2604R	2604R	
	SWD	Scored RKT Del	2605R	2605R	2605R	2605R
	SWD	NVD RKT/Gun Del	2606			
	SWD	Refine NVD RKT/Gun	2607R	2607R	2607R	2607R
ANSQ	SWD	Moving Target Gunnery	2610R	2610R		2610R
	SANSQ	NVD LLL EPs	S2700		S2700	
	ANSQ	NVD LLL FAM/Nav	2701R	2701R	2701R	2701R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
	SANSQ	Intro NVD LLL Ord	S2704			
FAM	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
	FAM	FAM/INST Proficiency	2800R	2800R	2800R	2800R
	SFAM	EP Simulator	S2801R	S2801R	S2801R	S2801R

**\*NOTE\***

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

2.4 INDIVIDUAL MISSION SKILL PROFICIENCY REQUIREMENTS

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

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

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

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

**\*Note\***

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

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

AH-1Z ATTAIN AND MAINTAIN PROFICIENCY TABLE						
MISSION SKILLS (3000 Phase)						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN PROFICIENCY
			BASIC	REFRESHER	SERIES CONV	
ESC	ESC	ASPT ESC	3100			
	ESC	NVD ASPT ESC	3101R	3101R	3101R	
	SESC	SIM ASPT ESC	3102R	3102R	3102R	3102R
	ESC	Surface ESC	3103R	3103R		
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
CAS	SCAS	Intro CAS	S3300		S3300	
	CAS	Intro Day CAS	3301R	3301R	3301R	3301R
	CAS	Intro NVD CAS HLL	3302			
	CAS	Intro NVD CAS LLL	3303R	3303R	3303R	3303R
	CAS	Intro Urban CAS	3304R	3304R		3304R
	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
AR	AR	Armed Recon	3305R	3305R		3305R
	SSWD	Review Hellfire/Intro APKWS	S2601R	S2601R		S2601R
	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
AI	AI	Aerial Interdiction	3306R	3306R	3306R	3306R
	SSWD	Review Hellfire/Intro APKWS	S2601R	S2601R		S2601R
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
SCAR	SCAR	SCAR	3307R	3307R		3307R
	SSWD	Review Hellfire/Intro APKWS	S2601R	S2601R		S2601R
	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
TRAP	TRAP	TRAP	3308R	3308R		3308R
	ESC	ASPT ESC	3102			
	ANSQ	NVD LLL TACFORM/TERF	2702R	2702R		2702R
FAC (A)	FAC (A)	IDF Control	3400R	3400R		3400R
	FAC (A)	RW Control	3401R	3401R		3401R
	FAC (A)	FW Control	3402R	3402R		3402R
	FAC (A)	NVD FW Control	3403R	3403R		3403R
	FAC (A)	Sup Arms Consolidate	3404R	3404R		3404R
	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
EXP	EXP	EXP (FARP) Ops	3600			
	EXP	EXP (FARP) Ops NVD	3601R	3601R	3601R	3601R
	EXP	EXP RVL Day	3602			
	EXP	EXP RVL NVD	3603R	3603R	3603R	3603R
	ANSQ	NVD LLL FAM/Nav	2701R	2701R	2701R	2701R

**\*NOTE\***

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

2.5 INDIVIDUAL CORE PLUS SKILL PROFICIENCY REQUIREMENTS

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

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

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

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

**\*Note\***

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

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

AH-1Z ATTAIN AND MAINTAIN PROFICIENCY TABLE						
CORE PLUS (4000 Phase)						
SKILL	STAGE	T&R DESCRIPTION	ATTAIN PROFICIENCY			MAINTAIN PROFICIENCY
			BASIC	REFRESHER	SERIES CONV	
ESC	ESC	Helo ESC Med/Hi	4200R	4200R		4200R
	ANSQ	Rev NVD LLL Form/TERF Nav	2702R	2702R		2702R
CAS	CAS	Urban CAS Med/High	4201R	4201R		4201R
	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
AR	AR	AR Med/High Threat	4205R	4205R		4205R
	SSWD	Review Hellfire/Intro APKWS	2601R	2601R		2601R
	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
AI	AI	AI Med/High Threat	4206R	4206R		4206R
	SSWD	Review Hellfire/Intro APKWS	2601R	2601R		2601R
	ANSQ	NVD LLL Form/TERF Nav	2702R	2702R		2702R
SCAR	SCAR	SCAR	4207R	4207R		4207R
	SSWD	Review Hellfire/Intro APKWS	2601R	2601R		2601R
	ANSQ	Rev NVD LLL Ord Del	2705R	2705R	2705R	2705R
OAAW	OAAW	OAAW	4209R	4209R		4209R
	ANSQ	NVD LLL Form/TERF Nav	2702R	2702R		2702R
AAD	RWDACM	OWP DACM	4300R	4300R		4300R
	RWDACM	1v1 RW	4301		4301	
	RWDACM	2V1 RW	4302			
	RWDACM	Rev 1v1/2v1 RW	4303R	4303R		4303R
	ANSQ	NVD LLL Form/TERF Nav	2702R	2702R		2702R
	FWDACM	1v1 FW	4304		4304	
	FWDACM	2v2 FW	4305R	4305R		4305R
ANSQ	NVD LLL Form/TERF Nav	2702R	2702R		2702R	
CBRN	SCBRN	CBRN	4400R	4400R		4400R
CQ	CQ	Day CQ	4600R	4600R	4600R	
	CQ	NVD CQ	4601R	4601R	4601R	4601R
	CQ	Unaided CQ	4602R	4602R	4602R	
	ANSQ	NVD LLL FAM/Nav	2701R	2701R	2701R	2701R

**\*NOTE\***

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

2.6 REQUIREMENTS, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all stage lectures, briefs, squadron training, prerequisites and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in Aircrew Performance Records (APR) and NATOPS jackets. 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.

<b>AH-1Z PILOT INDIVIDUAL QUALIFICATION REQUIREMENTS</b>	
<b>Qualification</b>	<b>Initial Event Qualification Requirements</b>
INSTRUMENT (INST-6100)	IAW OPNAV 3710.7 and an annual qualification letter signed by the commanding officer.
NATOPS (NTPS-6101)	IAW OPNAV 3710.7 and an annual qualification letter signed by the commanding officer.
TERFQ	2100,2101
NSQ	2101,2301,2606,2607
ANSQ	NSQ,2700,2701,2702,2704,2705
FAC (A)	3400,3401,3402,3403,3404
CQ	4600,4601,4602
RW DACM	TERFQ,4300,4301,4302,4303
FW DACM	TERFQ,4304,4305

<b>AH-1Z PILOT INDIVIDUAL DESIGNATION REQUIREMENTS</b>	
<b>Designation</b>	<b>Initial Event Designated Requirements</b>
FCP	DESG-6300, FCP-6200, 6201, 6202, 6203, 6204, 6205 and IAW AH-1Z NATOPS.
PQM (DESG-6300)	Successful completion of NATOPS and Instrument checks and CSIX 1901.
AHC (DESG-6398)	DESG-6300,6398, ANSQ. Successful completion of the Core Skills Phase and the ESC, CAS, AR, AI, SCAR, TRAP and EXP stages through TRAP-3308 and EXP 3603 of the Mission Skill Phase meet the requirements for the PUI to be eligible for the AHC designation. Refly of the SWD-2605 attaining Mission Skills Phase ordnance accuracy.
SECTION LEAD (DESG-6498)	DESG-6398,6400,6401,6498
DIVISION LEAD (DESG-6598)	SL-6498,6500,6501,6598
FLIGHT LEAD (DESG-6698)	FL-6698
AMC (DESG-6798)	AMC-6798
BIP	5100,5101,5102,5103,5104
IFBM	Per Squadron Guidance and Governing Documents
TERFI	5110,5111
NI/ANI	Per NATOPS, FRS, and Squadron Guidance
WTO	5200,5201,5202,5203
TSI	5210,5211
CSI	5300,5301,5302,5303
CRMI/CRMF	Per COMNAVAIRFORINST 1542.7
FRSI	5310,5311,5312,5313,5314,5315,5316,5317,5318,5319
FRSI-SI	5320,5321
FLSE	IAW Flight Leadership Program Model Manager requirements.
FAC (A) I	IAW the MAWTS-1 Course Catalogs. Certifications for FAC(A) I, DACMI, NSI, and WTI are signed by the MAWTS-1 Commanding Officer and forwarded to squadron commanding officers. Squadron commanding officers should designate pilots who satisfactorily complete the evaluation flight(s) and have a complete ATF from the MAWTS-1 IP who evaluates the pilot. FRS commanding officers should designate NSFIs as appropriate per the MAWTS-1 Course Catalog.
NSFI	
DACMI	
NSI	
WTI	

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

2.7 PROGRAMS OF INSTRUCTION (POI). In accordance with POI updating rules, in order for all events in a stage to be updated once the R coded events for the stage have been flown, there has to be a previously flown date present, either proficient or delinquent, otherwise the event will be recognized as incomplete and must be flown. **Therefore, all refresher and series conversion pilots shall ensure previously flown events are logged, based on the last date flown.** If the flight was flown under a previous T&R (AH-1Z or AH-1W), reference the AH-1Z Pilot Syllabus Matrix at the end of the Chapter to ensure events are converted correctly (Paragraph 2.24). **Pilot Training Officers shall ensure pilots are placed in the appropriate syllabus (B, R, SC, MR) in MSHARP, in order to ensure MSHARP functions properly.**

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

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

2.7.2 Series Conversion (SC) POI. The Series Conversion syllabus is provided for personnel proficient in the AH-1W converting directly to the AH-1Z. After performing event conversion in accordance with paragraph 2.24.3 of the T&R syllabus matrix, a previously designated AH-1W pilot in the series conversion syllabus shall fly all "SC" coded events if the pilot is proficient in the AH-1W. The Series Conversion syllabus is predicated on the experience of the Series Conversion pilot and is primarily designed for the AH-1W pilot who has not been out of the AH-1W cockpit for longer than 485 days and is beginning the Series Conversion within days of the last AH-1W flight. The commanding officer of the FRS may tailor the Series Conversion syllabus to fit the experience and proficiency of the Series Conversion pilot per the T&R Program Manual. A pilot in the Series Conversion syllabus should fly all "SC" coded events in the 1000 level. Two additional events are recommended for pilots requiring additional flights due to time out of the cockpit (e.g. AH-1W pilot out of cockpit >485 and doing series conversion): FAM 1103, 1108.

2.7.2.1 In order to regain AHC, flight leadership designations and FAC(A) (as applicable), the SC events listed in the 2000 through 5000 level shall be completed in any order, and in no fewer than 18 flight hours in the aircraft. Event conversion is not allowed for these events. ANSQ-2701 and ANSQ-2705 shall be flown under LLL conditions. All other flights may be flown under any light level condition. TERF qualification may be granted after the

completion of TERF-2101. NSQ may be granted after the completion of SWD-2607. ANSQ may be granted after the completion of NSQ, SANSQ-2700, ANSQ-2701 and ANSQ-2705.

2.7.2.2 In order to regain instructor designations (BIP, TERFI, WTO and NSI), a total of 30 **aircraft flight hours** must be flown, inclusive of the flight time from the above paragraph, but not including flight time from the 1000 level syllabus. Additionally, all "SC" coded events from the appropriate instructor syllabus shall be flown in order to regain instructor designations. Events that can count toward the 30 flight hour total are any 4000 level event and:

REC-2301	ESC-3100	FACA-3401
SWD-2605	ESC-3101	FACA-3402
SWD-2607	ESC-3103	FACA-3403
SWD-2610	CAS-3301	FACA-3404
ANSQ-2701	CAS-3302	AR-3305
ANSQ-2705	CAS-3303	AI-3306
		SCAR-3307

2.7.3.3 These events shall be flown under the light level conditions prescribed in the event description. For pilots regaining the NSI designation, at least 15 of the 30 total flight hours shall be flown at night. BIP-5104, WTO-5201 and NSI-5903 may also count toward the 30 flight hour requirement. All flight time gained while accomplishing a T&R event shall count towards the required flight time.

2.7.3.4 For conversion from the AH-1Z to the AH-1W see the AH-1W T&R.

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	Interactivre Courseware	USMC AH-1Z FRS
3-8	Core Skill Introduction Training	USMC AH-1Z FRS
9-17	Core Skill/Mission Skill Training	Tactical Squadron
9-17	Core Plus Skill Training	Tactical Squadron

2.7.4 Modified Refresher/Refresher (MR/R) POI

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

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

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

2.7.4.1.3 Pilots returning from a DIFDEN billet, or a DIFOP billet where a helicopter was not flown, having not flown a AH-1Z for > 485 days but ≤ 730

days shall conduct Modified Refresher training at the FRS.

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

2.7.4.2 The Refresher syllabus is predicated on the experience of the Refresher pilot. A previously designated AH-1Z pilot in the Refresher syllabus should fly all "R" coded events; however, a pilot need not fly every event within a stage of training to be re-qualified in that stage. The commanding officer may tailor the Refresher syllabus to fit the experience of the Refresher pilot per the T&R Program Manual. This assumes that the Refresher has had previous proficiency in that stage of training. If the pilot has no previous proficiency in a stage or particular event, then the pilot should fly the entire stage or all events not previously flown. The Refresher syllabus applies only up to the stage achieved during the prior tour. After completion of appropriate Refresher syllabus, the pilot will complete the entire remaining syllabus. Prerequisites apply only to replacement aircrew and not to Refresher pilots.

2.7.4.3 Previously designated AH-1W pilots will be assigned to the Refresher POI upon completion of FRS Series Conversion training. After performing event conversion in accordance with AH-1Z Pilot Syllabus Matrix (paragraph 2.23), previously designated AH-1W pilots shall complete all R coded events. Incomplete events will either be new events, like CAS-3304, with no direct comparison to a AH-1W event (in the 8 Mar 11 T&R), or an event with no proficiency date because the pilot never performed it in the AH-1W or because there is no event conversion defined. The current AH-1W T&R has an equivalent CAS-3304 event and can be used for conversion if not delinquent. ***M-SHARP will not automatically convert AH-1W T&R syllabus codes for proficiency in the AH-1Z. The Pilot Training Officer will have to manually enter these dates for each pilot before commencing Core Skill training in the Refresher POI at the tactical unit.*** At the discretion of the commanding officer pilots under the Refresher POI who were previously ANSQ qualified may conduct NS or (NS) Refresher syllabus events under HLL or LLL conditions.

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

WEEKS	COURSE	PERFORMING ACTIVITY
1-2	Interactivre Courseware	USMC AH-1Z FRS
3-8	Core Skill Introduction Training	USMC AH-1Z FRS
9-30	Core Skill/Mission Skill Training	Tactical Squadron
9-30	Core Plus Skill Training	Tactical Squadron

2.7.5 Fleet Replacement Squadron and NATOPS/Assistant NATOPS POI

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

2.7.6 Basic Instructor Pilot and Stage Instructor POI

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

2.7.7 MAWTS-1 Level Instructor POI

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

2.7.8 Flight Leadership POI

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

2.8 ACADEMIC TRAINING

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

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

2.8.2.1 Interactive Courseware (ICW). This is a Computer Based Training (CBT) syllabus for Core Skill Introduction training. It consists of both

self-paced lessons and instructor-presented phase lectures.

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

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

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

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

NIPR:

<https://vcepub.tecom.usmc.mil/sites/msc/magtftc/mawts1/departments1/ASD/AH-1%20Division.aspx> Click on Departments, ASD, AH-1 for general unclassified information.

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

2.8.2.6 Graduate Level Courses. There are 5 graduate level courses (FAC(A)I, NSFII, DACMI, NSI, WTI) that qualify instructors for specific portions of the T&R syllabus. The requirements for these instructor certifications are contained in the MAWTS-1 Course Catalog.

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

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

## 2.9 EVENT REQUIREMENTS

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

2.9.1.1 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.

2.9.1.2 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).

2.9.1.3 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.

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

2.9.1.5 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.

2.9.1.6 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.

2.9.1.7 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.

2.9.1.8 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.

## 2.9.2 Event Header

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

2.9.2.2 Refly Factor. Refly (proficiency interval) factors reflect the

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

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

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

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

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

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

Symbol	Device
A	Event performed in aircraft
S	Event performed in simulator or a simulated practical application
A/S	Event performed in aircraft preferred/simulator optional
S/A	Event performed in simulator preferred/aircraft optional
TEN	Tactical Environment Network
TEN +	Tactical Environment Network and at least one networked, man-in-the-loop simulator

2.9.2.6.1 Tactical Environment Network (TEN) simulator requirements are

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

### 2.9.3 Event Body

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

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

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

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

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

devoid of procedural error at a level acceptable to warrant progress into the next stage of training.

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

#### 2.9.3.2.1 Grading Standards

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

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

2.9.3.2.1.3 Requires Additional Training (RAT). A RAT is used when the PUI has not yet demonstrated sufficient grasp of the required skills and concepts to progress in the syllabus. A RAT is not derogatory in nature. Instructor remediation recommendations should specifically identify the deficient

area(s) for addressing shortcomings in terms of reading assignments, courseware, additional flight, simulator, or other appropriate training. The instructor assigning a R.A.T. synopsis is responsible for ensuring the recommendation has been endorsed by Squadron leadership and adhered to by the student unless a higher authority intervenes with additional guidance. A RAT shall not be used for E coded events.

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

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

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

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

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

2.10.1 Purpose. To develop a Core Skill Introduction complete copilot. These academics facilitate understanding of basic functions/operations in the AH-1Z and ensure individuals possess the requisite knowledge to be designated Pilot Qualified in Model (PQM), NATOPS qualified and rates the 7513/7565 MOS as specified in CCX-1901.

### 2.10.2 General

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

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

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

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

2.11 CORE SKILL INTRODUCTION PHASE (1000)

2.11.1 Purpose. To develop a Core Skill Introduction complete pilot with the airmanship, CRM, and systems and procedural knowledge to act as PIC of a single aircraft or as wingman, under IFR or VFR, and in familiar and unfamiliar airspace/airports. Additionally, to prepare the PUI for follow on Core Skill Phase training. At the completion of this phase the PUI will be

designated Pilot Qualified in Model (PQM), NATOPS qualified, and rate the 7513/7565 MOS as specified in CSIX-1901.

2.11.2 General. Completion of this phase meets the requirements for the PUI to be designated a PQM. At the discretion of the commanding officer, a letter designating the PUI as PQM shall be placed in the NATOPS jacket. A tracking code of DESG-6300 shall be logged. **The AH-1Z Model Manager shall be responsible for Core Skills 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.

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

CORE SKILL INTRODUCTION PHASE	
PAR NO.	STAGE NAME
2.11.3	Familiarization (FAM)
2.11.4	Instrument (INST)



Performance Standards

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

PUI shall demonstrate basic knowledge of ADB and maintenance functions.

PUI shall demonstrate a basic knowledge of preflight and postflight inspection checklist IAW AH-1Z NATOPS.

Prerequisites. ACAD-1000 through 1003

Crew. FRSI/PUI

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FAM-1101 0.0 \* R, SC, MR D A STATIC 1 AH-1Z

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Goal. Review preflight and postflight familiarization and responsibilities.

Requirements

Discuss

Use of performance charts  
Height/Velocitv diagram

Review

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

Performance Standards

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

PUI shall screen and understand the function of the ADB.

PUI shall conduct aircraft preflight and postflight inspections and identify key components IAW AH-1Z NATOPS.

Prerequisite. FAM-1100

Crew. FRSI/PUI

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SFAM-1102 1.5 \* R, SC, MR D FFS/FTD S-TEN 1 AH-1Z

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Goal. RS - Introduce NATOPS checklists and ground procedures.

Requirements

Discuss

All demonstrate and introduce maneuvers  
Auxiliary Power Unit  
Warning, caution and advisory system  
Associated NATOPS emergencies, limitations, servicing, checklist and FCF procedures  
PBA functionality  
HOCAS switchology and function



Course rules/area FAM  
Autorotational characteristics at altitude

Introduce

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

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.  
PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas and one route.  
PUI shall modify the mission list in the aircraft.  
PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. FAM-1101, SFAM-1102

Crew. FRSI/PUI

SFAM-1104 1.5 \* R, SC, MR D FFS/FTD S-TEN 1 AH-1Z

Goal. FS - Introduce familiarization maneuvers.

Requirements

Discuss

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

Demonstrate

Mission brief

Introduce

Maximum power takeoff  
Confined/unimproved area takeoff  
Confined area landings  
High Speed Approach and Landing  
Waveoff procedures  
20 to 30 degree dives  
High angle of bank  
Reduced Visibility Landing (RVL) and approach profile  
Power limited takeoff

Review

Start checklist  
Shutdown checklist

Normal takeoff  
Normal approach  
No hover takeoff  
No hover landings  
Precision (steep) approach  
Sliding landings

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.  
PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas and one route.  
PUI shall complete an accurate weight and power computation for given conditions.  
PUI will conduct a normal start from the front seat.

Prerequisites. NAV-1500, INST-1202

Crew. CSI OR FRSI/PUI

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FAM-1105	2.0	*	R, SC, MR	D	A	1 AH-1Z
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Goal. FS - Introduce basic familiarization maneuvers.

Requirements

Discuss

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

Demonstrate

Mission brief  
Pattern autorotations

Introduce

Maximum power takeoff  
High Speed Approach and Landing  
Slope landing and takeoff  
20 to 30 degree dives  
Waveoff procedures  
High angle of bank

Review

Start checklist  
Shutdown checklist  
Low work  
Normal takeoff  
Normal approach  
No hover takeoff  
No hover landings

Precision (steep) approach  
Sliding landings  
Reduced Visibility Landing (RVL) and approach profile  
Power limited takeoff

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.  
PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas and one route.  
PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. SFAM-1104

Crew. FRSI/PUI

SFAM-1106    1.5    \*            R, SC, MR            D                            FFS/FTD S-TEN    1    AH-1Z

Goal. FS - Introduce emergency maneuvers.

Requirements

Discuss

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

Demonstrate

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

Introduce

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

Performance Standards

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

Prerequisites. FAM-1105

Crew. CSI OR FRSI/PUI

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SFAM-1107 1.5 \* R, SC, MR D FFS/FTD S-TEN 1 AH-1Z

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Goal. FS - Introduce emergency procedures and CRM.

Requirements

Discuss

15 minutes of the discussion is for the PUI to give an abbreviated NATOPS and detailed crew brief to the co-pilot. Use remaining 15 minutes to cover the introduced emergencies and critique PUI's crew brief pertaining to emergencies and CRM.

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  
Single engine failure  
Rotor brake pressurized in flight  
Dual engine failure in a HIGE  
Dual engine failure in flight  
Dual engine failure at high power and airspeed  
Dual engine failure during takeoff  
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 AH-1Z NATOPS and MDG.  
PUI shall perform a minimum of five full autorotations.  
PUI shall act as PIC. Copilot that is 1104 complete is mandatory.  
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. SFAM-1106

Crew. CSI OR ANI/PUI/co-pilot (SFAM-1104 complete)

FAM-1108 2.0 \* R, SC, MR D A 1 AH-1Z

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

Requirements

Discuss

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

Introduce

Mission brief  
High altitude emergencies  
Pattern autorotations

Review

Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
Ppower limited takeoff  
No hover landings  
Precision (steep) approach  
Confined/unimproved area takeoff  
Confined/unimproved area landings  
High Speed Approach and Landing  
Sliding landings  
Slope landing and takeoff  
Waveoff procedures  
20 to 30 degree dives  
DECU lockout  
High speed low level autorotation  
Collective control interference  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

PUI shall perform a mission brief.  
PUI shall conduct all procedures and maneuvers IAW the AH-1Z NATOPS  
and MDG.  
PUI shall load a mission card with radio presets, a mission list,  
editable waypoints for local course rules, non-editable waypoints  
as appropriate and a vector overlay of appropriate local ranges  
or other restricted areas.  
PUI shall complete an accurate weight and power computation for  
given conditions.

Prerequisites. SFAM-1106

Crew. FRSI/PUI

FAM-1109 2.0 \* D A 1 AH-1Z

Goal. RS - Review Familiarization maneuvers.

Requirements

Discuss

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

Demonstrate

Reduced Visibility Landings (RVLs)

Review

Mission brief  
Low work  
Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
Power limited takeoff  
No hover landings  
Precision (steep) approach  
Confined/unimproved area takeoff  
Confined/unimproved area landings  
High Speed Approach and Landing  
Sliding landings  
Slope landing and takeoff  
Waveoff procedures  
20 to 30 degree dives

Performance Standards

PUI shall perform a mission brief.  
PUI shall conduct all procedures and maneuvers IAW the AH-1Z NATOPS  
and MDG.  
PUI shall load a mission card with radio presets, a mission list,  
editable waypoints for local course rules, non-editable waypoints  
as appropriate and a vector overlay of appropriate local ranges  
or other restricted areas.  
PUI shall complete an accurate weight and power computation for  
given conditions.

Prerequisites. SFAM-1107, FAM-1108

Crew. FRSI/PUI

SFAM-1110 1.5 \* D FFS/FTD S-TEN 1 AH-1Z

Goal. RS - Review emergency procedures and CRM.

Requirements

Discuss

All demonstrate and introduce maneuvers

Introduce

Autorotations to a spot

Review

Mission brief  
Waveoff procedures  
DECU lockout  
Hovering autorotations  
Taxiing autorotations  
Single engine flight characteristics at altitude  
Full autorotations  
High altitude emergencies  
Straight-in autorotation  
90 degree autorotation  
180 degree autorotation  
High speed low level autorotation  
Collective control interference  
Loss of tail rotor thrust/components in flight  
Loss of tail rotor thrust/components in hover  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

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

Prerequisites. FAM-1109

Crew. CSI OR FRSI/PUI

SFAM-1111 1.5 \* D FFS/FTD S-TEN 1 AH-1Z

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Goal. RS - Review emergency procedures and CRM.

Requirements

Discuss

20 minutes of discussion time is for the NATOPS and crew brief.  
Use remaining 10 minutes to cover reviewed emergencies.  
CRM during emergency procedures

Review

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
- Single engine failure
- Rotor brake pressurized in flight
- Dual engine failure in a HIGE
- Dual engine failure in flight
- Dual engine failure at high power and airspeed
- Dual engine failure during takeoff
- Engine driven suction pump failure
- Complete electrical failure

Performance Standards

First half of sortie is scenario based, covering previously introduced emergencies and maneuvers. PUI shall receive scenario assignment with published flight schedule and conduct NATOPS and crew briefs to co-pilot. PUI shall act as PIC. An 1104 complete copilot is mandatory.

Current scenarios in use shall be published in the FRS Course Catalog.

Second half of sortie is not scenario based and shall be used to review EPs.

PUI shall conduct all procedures and maneuvers IAW the AH- 1Z NATOPS and MDG.

PUI shall perform a minimum of five full autorotations.

Prerequisites. SFAM-1110

Crew. CSI or ASI/PUI/co-pilot (1104 complete)

FAM-1112	2.0	*	D	A	1 AH-1Z
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Goal. OS - Review emergency procedures and familiarization maneuvers.

Requirements

Discuss

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

Review

- Mission brief
- Normal takeoff
- Normal approach
- No hover takeoff
- Maximum power takeoff
- Power limited takeoff
- No hover landings
- Precision (steep) approach
- Confined/unimproved area takeoff
- Confined/unimproved area landings
- High Speed Approach and Landing
- Sliding landings

Waveoff procedures  
20 to 30 degree dives  
DECU lockout  
High altitude emergencies  
Pattern autorotations  
High speed low level autorotation  
Collective control interference  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

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

Prerequisites. SFAM-1110

Crew. FRSI/PUI

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FAM-1113    2.0    \*    R, SC    D    A    1 AH-1Z

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Goal. RS - Review emergency and familiarization maneuvers.

Requirements

Discuss

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

Review

Mission brief  
Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
Power limited takeoff  
No hover landings  
Precision (steep) approach  
Confined/unimproved area takeoff  
Confined/unimproved area landings  
High Speed Approach and Landing  
Sliding landings  
Waveoff procedures  
20 to 30 degree dives  
DECU lockout  
High altitude emergencies  
Pattern autorotations  
High speed low level autorotation  
Collective control interference  
Fixed pitch tail rotor malfunctions  
SCAS failure

Single Engine Failure

Performance Standards

PUI shall perform a mission brief.

PUI shall conduct all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.

PUI shall load a mission card with radio presets, a mission list, editable waypoints for local course rules, non-editable waypoints as appropriate and a vector overlay of appropriate local ranges or other restricted areas.

Prerequisites. FAM-1112

Crew. ANI/PUI

SFAM-1114 1.5 \* R, SC, MR D E FFS/FTD S-TEN 1 AH-1Z

Goal. RS - Emergency procedures and CRM evaluation.

Requirements

Discuss

20 minutes of discussion time is for the NATOPS and crew brief. Use remaining 10 minutes to cover emergency procedures review. Any previously introduced NATOPS/MDG system, emergency, limitation, procedure or checklist

Review

Aircraft emergencies with emphasis on causes indications, and procedures to recover aircraft and CRM  
Engine hot start  
Emergency shutdown  
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  
Single engine failure  
Rotor brake pressurized in flight  
Dual engine failure in a HIGE  
Dual engine failure in flight  
Dual engine failure at high power and airspeed  
Dual engine failure during takeoff  
Engine driven suction pump failure  
Complete electrical failure

Performance Standards

First half of sortie is scenario based, covering previously introduced emergencies. PUI shall receive scenario assignment with published flight schedule and conduct NATOPS and crew briefs to copilot. PUI shall act as PIC. An 1104 complete co-pilot is mandatory.

Current scenarios in use shall be published in the FRS Course Catalog.

Second half of sortie is not scenario based and shall be used to review EPs.

PUI shall conduct all procedures and maneuvers IAW the AH- 1Z NATOPS and MDG.

Prerequisites. SFAM-1111

Crew. CSI OR ASI/PUI/co-pilot (1104 complete)

FAM-1115    2.0    \*        R,SC,MR        D        E        A        1 AH-1Z

Goal. RS - Evaluate Familiarization maneuvers.

Requirements

Discuss

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

Review

Mission brief  
Course rules  
Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
Power limited takeoff  
No hover landings  
Precision (steep) approach  
Confined/unimproved area takeoff  
Confined/unimproved area landings  
High Speed Approach and Landing  
Sliding landings  
Waveoff procedures  
20 to 30 degree dives  
DECU lockout  
High altitude emergencies  
Pattern autorotations  
High speed low level autorotation  
Collective control interference  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

PUI shall act as PIC and demonstrate the CRM, systems and procedural knowledge, and stage specific flight skills to safely execute all FAM stage maneuvers and handle simulated emergencies IAW the AH-1Z NATOPS and MDG. IP shall act as peer-level co-pilot. PUI shall plan, brief, and lead the flight based on an assigned mission profile and IP planning guidance.

As the local flying area allows, mission profile should include operations at the departure airfield, at local training facilities and OLFs while incorporating local course rules.

PUI shall demonstrate a detailed understanding and functional

knowledge of all procedures, emergencies, systems and maneuvers  
IAW AH-1Z NATOPS and MDG.

Prerequisites. FAM-1113, SFAM-1114

Crew. ANI/PUI.

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SFAM-1116 1.5 \* R, SC, MR NS FFS/FTD S-TEN 1 AH-1Z

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Goal. FS - Introduce NVD Familiarization maneuvers during HLL.

Requirements

Discuss

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

Demonstrate

NVD portion of NATOPS brief

Introduce

Low work  
Normal takeoff  
Normal approach  
No hover takeoff  
Maximum power takeoff  
Power limited takeoff  
No hover landings  
Precision (steep) approach  
Confined/unimproved area takeoff  
Confined/unimproved area landings  
High Speed Approach and Landing  
Sliding landings  
Slope landing and takeoff  
Waveoff procedures  
20 to 30 degree dives

Performance Standards

PUI shall conduct all procedures and maneuvers IAW the AH-1Z NATOPS,  
MDG and NVD manual.

PUI shall load a mission card with radio presets, a mission list,  
editable waypoints for local course rules, non-editable waypoints  
as appropriate and a vector overlay of appropriate local ranges  
or other restricted areas.

Prerequisites. ACAD-1011, FAM-1115

Crew. CSI OR NSFPI/PUI

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SFAM-1117 1.5 \* NS FFS/FTD S-TEN 1 AH-1Z

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Goal. RS - Introduce NVD emergency maneuvers during HLL.

Requirement

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  
Collective control interference  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

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

Prerequisites. SFAM-1116

Crew. CSI OR NSFI/PUI

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FAM-1118	2.0	*	NS	A	1 AH-1Z
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Goal. FS - Review NVD Familiarization maneuvers during HLL.

Requirements

Discuss

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

Demonstrate

NVD portion of NATOPS brief

Review

Low work  
Normal takeoff



Power limited takeoff  
No hover landings  
Precision (steep) approach  
Confined/unimproved area takeoff  
Confined/unimproved area landings  
High Speed Approach and Landing  
Sliding landings  
Slope landing and takeoff  
Waveoff procedures  
20 to 30 degree dives  
High altitude emergencies  
Pattern autorotations  
High speed low level autorotation  
Collective control interference  
Fixed pitch tail rotor malfunctions  
SCAS failure  
Single Engine Failure

Performance Standards

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

Prerequisites. FAM-1118

Crew. NSFI/PUI

2.11.4 Instruments (INST)

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

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

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

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

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

SINST-1200 1.5 \* (N\*) FFS/FTD S-TEN 1 AH-1Z

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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 AH-1Z NATOPS and MDG.

Prerequisites. ACAD-1007, FAM-1103

Crew. CSI OR FRSI/PUI

SINST-1201 1.5 \* R, SC, MR (N\*) FFS/FTD S-TEN 1 AH-1Z

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

Requirements

Discuss

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

Introduce

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

Review

Instrument flight checklist



PUI to conduct procedures and maneuvers IAW the AH-1Z NATOPS and MDG.

PUI shall load a mission card with appropriate instrument fixes/ATC reporting points as waypoints, a vector overlay indicating final approach course, and appropriate ATC frequencies.

Prerequisites. SINST-1201

Crew. CSI OR FRSI/PUI

INST-1203 2.0 \* (N\*) A 1 AH-1Z

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Goal. FS - Introduce instrument flight navigation procedures.

Requirements

Discuss

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

Introduce

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

Review

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

Performance Standards

PUI to conduct procedures and maneuvers IAW the AH-1Z NATOPS and MDG.

PUI shall load a mission card with appropriate instrument fixes/ATC reporting points as waypoints, a vector overlay indicating final approach course, and appropriate ATC frequencies.

PUI shall file the DD-175 via on-line services.

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

Prerequisites. FAM-1115

Crew. FRSI/PUI

INST-1204 2.0 \* R, SC, MR (N\*) A 1 AH-1Z

Goal. OS - Review instrument flight navigation procedures.

Requirements

Discuss

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

Review

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

Performance Standards

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

Prerequisites. INST-1203

Crew. FRSI/PUI

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

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

Requirements

Discuss

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

Review

- Emergencies ASAPractical
- Emergencies ASAPossible
- Instrument autorotation
- Standard Instrument Departures (SIDs)
- TACAN procedures
- Airway navigation
- TACAN approaches
- Precision Approach (PAR)
- Airport Surveillance Radar (ASR)
- No-Gyro approach
- Missed approach
- Use of AFCS in instrument flight

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, AH-1Z NATOPS, MDG, OPNAV 3710 and IFM

Sortie is scenario based. PUI shall receive scenario assignment with the published flight schedule, and conduct NATOPS and crew brief to co-pilot. PUI shall act as PIC and demonstrate the CRM, systems and procedural knowledge, and stage specific flight skills to safely conduct the flight under IFR and IMC. An 1105 complete copilot is mandatory.

Current scenarios in use will be in accordance with the HMLAT-303 Course Catalog.

CSI or ASI will simulate all ATC communications.

PUI shall conduct a minimum of two approaches.

Prerequisites. INST-1204

Crew. CSI or ASI(IFBM as required)/PUI/co-pilot (FAM-1105 complete)

2.11.5 Formation (FORM)

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

2.11.5.2 General. At the completion of this stage, the PUI will be proficient at formation takeoffs and landings, rendezvous, parade, cruise, combat cruise, combat spread, lead change, ASTACSOP formation procedures and all formation maneuvers listed in the AH-1Z NATOPS and MDG.

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

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

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

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

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Goal. OS - Introduce formation flight.

Requirements

Discuss

All demonstrate and introduce maneuvers  
CRM during form flight  
Form Maneuver Card  
ASTACSOP items  
Radius of turn

Introduce

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

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS, ASTACSOP, and MDG.

PUI shall load a mission card with a vector overlay of a formation working area and a data frame of the formation sequence.

Prerequisites. ACAD-1008, SINST-1205

Crew. CSI OR FRSI/PUI

FORM-1301 2.0 \* R,MR D A 1 AH-1Z & 1 AH-1

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

Requirements

Discuss

All demonstrate and introduce maneuvers  
CRM during form flight

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

Demonstrate

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

Review

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

Performance Standards

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

Prerequisites. SFORM-1300

Crew. FRSI/PUI

SFORM-1302 2.0 \* D A/S 1 AH-1Z & 2+ H-1

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

Requirements

Discuss

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

Demonstrate

Tactical formation maneuvers

Introduce

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

Performance Standards

PUI shall conduct all procedures and maneuvers IAW the AH-1Z NATOPS, ASTACSOP, and MDG.

PUI shall load a mission card with a vector overlay of a formation working area and a data frame of the formation sequence.

PUI shall perform all maneuvers in a position other than division lead.

Prerequisites. FORM-1301

Crew. CSI or FRSI/PUI

FORM-1303 1.5 \* R,MR NS A 1 AH-1Z & 1 AH-1

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

Requirements

Discuss

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

Demonstrate

- Tactical formation maneuvers
- Aircraft lighting configurations

Introduce

- Parade flight
- Cruise flight
- Parade turns
- Crossovers
- Breakup and rendezvous
- Cruise turns
- Formation landing
- Formation takeoff
- Wingman awareness
- Lead change



PUI shall demonstrate a detailed understanding and functional knowledge of all formation procedures IAW the AH-1Z NATOPS and MDG.

PUI shall load a mission card with a vector overlay of a formation working area and a data frame of the formation sequence.

PUI shall perform all MDG formation maneuvers as lead and wingman. IP will conduct jacket review.

Prerequisites. FORM-1302, 1303

Crew. ASI/PUI

#### 2.11.6 Terrain Flight (TERF)

2.11.6.1 Purpose. To introduce low level, contour and NOE modes of TERF flight and develop proficiency in the application of TERF. To develop the PUI's stage specific flight skills, systems and procedural knowledge, and CRM and prepare the PUI for Core Skill Phase TERF training.

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

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

Ground/Academic Training. TERF stage lecture and ICW.

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

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TERF-1400	2.0	*	R, SC, MR	D	A	1 AH-1Z & 1 H-1
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Goal. FS - Introduce TERF maneuvers and navigation

#### Requirements

##### Discuss

All demonstrate and introduce maneuvers

##### Demonstrate

TERF portion of NATOPS brief  
Loss of tail rotor effectiveness

##### Introduce

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

Review

Confined/unimproved area landings  
Power limited takeoff  
High Speed Approach and Landing  
Collective control interference  
Fixed pitch tail rotor malfunctions  
High altitude emergencies  
Additional FAM sustainment as required

Performance Standards

PUI shall have a working knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.  
Plan and navigate a route in NOE flight of 4 checkpoints utilizing the 1:50,000 scale map.  
PUI shall load a mission card with a mission list, a serpentine route of a selected TERF route, a vector overlay of the route, and set up terrain banding.  
PUI shall complete an accurate weight and power computation for given conditions.

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

External Syllabus Support. Authorized TERF area

Crew. FRSI/PUI

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TERF-1401 2.0 \* NS A 1 AH-1Z & 1 H-1

Goal. FS - Introduce NVD TERF maneuvers and navigation.

Requirements

Discuss

All demonstrate and introduce maneuvers  
NVD considerations in the TERF environment

Demonstrate

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

Introduce

Low level flight  
Contour flight  
Nap of Earth (NOE)  
Power checks  
NOE takeoff  
NOE approach  
NOE High Speed Approach and Landing  
Masking and unmasking  
Bunt  
Roll  
Turns  
TERF navigation

Review

Confined/unimproved area landings

High Speed Approach and Landing  
Collective control interference  
Fixed pitch tail rotor malfunctions  
Additional FAM sustainment as required

Performance Standards

PUI shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS, MDG and NVD manual.

Plan and navigate a route in NOE flight of 4 checkpoints utilizing the 1:50,000 scale map.

PUI shall load a mission card with a mission list, a serpentine route of a selected TERF route, a vector overlay of the route, and set up terrain banding.

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

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

Prerequisite. FAM-1118, TERF-1400 (FORM-1303~Section)

External Syllabus Support. Authorized TERF area

Crew. NSFI/PUI

2.11.7 Navigation (NAV)

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

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

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

Ground/Academic Training. NAV stage lecture, ICW.

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

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

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

Requirements

Discuss

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

Demonstrate

STATUS page operation

Introduce

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

Performance Standards

PUI will have a detailed understanding and functional knowledge of the DMS IAW the AH-1Z NATOPS.

PUI shall load a mission card with communications including a mission list, a route, editable and non-editable waypoints, targets and a vector overlay.

PUI will create a route using the MAN and AUTO build functions.

Prerequisites. FAM-1103

Crew. FRSI/PUI or CSI/PUI

NAV-1501 0.0 \* SC (N) A/S 1 STATIC AH-1Z

Goal. OS - Introduce the TSS.

Requirements

Discuss

All demonstrate and introduce maneuvers  
TSS components  
TSS track modes (AA,AG,UR)  
TSS LASER modes (T,S)  
TSS LST/IR AD functionality and setup  
TSS environmental considerations  
Non-uniformity correction (NUC) procedures

Introduce

TSS boresight  
TSS page operation  
TSS Mission grip functionality  
VTR functionality  
Storing a waypoint/target using the TSS

Performance Standards

PUI shall have a detailed understanding and functional knowledge of the TSS IAW AH-1Z NATOPS

Prerequisites. FAM-1103

Crew. FRSI/PUI or CSI/PUI

SNAV-1502 1.5 \* R,SC,MR D FFS/FTD S-TEN 1 AH-1Z



Review

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

Performance Standards

- PUI will have a detailed understanding and functional knowledge of the DMS and TSS IAW the AH-1Z NATOPS and NTPP.
- 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 (20 NM minimum) using a JOG (Air).
- PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. NAV-1502

External Syllabus Support. Authorized TERF area

Crew. FRSI/PUI

NAV-1504	2.0	*	NS	A	1 AH-1Z
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Goal. OS - Introduce NVD navigation.

Requirements

Discuss

- Night navigation considerations
- Route briefing techniques

Review

- Mission card loading
- MAP page orientation
- Storing waypoints or targets
- Direct-To function
- Checkpoint identification using the TSS
- Overlay creation and selection
- Terrain banding
- AUTO and MAN route builds

EGI needle utilization  
PTA, ETA and CGS  
High Speed Approach and Landing  
Pattern autorotations  
Fixed pitch tail rotor malfunctions  
Additional FAM sustainment as required

Performance Standards

PUI will have a detailed understanding and functional knowledge of the DMS and TSS IAW the AH-1Z NATOPS and NTTP.

PUI shall load a mission card consisting of both editable and non-editable waypoints, communication load, mission list and one route.

PUI will adjust at minimum two route points in MAN build and two route points in AUTO build.

PUI will use the mission card STORE function and conduct post flight debrief with new and adjusted routes.

Plan and navigate a route in low level and contour flight of at least 5 checkpoints (20 NM minimum) using a JOG (Air)

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

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

Prerequisites. FAM-1118, NAV-1503

Crew. NSFI/PUI

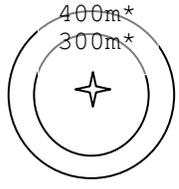
2.11.8 Specific Weapons Delivery (SWD)

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

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

The SWD stage shall focus on teaching the PUI proper weapons delivery switchology, techniques, and flight profiles. At the completion of the stage, the PUI should be able to perform prescribed weapons delivery demonstrating correct switchology and release profiles. SWD should be conducted on rated/scored ranges whenever possible. Focus should be on weapons delivery profiles and ordnance accuracy, not tactical scenarios. VTR debrief should be used to the maximum extent possible.

IPs shall evaluate ordnance effectiveness based on the following accuracy metrics.

CORE SKILL INTRODUCTION	ROCKET STANDARD	GUN STANDARD	PURPOSE
 <p>*Radius</p>	<p>-In correct profile per NTTP</p> <p>-No miss greater than 400 meters</p> <p>-CE90&lt;300 meters**</p>	<p>-On target within 5 seconds of trigger pull</p>	<p>-Based upon rocket Min Safe Distances (MSDs)***</p> <p>-Qualifies PUI to deliver rockets during CAS training events</p>

\*\* CE90 example: SWD-1605 requires (7) 2.75" rockets. CE90<300 meters requires that 90% of the delivered rockets impact within 200 meters of the target. In order to calculate, simply disregard the worst 10% of rockets released and the remaining farthest SINGLE MISS DISTANCE = CE90. Conservative rounding is applied.

Examples:

- 3-10 rockets released ~ disregard one rocket, SECOND FARTHEST MISS = CE90
- 11-20 rockets released ~ disregard two rockets, THIRD FARTHEST MISS = CE90
- In no case can a single rocket miss the intended target by more than 400m, including the omitted rounds for CE90 calculation.

\*\*\* Minimum Safe Distances (MSDs) are based upon ALSA assumptions, which consider (among other factors) warhead fragmentation patterns and delivery accuracy. HE rocket delivery profiles outside of the NTTP Weapons Release Envelope will invalidate the MSDs listed in JFIRE, and will increase risk to ground personnel during CAS training events.

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

Ground/Academic Training. SWD stage lecture, ICW complete.

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

SSWD-1600 1.5 \* D FFS/FTD S-TEN 1 AH-1Z

Goal. RS - Introduce ordnance checklists, weapons systems and setup and 20mm employment.

Requirements

Discuss

- All demonstrate and introduce maneuvers
- CRM during ordnance delivery
- Visual/Contact/Tally

Introduce

- Ordnance checklists
- TSS offset function
- TSS aim point adjust
- Laser system function
- TSS prepoint

WPN page setup  
TSS Guns  
Fixed Guns  
HMSD Guns

Review

TSS track modes  
VTR usage  
Target grid entry  
MAP page setup  
TSS and NAV system integration

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the AH-1Z NATOPS, MDG, NTPP, ASTACSOP, and NTRP.  
PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan and distances from target, and weapons setup.  
PUI shall set the mission card to turn on contour lines.  
PUI will utilize TSS LASER and TSS STOR to store a minimum of two different target sets.  
PUI will employ the 20mm system in fixed forward, TSS guns, and HMSD guns against applicable target sets.  
RAC PUIs shall perform a minimum of two full autorotations for FAM sustainment.

Prerequisites. ACAD-1013, SINST-1205, NAV-1500 and 1501

Crew. CSI OR FRSI/PUI

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SSWD-1601 1.5 \* SC D FFS/FTD S-TEN 1 AH-1Z

Goal. OS - Introduce PGM employment. Review ordnance checklists, weapons systems and setup and 20mm employment.

Requirements

Discuss

All demonstrate and introduce maneuvers  
CRM during ordnance delivery  
Weapons delivery profiles

Introduce

ASTACSOP PGM comm procedures  
Weapons emergencies  
Autonomous Hellfire employment  
Remote designator Hellfire employment

Review

Ordnance checklists  
TSS switchology and employment  
TSS Guns  
Fixed Guns  
HMSD Guns

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the AH-1Z NATOPS, MDG, NTTP, ASTACSOP and NTRP.  
PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan and distances from target, and weapons setup.  
PUI shall set the mission card to turn on contour lines  
PUI will employ the 20mm system in fixed forward, TSS guns, and HMSD guns against applicable target sets.  
PUI will employ PGMs in autonomous LOBL and LOAL modes of operation to include Laser system operation and HMSD integration.  
RAC PUIs shall perform a minimum of two full autorotations for FAM sustainment.

Prerequisites. SSWD-1600

Crew. CSI OR FRSI/PUI

SSWD-1602 1.5 \* D FFS/FTD S-TEN 1 AH-1Z

Goal. OS - Introduce rocket employment. Review ordnance checklists, weapons systems, setup and 20mm employment.

Requirements

Discuss

All demonstrate and introduce maneuvers  
CRM during ordnance delivery  
HMSD boresight, symbology, integration  
Weapons delivery profiles

Introduce

Ordnance comm procedures  
Weapons emergencies  
CCRP rocket delivery  
CCIP rocket delivery

Review

Ordnance checklists  
TSS switchology and employment  
TSS Guns  
Fixed Guns  
HMSD Guns

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the AH-1Z NATOPS, MDG, NTTP, ASTACSOP, and NTRP.  
PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan and distances from target, and weapons setup.  
PUI shall set the mission card to turn on contour lines.  
PUI will employ the 20mm system in fixed forward, TSS guns, and HMSD guns against applicable target sets.  
PUI will employ rockets in CCRP-M, CCRP-A, and CCIP modes of operation using manual, LASER and geo ranging.  
PUI will employ PGMs in autonomous LOBL and LOAL modes of operation

to include LASER system operation and HMSD integration.  
RAC PUIs shall perform a minimum of two full autorotations for FAM sustainment.

Prerequisites. SSWD-1600

Crew. CSI OR FRSI/PUI

SSWD-1603 1.5 \* R, SC D FFS/FTD S-TEN 1 AH-1Z

Goal. OS - Review ordnance checklists, weapons systems and setup and 20mm, PGM and rocket employment.

Requirements

Discuss

CRM during ordnance delivery

Review

Ordnance checklists  
TSS switchology and employment  
20mm delivery  
CCIP rocket delivery  
CCRP rocket delivery  
Hellfire employment

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the AH-1Z NATOPS, MDG, NTTP, ASTACSOP, and NTRP.  
PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan and distances from target, and weapons setup.  
PUI shall set the mission card to turn on contour lines.  
PUI will employ the 20mm system in fixed forward, TSS guns, and HMSD guns against applicable target sets.  
PUI will employ rockets in CCRP-M, CCRP-A, and CCIP modes of operation using manual, LASER and geo ranging.  
RAC PUIs shall perform a minimum of two full autorotations for FAM sustainment.

Prerequisites. SSWD-1602

Crew. CSI or FRSI/PUI

SWD-1604 1.5 \* D A 1 AH-1Z

Goal. OS - Introduce ordnance checklists, weapons systems and setup and 20mm, PGM and rocket employment in the aircraft.

Requirements

Discuss

All demonstrate and introduce maneuvers  
CRM during ordnance delivery  
Aircraft weapon system components (to include LAADS, SSE, SSC, ISMS, and mission computers)

HMSD boresight, symbology, integration  
Unguided weapons delivery ballistics  
Unguided weapons employment  
Visual/Contact/Tally  
Weapons accuracy standards  
ASTACSOP arming procedures  
CALA and airfield ordnance operations  
Radius of turn (g-loading)  
20mm system  
All 20mm types  
20mm, 2.75" MSD Numbers  
20mm modes and procedures  
Weapons emergencies  
Jettison procedures

Introduce

Weapons preflight  
Range operations  
Ordnance comm procedures  
Simulated Hellfire employment  
CCRP rocket delivery  
CCIP rocket delivery  
TSS Guns  
Fixed Guns  
HMSD Guns

Review

ASTACSOP RIO  
Ordnance checklists  
TSS switchology and employment

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the AH-1Z NATOPS, MDG, NTPP, ASTACSOP, and NTRP.  
PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan and distances from target, and weapons setup.  
PUI will employ the 20mm system in fixed forward, TSS guns, and HMSD guns against applicable target sets.  
PUI will employ rockets in CCRP and CCIP modes of operation using manual, LASER and geo ranging.  
PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. FORM-1301, TERF-1400, SNAV-1502, SSWD-1602

Ordnance. (1) captive PGM, (7) 2.75" rockets, (300) rounds 20mm

External Syllabus Support. Live fire LASER safe range (raked /scored range if available)

Crew. FRSI/PUI

SWD-1605    1.5    \*    R, SC, MR    D    E    A    1 AH-1Z

Goal. OS - Evaluate ordnance checklists, weapons systems and setup and

20mm, PGM and rocket employment in the aircraft.

Requirements

Discuss

Rocket pods  
All 2.75" rocket motors, fuses, warheads  
Rocket delivery modes and procedures  
Hellfire systems  
All Hellfire types  
Hellfire LASER safety considerations  
Hellfire delivery modes and procedures

Review

ASTACSOP RIO  
Weapons preflight  
TSS switchology and employment  
Range operations  
Ordnance comm procedures  
Simulated Hellfire employment  
CCRP rocket delivery  
CCIP rocket delivery  
20mm delivery  
EW page setup  
ASE operation

Performance Standards

PUI shall have a detailed understanding and functional knowledge of weapons systems and checklists IAW the AH-1Z NATOPS, MDG, NTTP, ASTACSOP, and NTRP  
PUI shall load a mission card with ingress and egress routes, vector overlay of the objective area to include range fan and distances from target, and weapons setup  
PUI will employ rockets in CCRP and CCIP modes of operation using manual, LASER and geo ranging.  
PUI shall complete an accurate weight and power computation for given conditions.

Prerequisites. SSWD-1603, SWD-1604, TCT-1700

Ordnance. (1) captive PGM, (7) 2.75" rockets, (300) rounds 20mm.

External Syllabus Support. Live fire LASER safe range (raked/scored range if available)

Crew. FRSI/PUI

2.11.9 Threat Counter-Tactics (TCT)

2.11.9.1 Purpose. To introduce offensive/defensive electronic and infrared countermeasures, and Aircraft Survivability Equipment (ASE).

2.11.9.2 General. At the completion of this stage, the PUI will be proficient at setup and operation of all aircraft survivability equipment and be exposed to threat indications and ASTACSOP threat reactions.

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

Ground/Academic Training. N/A

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STCT-1700 1.5 \* SC D FFS/FTD S-TEN 1 AH-1Z

Goal. RS - Introduce ASE functionality and operations.

Requirements

Discuss

ASE suite operation (NATOPS checklists, visual displays and audio messages for power on and BIT).

JMPS threat database

Expendables

Nomenclature (training and tactical)

General purpose / applicable threat types

AAR-47 and APR-39

General purpose / applicable threat types

Displays, controls, detectors and other components

Visual and audio threat information

Automatic and manual threat reaction capabilities & operation

APR-39, AAR-47, and ALE-47 integration

AAR-47 operating environment & principles of operation

Software - version reporting & significance

ALE-47

General purpose

Controls, displays and other components

System modes of operation

BIT, maintenance BIT and failure messages

MAG ID setting, reporting and implications

Dispense switch function

Demonstrate

RADAR search, acquire, track and launch visual and audio indications

Successful IR missile, RADAR missile and RADAR ADA engagement and indications

Automatically and manually dispense chaff to disrupt RADAR threat engagement

Automatically and manually dispense flares to disrupt IR missile engagement

Time permitting, execute ASTACSOP threat reactions

(communication, maneuvering, and expendables) to visually acquired non-RADAR ADA, RADAR ADA, RADAR SAMs and IR SAMs.

Introduce

ASE suite power on, BIT, settings and power off per NATOPS and TPG checklists  
ASE suite cockpit control switchology and related display information (EW page setup)  
Inventory reset  
Threat intervisibility

Performance Standards

Successfully operate (energize and BIT) and troubleshoot APR-39, AAR-47 and ALE-47 systems. Observe various threat system indications.  
PUI shall load a mission card with editable points from a local database and threats as directed by IP.  
PUI shall load a vector overlay with threat rings.

Prerequisites. ACAD-1012, SINST-1205

Crew. CSI or FRSI/PUI

2.11.10 Core Skill Introduction Check (CSIX)

2.11.10.1 Purpose. To review all areas of instruction, demonstrate proficiency and knowledge of all maneuvers to certify the PUI as PQM and Core Skill Introduction Phase complete.

2.11.10.2 General. The PUI will demonstrate proficiency through the Core Skill Introduction phase. Upon completion of the evaluation event, the PUI will be designated as PQM IAW AH-1Z NATOPS Chapter 5. CSIX-1900/1901 meets the qualifications for the 7513/7565 MOS and will serve as the initial NATOPS evaluation (NTPS-6101). The PUI shall have conducted at least 1.5 hours of FAM sustainment prior to the CSIX phase or the PUI shall be scheduled for a 1.5 hour FAM warmup prior to CSIX-1901.

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

Ground/Academic Training. N/A.

SCSIX-1900 1.5 \* D E FFS/FTD S-TEN 1 AH-1Z

Goal. RS - Emergency procedures and CRM evaluation.

Requirements

Discuss

30 minutes of discussion time is for the NATOPS and crew brief.

Review

NATOPS brief  
Hot Start  
Emergency shutdown  
Main drive shaft failure  
Loss of tail rotor thrust/components in a hover  
Loss of tail rotor thrust/components in flight  
Dual engine failure at high power and airspeed

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

Performance Standards

First half of sortie is scenario based using a ferry/cross country flight profile. PUI shall receive scenario assignment with the published flight schedule and conduct NATOPS and crew brief to co-pilot. PUI shall act as PIC. A NAV-1502 complete copilot is mandatory.

Current scenarios in use shall be published in the HMLAT-303 Course Catalog.

PUI shall conduct all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.

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

Prerequisites. All Core Skill Introduction Phase events complete except CSIX-1901

Crew. CSI OR ASI/PUI/co-pilot (NAV-1502 complete)

CSIX-1901	2.0	*	R, SC, MR	D	E	A	1 AH-1Z
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Goal. RS - Core Skill Introduction Check.

Requirements

Discuss

Responsibilities of the Pilot Qualified in Model (PQM) IAW OPNAV 3710.7

Any aircraft system, limit, EP or MDG maneuver

Review

FAM maneuvers  
IFR operations and procedures  
VFR operations and procedures  
Navigation  
Simulated emergencies  
Inflight contingencies

Performance Standards

PUI shall act as PIC and IP shall act as peer-level co-pilot. PUI shall plan, brief and lead the flight based on an assigned mission profile and IP guidance.

Mission profile shall focus on the tasks related to ferry/cross country flights and shall incorporate VFR and IFR components.

Mission profile should include operations at controlled and uncontrolled airports, and where possible, exposure to land as soon as possible and land as soon as practicable emergencies away from homefield.

PUI shall demonstrate a detailed understanding and functional knowledge of any previously introduced procedure, emergency, system, and maneuver IAW the AH-1Z NATOPS and MDG.

PUI shall demonstrate the ability to safely execute any previously introduced procedure, maneuver, or emergency.

PUI shall complete an accurate weight and power computation for

given conditions.

Prerequisites. SCSIX-1900.

Crew. ASI/PUI.

2.12 CORE SKILL ACADEMIC PHASE (2000)

2.12.1 Purpose. To develop a Core Skill complete co-pilot. These academics facilitate understanding of functions/operations in the AH-1Z and ensure individuals possess the requisite knowledge to be a TERF, TCT, REC, FCLP, SWD, NSQ and ANSQ qualified co-pilot. The focus of this training is co-pilot combat proficiency.

2.12.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 AH-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 AH-1 Course Catalog is the master document for stage academic requirements.

2.12.3 Core Skill academic events are listed below.

<b>CORE SKILLS ACADEMIC PHASE</b>	
<b>TRAINING CODES</b>	<b>COURSEWARE</b>
<b>GENERAL REQUIREMENTS</b>	
ACAD-2000	AN/ARC-210 HAVEQUICK/SINGARS
<b>TERF</b>	
ACAD-2001	Introduction to NVG Tactical Environment
ACAD-2002	Aeromedical Aspects of NVG Aided Flight
ACAD-2003	NVD Design Consideration
ACAD-2004	FLIR System and Image Optimazation
ACAD-2005	Operational Considerations and Sensor Integration
ACAD-2006	NVG RELATED MISHAP LESSONS LEARNED (T/M/S SPECIFIC)
ACAD-2012	H-1 Aerodynamics
ACAD-2013	The Night Operational Environment
ACAD-2014	NVG Systems and Image Characteristics
ACAD-2015	Human Factors
ACAD-2016	FLIR Introduction and Theory
ACAD-2017	NVG Components and Pre-flight Procedures
ACAD-2018	NVG Misperceptions and Illusions
ACAD-2019	Circadian Rhythm and Fatigue
ACAD-2020	Night Operations & Planning Aids
<b>TCT</b>	
ACAD-2021	(S) Evasive Maneuvers
ACAD-2023	(S) HMLA ASE*
<b>REC</b>	
ACAD-2011	Recognition of Combat Vehicles (ROC-V)**
<b>FCLP</b>	
<b>No Lectures</b>	

<b>SWD</b>	
ACAD-2063	(S) AGM-114 Hellfire
ACAD-2064	(S) AIM-9
ACAD-2066	Rockets
ACAD-2067	20mm
<b>ANSQ</b>	
No Lectures	
<b>FAM</b>	
No Lectures	
<b>CORE SKILL</b>	
ACPM-8200	MACCS Agencies, Functions, and Control of Aircraft and Missiles
ACPM-8201	MWCS Brief
ACPM-8202	ACA and Airspace
ACPM-8210	Aviation Ground Support
ACPM-8230	ACE Battle Staff
ACPM-8231	Battle Command Display
ACPM-8240	Six Functions of Marine Aviation
ACPM-8241	ASR/JTAR Introduction and Practical Application
ACPM-8242	Site Command Primer
ACPM-8250	Theater Air Ground System (TAGS)
*Indicates classes that should be presented to all pilots annually.	
** ROC-V available at <a href="https://www.marinenet.usmc.mil">https://www.marinenet.usmc.mil</a> or <a href="https://rocv.army.mil">https://rocv.army.mil</a> .	

2.13 CORE SKILL PHASE (2000)

2.13.1 Purpose. To produce a Core Skill proficient co-pilot.

2.13.2 General. Upon completion of this phase, the PUI will be TERF, TCT, REC, FCLP, SWD, NSQ, and ANSQ complete, and may conduct additional skills as specified by the squadron commander.

Consideration should be given to scheduling a co-pilot in addition to the instructor during completion of some simulator events. A junior 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, REC-2301, SWD-2606 and SWD-2607 meets the requirements for the PUI to be Night Systems Qualified (NSQ). At the discretion of the squadron commanding officer a letter assigning the PUI as NSQ shall be placed in the NATOPS jacket and APR.

Completion of SANSQ-2700, ANSQ-2701, ANSQ-2702, ANSQ-2704, and ANSQ-2705 meets the requirements for the PUI to be Advanced Night Systems Qualified (ANSQ). At the discretion of the squadron commanding officer a letter assigning the PUI as ANSQ shall be placed in the NATOPS jacket and

APR.

Prior to completion of the Core Skills/Mission Skills Phase, Expeditionary Shore Based (FARP) Operations shall be conducted. Refer to Mission Skills Phase, paragraph 2.15.12 for sortie requirements. EXP-3600

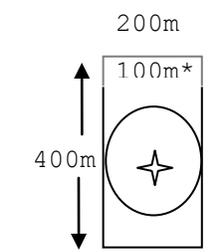
through 3603 may be logged in conjunction with any Core or Mission Skills Phase event.

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

CORE SKILL PHASE	
PAR NO.	STAGE NAME
2.13.3	Terrain Flight (TERF)
2.13.4	Threat Counter-Tactica (TCT)
2.13.5	Reconnaissance (REC)
2.13.6	Field Carrier Landing Practice (FCLP)
2.13.7	Specific Weapons Delivery
2.13.8	Advanced Night Systems Qualification (ANSQ)
2.13.9	Familiarization (FAM)

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

2.13.2.2 Ordnance Delivery. For Core Skill events involving ordnance delivery, the PUI shall be evaluated on delivery accuracy. At the completion of the ANSQ syllabus, the PUI will have conducted three simulator and seven conventional ordnance delivery events. IPs shall evaluate ordnance accuracy based on the following accuracy metrics.

CORE SKILL	ROCKET STANDARD	GUN STANDARD	PURPOSE
 <p>200m 400m 100m* *Radius</p>	<p>-In correct profile per NTTP</p> <p>-No miss greater than 200 meters long/short, 100 meters laterally</p> <p>-CE90<math>\leq</math>100 meters**</p>	<p>-On target within 3 seconds of trigger pull</p>	<p>-Based upon rocket Risk Estimate Distances (REDs)***</p> <p>-Qualifies PUI to deliver rockets during combat OAS.</p>

\*\* CE90 example: SWD-2605 requires (7) 2.75" rockets. CE90 $\leq$ 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 ANTTP Weapons Release Envelope will invalidate the REDs listed in JFIRE, and will increase risk to ground personnel during CAS missions.

2.13.2.2.1 PGMs - Correct switchology, proper LASER placement, profile IAW AH-1 NTTP direct hit.

2.13.2.2.2 TOTs - Initial ordnance impacts delivered within  $\pm$  30 seconds of established TOT.

### 2.13.3 Terrain Flight/Navigation (TERF)

2.13.3.1 Purpose. To enhance proficiency in terrain flight and navigation.

2.13.3.2 General. PUI will demonstrate proficiency in terrain flight and navigation. Once complete in this stage the pilot may be TERF qualified at the discretion of the commanding officer.

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

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

TERF-2100    2.0    180    R                    D                    A                    1 AH-1Z

Goal. OS - Review TERF maneuvers and navigation.

#### Requirements

##### Discuss

- Terrain appreciation,
- Effective CRM/TRM during navigation
- Navigation terminology
- Load computations and HIGE/HOGE requirements
- Assault Support Tactical SOP
- Terrain flight tactical application
- Moving map navigational system use and operation
- High gross weight handling characteristics
- Obstacle avoidance

##### Review

- TERF profiles
- TERF maneuvers
- Loading and operation of the moving map navigation system
- CRM during TERF

#### Performance Standards

- PUI shall conduct the route brief.
- PUI shall complete a navigation route with a minimum of 5 checkpoints utilizing a 1:50,000 scale map and minimum length of 20 NM. Remain oriented on entire route within 500 meters, 15 degrees of heading and 1 minute of planned

route time.  
PUI shall conduct all TERF maneuvers IAW the AH-1Z NATOPS, MDG and NTTP.  
PUI shall conduct 5 landings to an unimproved landing site

Prerequisites. ACAD-2012

Range Requirement. Authorized TERF route, high bird if required

Crew. TERFI/PUI

TERF-2101 2.0 180 R,SC,M NS A 1 AH-1Z

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 pattern in TERF environment  
Cultural lighting  
Intercockpit and intraflight crew coordination during low altitude tactical flight utilizing NVGs.

Review

Proper NVD scan patterns  
Light 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 AH-1Z NATOPS, MDG and NTTP.  
PUI shall conduct 5 landings to an unimproved landing site.

Prerequisites. ACAD-2013 through 2020 prior to completion, TERF-2100

Range Requirements. Authorized TERF route, high bird if required

Crew. NSI/PUI

2.13.5 Threat Counter Tactics (TCT)

2.13.5.1 Purpose. To introduce offensive/defensive electronic and infrared countermeasures, tactics, employment of Aircraft Survivability Equipment (ASE) and employment of precision guided munitions in a RADAR/IR environment.

2.13.5.2 General. At the completion of this stage, the PUI will be proficient at setup, operation, and employment of all aircraft survivability

equipment.

Aircraft should be configured with an operable APR-39, ALE-47, AAR-47, captive PGM, HMSD, TSS and CLDR.

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

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

STCT-2200 1.5 \* D FFS/FTD S-TEN 1 AH-1Z

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

Tactical employment of PGMs versus preplanned and reactive targets in an EW environment  
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 expendables 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.

Prerequisites. ACAD-2021, 2023

Crew. TSI/PUI

STCT-2201 1.5 365 R, SC, M (NS) FFS/FTD S-TEN+/A 1 AH-1Z & 1 H-1

Goal. OS - Introduce tactical employment of ASE versus RADAR and IR threat systems.

Requirements

Discuss

Capabilities/limitations/weapon envelopes of potential threat systems; (1) IR threat, (1) RADAR threat  
Terrain profile analysis and related tactical considerations  
Maneuvers/terrain masking necessary to avoid detection/acquisition from enemy infrared guided and optically tracked systems

Demonstrate/Introduce

How to plan a route in order to avoid a threat using mission planning software, threat overlays and WEZ analysis.  
Use of aircraft systems to aid in threat avoidance (e.g. CLOS, intervisibility)

Review

APR-39, AAR-47, and ALE-47 systems  
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.  
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.

Prerequisites. STCT-2200 (TERF-2100~AC, TERF-2101~NS)

Ordnance. If flown in aircraft: (1) captive PGM, (60) chaff/flares

Range Requirement. EW range, LASER safe range

External Syllabus Support. Live fire range, remote RADAR emitter and IR stimulator support

Crew. TSI(NSI)/PUI (WTO(NSI)/PUI~AC)

2.13.5 Reconnaissance (REC)

2.13.5.1 Purpose. To develop proficiency in reconnaissance operations.

2.13.5.2 General. The PUI will demonstrate proficiency in aircraft system employment and sensor management for target detection, recognition and identification during reconnaissance operations.

Aircraft shall be configured with an operable TSS, HMSD and VTR.

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

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

SREC-2300 1.5 \* D FFS/FTD S TEN/A 1 AH-1Z

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Goal. OS - Introduce day visual reconnaissance.

Requirements

Discuss

TSS switchology, components and functions  
Mission grip functions  
Sensor Management  
VTR functions and tactical use  
Basic Visual Reconnaissance techniques  
Commander's Critical Information Requirements (CCIRs)  
Traveling, traveling overwatch & bounding overwatch

Demonstrate/Introduce

VTR displays and functions  
MISREP/IFREP procedures  
Intelligence collection/dissemination procedures  
S-2 debrief

Performance Standards

Successfully operate (energize and boresight) TSS system.  
Successfully operate FLIR to include gain/level, man/auto, polarity and focus.  
Successfully record and play back VTR in FLIR and Color TV modes.  
Correctly describe LASER functions.  
Correctly perform auto track, offset, pre-point, source selection functions.

Prerequisites. ACAD-2011 (TERF-2100~AC)

Range Requirement. Authorized TERF area, LASER safe range

External Syllabus Support. Thermally augmented threat vehicles if available.

Crew. TSI/PUI (WTO/PUI~AC)

REC-2301 1.5 120 R, SC, M NS A 1 AH-1Z & 1 H-1

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Goal. OS - Introduce night visual reconnaissance procedures (HLL).

Requirements

Discuss

Section TERF maneuvering  
Use of sensor performance prediction tools

Demonstrate/Introduce

Traveling, traveling overwatch & bounding overwatch  
Use of sensor performance prediction tools

Review

TSS switchology/components/functions

Mission grip functions  
Sensor management  
Basic Visual Reconnaissance techniques  
Commander's Critical Information Requirements (CCIRs)  
MISREP/IFREP procedures  
Intelligence collection and dissemination procedures

Performance Standards

Utilize the proper reconnaissance method to acquire detect, identify and recognize targets.

PUI shall demonstrate proficiency with sensors and modes.

PUI shall conduct reconnaissance, while demonstrating functional knowledge of recce techniques and proper use of the sensor.

PUI shall use the data recorder(VTR) for debrief and mission analysis.

Prerequisites. TERF-2101, SREC-2300

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

External Syllabus Support. Thermally augmented threat vehicles if available

Crew. NSI/PUI

2.13.6 Field Carrier Landing Practice (FCLP)

2.13.6.1 Purpose. To introduce flight operations from a carrier deck or air capable ship during the day and at night using the simulator and by introducing day and night FCLPs.

2.13.6.2 General. The PUI will demonstrate/introduce proper communication procedures, patterns and aviation operations in the shipboard environment. Consideration should be given to conducting FCLPs to both LSD/LPD and LHA/LHD deck configurations. Refer to appropriate NATOPS and LHA/LHD/MCS NATOPS manuals for shipboard operations.

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

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

SFCLP-2500 1.5 \* D/NS/N\* FFS/FTD S-TEN 1 AH-1Z

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 AH-1Z 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. N/A

Crew. TSI+NSI/PUI

FCLP-2501 1.0 365 R D A 1 AH-1Z

Goal. FS - 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 AH-1Z NATOPS and shipboard NATOPS manuals.

PUI shall observe and participate in blade fold operations.

Prerequisites. SFCLP-2500

External Syllabus Support. FCLP pad

Crew. BIP/PUI

FCLP-2502 1.0 365 R,M N\*/NS A 1 AH-1Z

Goal. FS - 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 pattern  
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 per the AH-1Z NATOPS and shipboard NATOPS manuals.

Prerequisites. FCLP-2501

External Syllabus Support. FCLP pad with overt and NVD deck lighting

Crew. NSI/PUI

2.13.7 Specific Weapons Delivery (SWD)

2.13.7.1 Purpose. To introduce and develop proficiency in SWD and weapon systems employment.

2.13.7.2 General. At the completion of this stage, the PUI will have demonstrated proficiency in ordnance delivery and proper use of the TSS under all threat conditions with mixed ordnance loads. SWD should be conducted on rated/scored ranges whenever possible. Focus should be on weapons delivery profiles and ordnance accuracy, not tactical scenarios. VTR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

Aircraft should be configured with an operable FLIR, PGM system, FMV, HMSD, CLDR, 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 AH-1 Course Catalog.

SSWD-2600 1.5 \* D FFS/FTD S-TEN/A 1 AH-1Z

Goal. OS - To introduce and develop proficiency using Hellfire missile system.

Requirements

Discuss

Hellfire missile characteristics  
Pre/post-launch constraints symbology  
Timing/designation/delay options  
Cloud ceiling limitations  
J-LASER terminology  
Surface Danger Zones (SDZs)  
Joint Munitions Effectiveness Manuals (JMEMs)/JMEMs Weaponneering System (JWS)  
Weaponneering considerations  
HMDS Symbology

Introduce/Review

Hellfire operations in all modes and profiles (e.g. manual, LOBL, LOAL, hover, running, diving)  
20mm delivery in TSS and HMDS modes  
Remote/buddy lase operations

Performance Standards

Conduct the Arm/Dearm and the Penetration/After Firing checklist per AH-1Z NATOPS & TPG.  
Demonstrate proper switchology during PGM engagements.  
Engage and destroy six point targets or armored threats utilizing Hellfire engagements IAW the AH-1Z NATOPS and AH-1Z NTTP.  
Engage and destroy three point targets utilizing HMDS and TSS modes of 20mm delivery.

Prerequisites. ACAD-2063, 2064, 2066, 2067, SREC-2300 (TERF-2100~AC)

Ordnance. If flown in aircraft: (1) captive Hellfire

Range Requirement. LASER safe range

Crew. TSI/PUI (WTO/PUI~AC)

SSWD-2601 1.5 180 R,M D FFS/FTD S-TEN/A 1 AH-1Z

Goal. OS - Review Hellfire and introduce APKWS.

Requirements

Discuss

APKWS characteristics  
APKWS employment procedures  
LASER considerations  
APKWS weaponneering considerations  
APKWS aircrew coordination

Introduce/demonstrate  
APKWS employment

Review  
Hellfire employment

Performance Standards

Successful employment of APKWS at ranges from 1500 - 5000 meters utilizing all profiles.  
Successful employment of multiple Hellfire against point targets utilizing a combination of delayed lase, shifting targets with missiles in flight and remote lasing.  
During at least one engagement PUI shall adhere to a TOT +/- 30 seconds.

Prerequisites. SSWD-2600 (TERF-2100~AC)

Ordnance. If flown in aircraft: (1) captive Hellfire, (2) 2.75 inch APKWS rockets, (300) rounds 20mm

Range Requirement. Live fire range and LASER safe range

Crew. TSI/PUI (WTO/PUI~AC)

SWD-2602	1.5	730	R,M	(NS)	A	1 AH-1Z
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Goal. OS - To conduct a Hellfire shoot and develop 20mm proficiency.

Requirements

Discuss

Target acquisition in the night environment  
Backscatter avoidance techniques  
Designation employment considerations/techniques  
Ordnance preflight procedures  
Hellfire related emergency procedures  
Missile firing reports/data required

Demonstrate/Introduce

Simulated missions to destroy point targets and armored threats.

Review

Hellfire missile characteristics  
Hellfire missile switchology  
Laser interlocks and considerations  
Pre/post-launch constraints symbology  
Timing/designation/delay options  
J-LASER terminology  
Surface Danger Zones (SDZs)  
Joint Munitions Effectiveness Manuals (JMEmS)/JWS Weaponneering considerations  
20mm delivery in TSS and HMSD modes

Performance Standards

A successful live Hellfire missile engagement with proper missile selection, system bore sight, mode of delivery selection, LASER code entry and within weapons employment envelope.

Successful gun delivery with proper corrections working towards gun standard core skills accuracy metric.

Prerequisites. TERF-2100, SSWD-2601 (TERF-2101, REC-2301~NS)

Ordnance. (1) live Hellfire, (400) rounds 20mm

Range Requirement. Live fire and LASER safe range

Crew. WTO(NSI)/PUI

SSWD-2603 1.5 \* SC D/NS FFS/FTD S TEN 1 AH-1Z

Goal. FS - To develop proficiency at specific weapons delivery (SWD).

Requirements

Discuss

Rocket and 20mm switchology  
Rocket and fixed 20mm range settings  
Rocket and 20mm trouble shooting considerations  
Section and Division attack patterns  
SOP ordnance procedures  
Target fixation  
CRM during ordnance evolutions  
Flechette rockets  
Illumination rockets  
AIM-9

Demonstrate/Introduce

Flechette rocket delivery profiles  
Illumination delivery profiles  
AIM-9 switchology and delivery

Review

Rocket and 20mm ordnance emergencies  
HMSD symbology  
20mm fixed forward and HMSD using running, pop-up, and diving fire  
Rocket delivery using pop-up, and diving fire per the NTTP utilizing both low altitude and medium altitude tactics.

Performance Standards

Successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch HE/Inert rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, working towards Core Skill accuracy metric while adhering to all range regulations.

Prerequisites. STCT-2200, SREC-2301

Crew. TSI/PUI

SWD-2604 1.5 \* R,SC D A 1 AH-1Z

Goal. FS - To develop proficiency at specific weapons delivery (SWD).

Requirements

Discuss

Engagement envelopes of 2.75 inch rockets  
Rocket and 20mm common switchology errors  
Rocket and fixed 20mm range settings  
Rocket and 20mm trouble shooting considerations  
SWD Error analysis  
CRM and intracockpit communication during ordnance evolutions

Review

Fixed forward turret fire performing a minimum of 4 attacks  
utilizing diving fire.  
Rocket delivery per NTP profile.

Performance Standards.

Successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, working towards Core Skill accuracy metric while adhering to all range regulations.

Prerequisites. TERF-2100, SSWD-2603

Ordnance. (7) 2.75 inch rockets, (300) rounds 20mm

Range Requirement. Live fire and LASER safe range

Crew. WTO/PUI

SWD-2605 1.5 180 R,SC,M D E A 1 AH-1Z

Goal. FS - To evaluate proficiency at specific weapons delivery (SWD).  
Requirements

Discuss

Engagement envelopes of 2.75 inch rockets  
Rocket and 20mm common switchology errors  
Rocket and fixed 20mm range settings  
Rocket and 20mm trouble shooting considerations  
SWD Error analysis  
CRM and intracockpit communication during ordnance evolutions

Review

Fixed forward turret fire performing a minimum of 4 attacks  
utilizing diving fire.  
Rocket delivery per NTP profile.

Performance Standards

Successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch rockets at ranges from 500-2000 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. AHC requires refly of SWD-2605 meeting the Mission Skills accuracy metric).



IR LASER pointer usage and switchology  
CRM regarding target acquisition and hand-off (i.e. front-rear seat)

Demonstrate

A RW CAS mission to include coordination with the terminal controller and section tactics.

Review

Fixed forward and HMSD turret fire with IR Pointer  
20mm delivery in TSS and HMSD modes  
Rocket delivery per NTTP using pop-up and diving profiles  
All ordnance emergencies  
SWD and error analysis

Performance Standards

Successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.

Prerequisites. SWD-2606

Ordnance. (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares and IR Pointer.

Range requirement. Live fire range and LASER safe range with thermally significant targets if available

Crew. NSI/PUI

SWD-2610	1.5	365	R,M	(NS)	A/S	1 AH-1Z
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Goal. OS - Introduce moving target gunnery.

Requirement

Discuss

Unguided ordnance ballistics  
Attack profiles and geometry in regards to moving targets  
Sensor track considerations  
LASER guided weapons considerations

Introduce/demonstrate

Moving target gunnery.

Performance Standards

Validate, using VTR, an effective PGM engagement of a moving target. Successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.

Prerequisites. SWD-2603 (SWD-2607~NS, SWD-2705~LLL)

Ordnance. (7) 2.75 inch rockets, (500) rounds 20mm

Range Requirement. Live fire range and LASER safe range

External Syllabus Support. Moving target or 1 aircraft to provide a shadow

Crew. WTO(NSI)/PUI (TSI(NSI)/PUI~SIM)

#### 2.13.8 Advanced Night System Qualification (ANSQ)

2.13.8.1 Purpose. To develop proficiency during LLL operations.

2.13.8.2 General. At the completion of this stage, the PUI shall demonstrate core skills proficiency under LLL conditions. Once complete in this stage, and designated ANSQ by the squadron commanding officer, the PUI may complete the remaining combat qualification NVD training under any light level condition.

Aircraft shall be configured with an operable FLIR, VTR, FMV, (also CLDR, APR-39, AAR-47, ALE-47, HMSD and IR Pointer for ordnance events).

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

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

SANSQ-2700 1.5 \* SC NS FFS/FTD S-TEN 1 AH-1Z

Goal. OS - Perform NVD and aircraft emergency procedures during LLL conditions.

#### Requirements

##### Discuss

- Crew comfort 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 LLL operations

##### Introduce

- Pattern work at lighted and unlighted landing sites
- NVD and aircraft emergency procedures at lighted and unlighted landing sites
- Inadvertent IMC (IIMC)

##### 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
- Safely conduct NVD and aircraft emergencies IAW NATOPS
- Demonstrate proper knowledge of IIMC procedures IAW ASTACSOP

Prerequisites. NSQ

Crew. TSI+NSI/PUI

ANSQ-2701 2.0 180 R,SC,M NS A 1 AH-1Z

Goal. FS - Perform NVD low work, pattern work and navigation (LLL).

Requirements

Discuss

Map preparation  
Checkpoint selection  
Sensor integration during navigation  
Cultural lighting  
Aircraft external lighting configurations  
Mission card preparation

Introduce

Basic low work and pattern work at an unlighted field or remote landing site  
NVD navigation techniques

Performance Standards

PUI shall conduct 5 landings at an unlighted field or remote landing site free from artificial illumination  
PUI shall perform all FAM maneuvers IAW MDG and MAWTS-1 NVD manual.  
PUI shall plan, brief and navigate a route utilizing a 1:250,000 scale map consisting of a minimum of 5 checkpoints and 50 nautical miles remaining oriented within 1 NM of flight planned route, and 15 degrees of heading and arrive at final checkpoint within 1 minute of assigned time.  
Utilize TSS to aid in identifying checkpoints enroute  
PUI shall not use the GPS for a minimum of 2 legs of the route

Prerequisites. SANSQ-2700

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

Crew. NSI/PUI

ANSQ-2702 1.5 180 R,M NS A 1 AH-1Z & 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 AH-1 NTPP  
Loss of visual contact procedures

Introduce

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 section formation flight in both the tactical lead and tactical wingman positions IAW NTTP, NATOPS and MDG

PUI shall conduct all TERF maneuvers IAW the AH-1Z NATOPS, MDG and NTTP.

IP shall demonstrate loss of visual contact and the subsequent rendezvous and join-up

Prerequisites. ANSQ-2701

Range Requirement. Authorized TERF area and route. Pure section preferred

Crew. NSI/PUI

SANSQ-2704 1.5 \* NS FFS/FTD S-TEN/A 1 AH-1Z

Goal. OS - Introduce ordnance delivery (LLL).

Requirements

Discuss

Penetration checklist procedures  
LLL target acquisition  
LLL ordnance delivery effects  
LLL ordnance delivery scan techniques  
Target/reticle fixation  
HMDS symbology and declutter modes  
Target handoff techniques  
Arming/Dearming procedures

Introduce

LLL ordnance delivery

Review

APKWS employment profiles and CRM  
Rocket and 20mm common switchology errors  
IR LASER pointer usage and switchology  
CRM regarding target acquisition and hand-off (e.g. front/rear seat)  
Fixed forward and HMDS turret fire with IR Pointer  
Rocket delivery per ANTTTP using pop-up and diving profiles  
Ordnance emergencies

SWD and error analysis

Performance Standards

Conduct Arm/Dearm procedures and penetration checklists IAW ASTACSOP and local directives.

Successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment working towards core skill accuracy metric while adhering to all range regulations.

Conduct proper actions in response to inflight ordnance emergencies.

Prerequisites. NSQ (ANSQ-2702~AC)

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

Crew. TSI+NSI/PUI (NSI/PUI~AC).

ANSQ-2705    1.5    180    R,SC,M    NS    A    2 AH-1Z

Goal. OS - Review ordnance delivery (LLL).

Requirements

Discuss

20mm ordnance nomenclature  
Rocket warhead/fuse combinations

Review

Rocket delivery per ANTTP using pop-up and diving profiles  
LLL target acquisition difficulties  
LLL ordnance delivery effects  
LLL scan techniques

Performance Standards

Conduct Arm/Dearm procedures and penetration checklists IAW ASTACSOP and local directives.

Successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.

Prerequisites. ANSQ-2702, SANSQ-2704.

Ordnance. (7) 2.75 inch rockets, (500) rounds 20mm, (60) chaff/flares and IR Pointer.

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

Crew. NSI/PUI

2.13.9 Familiarization (FAM)

2.13.9.1 Purpose. To develop and maintain familiarity with aircraft flight

characteristics, limitations, and emergency procedures. To develop proficiency in all maneuvers and to instill basic CRM procedures.

2.13.9.2 General. PUI must demonstrate proficiency with all shore based FAM procedures to include normal/emergency procedures and basic aircraft maneuvers. Additionally, the PUI must display a thorough knowledge of limitations and flight characteristics.

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

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

FAM-2800 1.5 90 R, SC, M (NS) A 1 AH-1Z

Goal. OS - Familiarization/instrument proficiency.

Requirements

Discuss

Aircraft limitations  
Emergency procedures  
Aircraft systems

Review

FAM stage maneuvers

Performance Standards

PUI shall perform all maneuvers IAW AH-1Z MDG and NATOPS  
PUI should complete 5 autorotations IAW the AH-1Z NATOPS and MDG.

Prerequisites. CSIX-1901

Crew. BIP(NSI)/PUI.

SFAM-2801 1.5 90 R, SC, M (NS) E FFS/FTD S-TEN/A 1 AH-1Z

Goal. OS - Review aircraft emergency procedures and systems failures.

Requirements

Review

Emergency procedures

Performance Standards

Demonstrate the ability to operate the aircraft under all emergency conditions per AH-1Z NATOPS.  
PUI shall conduct a minimum of (2) RVLs.

Prerequisites. CSIX-1901

Crew. CSI (BIP(NSI)/PUI~AC)

2.14 MISSION SKILL ACADEMIC PHASE (3000)

2.14.1 Purpose. To develop a Mission Skill proficient pilot. These academics facilitate understanding of operations in the AH-1Z and MAGTF level functions to ensure individuals possess the requisite knowledge to be

designated Attack Helicopter Commander (AHC) and Forward Air Controller (Airborne) [FAC(A)].

2.14.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 AH-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 AH-1 Course Catalog is the master document for stage academic requirements.

2.14.3 Mission Skill academic events are listed below.

<b>MISSION SKILLS ACADEMIC PHASE</b>	
<b>TRAINING CODES</b>	<b>COURSEWARE</b>
<b>GENERAL REQUIREMENTS</b>	
ACAD-3000	Intelligence Preparation of the Battlespace
ACAD-3001	Problem Framing
ACAD-3002	ROE Planning
ACAD-3003	GCE Raid Planning
ACAD-3004	Execution Checklist
ACAD-3005	Objective Area Planning*
ACAD-3006	NEO Execution
ACAD-3007	Rapid Response Planning
ACAD-3008	(S) Radar Guided Surface to Air Missiles
ACAD-3009	(S) REC Threat to the MAGTF
ACAD-3010	(S) IR SAM Threat to RW Aircraft*
ACAD-3011	(S) ADA Threat to RW Aircraft*
ACAD-3012	(S) Laser Threat
ACAD-3013	(S) Electronic Warfare
<b>ESC</b>	
ACAD-3019	Assault Support Escort Tactics*
No Lectures	
<b>CAS/AR/AI/SCAR</b>	
ACAD-3030	(S) RW OAS*
ACAD-3031	Urban CAS*
ACAD-3032	Close Air Support
ACAD-3033	CAS Standardization*
ACAD-3034	(S) Weaponing
ACAD-3035	HMLA AR and SCAR TTPs
<b>TRAP</b>	
ACAD-3038	(S) Personnel Recovery
ACAD-3039	(S) TRAP
<b>FAC (A)</b>	
ACAD-3041	JFAC(A) Courseware lectures taught by Squadron FAC(A) I*
ACAD-3042	FAC(A) TTPs
<b>EXP</b>	
ACAD-3045	HMLA FARP Ops

MISSION SKILL	
ACPM-8300	Air Defense
ACPM-8310	Forward Arming Refueling Point (FARP) Operations
ACPM-8311	Marine Corps Tactical Fuel Systems
ACPM-8320	Joint Structure and Joint Air Operations
ACPM-8321	Joint Air Tasking Cycle, Phase 1: Strategy Development
ACPM-8322	Joint Air Tasking Cycle, Phase 2: Target Development
ACPM-8323	Joint Air Tasking Cycle, Phase 3: Weaponing and Allocation
ACPM-8324	Joint Air Tasking Cycle, Phase 4: Joint ATO Production
ACPM-8325	Joint Air Tasking Cycle, Phase 5: Force Execution
ACPM-8326	Joint Air Tasking Cycle, Phase 6: Combat Assessment
ACPM-8340	Integrating Fires and Airspace within the MAGTF
ACPM-8350	Phasing Control Ashore
ACPM-8351	TACRON Organizations and Functions
*Indicates classes that should be presented to all pilots annually.	

2.15 MISSION SKILL PHASE (3000)

2.15.1 Purpose. To produce a mission skills proficient pilot. Upon completion of the Mission Skills phase, pilots should be proficient in Mission Essential Task.

2.15.2 General. Upon completion of the Mission Skills phase, pilots may be designated Attack Helicopter Commander (AHC) and Forward Air Controller (Airborne) [FAC(A)].

Completion of the Core Skills Phase and the ESC, CAS, AR, AI, SCAR, TRAP and EXP stages through TRAP-3308 and EXP 3603 of the Mission Skill Phase meet the requirements for the PUI to be eligible for the AHC 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 AHC shall be placed in the NATOPS jacket and APR.

Completion of the FAC(A) stage and compliance with the JFAC(A) MOA meets the requirements for the PUI to be FAC(A) qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as FAC(A) qualified shall be placed in the NATOPS jacket and APR.

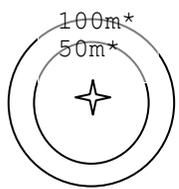
Prior to completion of the Core/Mission Skills Phase, Expeditionary Shore Based (FARP) Operations shall be conducted. Refer to Mission Skills Phase, paragraph 2.15.10 for sortie requirements. EXP-3600 through EXP-3603 shall be logged in conjunction with any Core or Mission Skills Phase event.

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

MISSION SKILL PHASE	
PAR NO.	STAGE NAME
2.15.3	Escort (ESC)
2.15.4	Close Air Support (CAS)
2.15.5	Armed Reconnaissance (AR)
2.15.6	Air Interdiction (AI)
2.15.7	Strike Coordination and Reconnaissance (SCAR)
2.15.8	Tactical Recovery of Aircraft Equipment and Personnel (TRAP)
2.15.9	Forward Air Controller (Airborne) [FAC(A)]
2.15.10	Expeditionary Shore-based Site Operations (EXP)

2.15.2.2 Ordnance Delivery. At the completion of this stage, the PUI will have demonstrated increased accuracy during ordnance delivery and proper use of the TSS under all threat conditions with mixed ordnance loads. At the completion of the OAS syllabus, prior to AHC (DESG-6398), the PUI shall reflly SWD-2605 and will be required to meet the Mission Skills ordnance accuracy metric. SWD should be conducted on rated/scored ranges whenever possible. Focus should be on weapons delivery profiles and ordnance accuracy, not tactical scenarios. VTR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

IPs shall evaluate ordnance effectiveness based on the following accuracy metrics.

MISSION SKILLS	UNGUIDED ROCKET STANDARD	GUN STANDARD	PURPOSE
 <p>*RADIUS</p>	<p>-In correct profile per NTTP</p> <p>-No miss greater than 100 meters</p> <p>-CE90&lt;50 meters**</p> <p>-(1) rocket must impact within 10 meters</p>	<p>-On target within 3 seconds of trigger pull</p>	<p>-Based upon M151 Effective Casualty Radius (ECR)***</p> <p>-Demonstrates the ability to damage targets</p>

\*\* CE90 example: SWD-2605 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. This constitutes a failure to meet the performance standards

\*\*\* Effective Casualty Radii (ECRs) are generic distances intended to be

applied versus the anticipated target set for a particular weapon, based primarily upon explosive yield and warhead/fuse characteristics. Variables to weapon effectiveness include target vulnerability and composition of underlying terrain. Weapons that impact the target vicinity at distances beyond the warhead's ECR are predicted to be ineffective for target damage.

2.15.2.2.1 PGMs - Correct switchology, proper LASER placement, profile IAW AH-1 NTTP direct hit.

2.15.2.2.2 TOTs - Initial ordnance impacts delivered within  $\pm$  30 seconds of established TOT.

2.15.2.2.3 During this phase, one of the night aircraft ordnance events shall employ (7) 2.75 inch Illumination rockets (i.e. M257/M278). Illumination employment shall be evaluated on effectiveness and account for wind, elevation, delivery and flight release parameters. SOTC-6900 shall be logged in conjunction with the appropriately flown sortie.

2.15.2.2.4 During this phase, one of the aircraft ordnance events shall employ (4) 2.75 inch Advanced Precision Kill Weapons System (APKWS) rockets. APKWS employment shall be evaluated on effectiveness, delivery and flight release parameters. SOTC-6901 shall be logged in conjunction with the appropriately flown sortie.

2.15.2.2.5 During this phase, one of the aircraft ordnance events shall employ (7) 2.75 inch flechette rockets. Flechette employment shall be evaluated on effectiveness, delivery and flight release parameters. SOTC-6902 shall be logged in conjunction with the appropriately flown sortie.

### 2.15.3 Escort (ESC)

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

2.15.3.2 General. The pilot will develop a detailed understanding and functional knowledge of escort formations, maneuvers and techniques associated with airborne 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. One of the three required flights in the ESC stage shall be flown with 2 AH-1Zs.

Aircraft should be configured with an operable FLIR, VTR, FMV, (also CLDR, APR-39, AAR-47, ALE-47, HMSD and IR Pointer if ordnance is utilized).

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

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

ESC-3100	1.5	*	D	A	1 AH-1Z & 1 H-1
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Goal. OS - Demonstrate and introduce day assault support escort procedures in a low to medium threat environment.

Requirements

Discuss

Purpose of escort  
EFL responsibilities  
Categories of assault support  
Six missions of assault support escort  
Assault support escort techniques  
Advantages/disadvantages of escort techniques  
Escort patterns  
LZ clearance/coverage scan techniques  
Fire support planning ISO LZ clearance and GCE Ground Tactical Plan (GTP)  
LZ clearance procedures and communications  
Threat reaction and immediate action procedures  
Escort/assault support terminology  
Capabilities/employment of Hellfire during escort  
AIM-9 switchology and employment techniques  
Lighting and threat detection  
Supporting arms coordination  
Fragmentation patterns  
Assault sectors of fire and escort/assault integration and deconfliction  
Tilt-rotor considerations  
TRAP considerations and procedures

Demonstrate/Introduce

Escort/assault support mission planning  
Escort responsibilities  
Attached/detached/combined escort  
Objective area fires integration/deconfliction  
Objective area flow and communications  
LZ coverage patterns and ordnance delivery procedures  
Tactical employment of ordnance in close proximity to assault support aircraft enroute and in the LZ (objective area)

Performance Standards

PUI shall exhibit a thorough understanding of escort responsibilities and assault support operations.  
PUI shall properly plan and employ escort assets in objective area.  
PUI shall properly employ escort techniques and patterns for the assigned mission.  
PUI shall integrate fire support in objective area (if required).  
PUI shall use correct terminology and techniques for LZ clearance and coverage.

Prerequisites. ACAD-3008, 3009, SSWD-2603 (SWD-2604~ORD)

Ordnance (Optional). (1) captive PGM, CATM-9 (if avail), (7) 2.75 inch rockets, (300) rounds 20mm, (60) Chaff/Flares

Range Requirements. Live fire and LASER safe range (if required)

External Syllabus Support. One or more assault support aircraft

Crew. WTO/PUI

ESC-3101 1.5 365 R,SC NS A 1 AH-1Z & 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 A/C lighting  
Night formation, lighting and threat detection  
AMC/AFL/EFL relationship  
Supporting arms coordination  
FLIR and IR Pointer usage  
Assault support aircraft sectors of fire  
Escort/assault integration and deconfliction  
Fixed wing escort procedures  
Waveoff criteria and actions

Demonstrate/Introduce

Tactical employment of ordnance in close proximity to assault support aircraft enroute and in the LZ (objective area)  
LZ coverage and scan patterns  
ITG with IR pointer

Review

Ordnance delivery procedures with NVDs  
Escort responsibilities  
Attached/detached/combined escort  
Objective area fires integration  
Objective area flow and communications

Performance Standards

PUI shall conduct the EFL brief.  
PUI shall exhibit a thorough understanding of assault support escort responsibilities and assault support operations IAW the AH-1Z NTTP and ASTACSOP.  
PUI shall properly plan for and employ escort assets in objective area.  
PUI shall conduct enroute attached escort of assault support aircraft.  
PUI shall properly employ escort techniques and patterns for the assigned mission.  
PUI shall integrate fire support in objective area (if required).  
PUI shall utilize IR Pointer for initial terminal guidance to LZ or to alert crews to a simulated enemy position.  
PUI shall use correct terminology and techniques for LZ clearance and coverage.

Prerequisites. ACAD-3010, 3011, ESC-3100 (NSQ~NS, ANSQ~LLL)

Ordnance (Optional). (1) captive PGM, CATM-9 (if avail), (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

Range Requirements. Live fire and LASER safe range (if required)

External Syllabus Support. One or more assault support aircraft

Crew. NSI/PUI

SESC-3102 1.5 365 R, SC, M (NS) FFS/FTD S-TEN+/A 1 AH-1Z & 1 H-1

Goal. OS - Review assault support escort procedures in a medium threat environment.

Requirements

Discuss

Six missions of assault support escort  
Capabilities/employment of PGMs  
Guided rockets during escort missions  
Advantages/disadvantages of attached/detached escort  
AIM-9 switchology and employment techniques  
Escort patterns  
Sensor employment  
LZ clearance/coverage techniques and procedures  
Threat reaction SOPs and immediate action procedures  
Escort/assault support terminology

Demonstrate/Introduce

Escort responsibilities and current tactical doctrine during assault support operations  
Attached/detached/combined escort  
Escort/assault support mission planning and operations within the objective area.

Performance Standards

PUI shall exhibit a thorough understanding of escort responsibilities and assault support operations.  
PUI shall perform threat reactions IAW NTTP, ASTACSOP.  
PUI shall plan, brief and execute an assault support escort mission in a medium threat environment, with a specific focus on contingencies and threat reactions.

Prerequisites. ACAD-3003 through 3005, 3019, ESC-3101

Ordnance (Optional). (1) captive PGM, CATM-9 (if avail), (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

Range Requirements. Live fire and LASER safe range (if required)

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

Crew. TSI (NSI)/PUI (WTO (NSI)/PUI~AC)

ESC-3103 1.5 \* R (NS) A 1 AH-1Z & 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  
Hellfire 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

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 enroute and in the objective area (if required).

Prerequisites. SSWD-2603 (NSQ~NS, ANSQ~LLL, SWD-2604~ORD)

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

Range Requirements. Live fire and LASER safe range (if required)

External Syllabus Support. One ground/amphibious unit (minimum three vehicles)

Crew. WTO (NSI) / PUI

2.15.4 Close Air Support (CAS)

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

2.15.4.2 General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of CAS missions. In addition, the pilot will be proficient in the operation and employment of all organic weapon systems.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, HMSD VTR, FMV, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, TACP, and indirect fire support assets should be incorporated to the maximum extent practicable, 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 AH-1 Course Catalog.

SCAS-3300 1.5 \* SC D/NS FFS/FTD S-TEN+ 1 AH-1Z & 1 H-1

Goal. OS - Introduce RW CAS missions in rural and urban environments during both day and night in a low to medium threat environment.

Requirements

Discuss

- Execution Template IAW TACP TACSOP
- CAS check-in brief
- Nine line and five line attack briefs
- Battle position selection
- Plotting BPs/HAs
- 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 and considerations

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 guns, rockets and PGMs.
- PUI shall demonstrate a detailed understanding and functional knowledge of all weapons systems, common trouble shooting techniques and delivery techniques.

Prerequisites. ACAD-3030 through 3033, SSWD-2600, SANSQ-2704

Crew. TSI+NSI/PUI

CAS-3301 1.5 180 R,SC,M D A 2 AH-1Z

Goal. OS - Provide RW CAS to ground forces in a low threat environment.

Requirements

Discuss

Objective area timing  
Attack and cover elements  
AH-1Z 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 attack 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

Performance Standards

PUI shall utilize mission planning software to conduct elevation analysis and line of sight communications 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.  
PUI shall achieve the desired effects as stipulated by the terminal controller.  
PUI shall ensure all missions are within 30 seconds of TOT during engagements or fall within the assigned engagement window.

Prerequisites. SCAS-3300

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (200) rounds 20mm, (60) chaff/flares

Range Requirements. Live fire and LASER safe range

External Syllabus Support. TACP

Crew. WTO/PUI

CAS-3302 1.5 \* NS A 2 AH-1Z

Goal. OS - To provide RW CAS to ground forces at night in a medium threat environment.

Requirements

Discuss

Night/IR marking methods  
IR CAS terminology and use  
Employment capabilities of the TSS  
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 mission at night with NVDs utilizing CAS Mission briefs  
Conduct CAS in a medium threat environment.

Review

J-LASER terminology  
IR pointer usage  
Integration of attack helicopters into the ground scheme of maneuver  
Friendly marking techniques/procedures  
Identification of friendly/enemy positions  
Objective area timing

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 attack controller.  
PUI shall ensure all missions are within 30 seconds of TOT during engagements or fall within assigned engagement window.  
PUI shall conduct 20mm TSS delivery in FLIR mode.  
IP shall validate, using VTR, an effective PGM engagement of a point target.

Prerequisites. CAS-3301 (NSQ~NS, ANSQ~LLL)

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (500) rounds 20mm, (60) chaff/flares

Range Requirements. Live fire and LASER safe range

External Syllabus Support. TACP

Crew. NSI/PUI

CAS-3303    1.5    180    R,SC,M            NS            A            1 AH-1Z & 1 H-1

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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 communications consideration as part of mission planning

Demonstrate/Introduce

Night CAS in a medium threat environment  
Integration of FW CAS and indirect fires assets into objective area mechanics  
FAC(A) game plan in support of the OAS brief(developed and briefed by IP)

Performance Standards

PUI shall brief objective area portion of 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.  
PUI shall achieve the desired effects as stipulated by the terminal attack controller.  
PUI shall ensure all missions are within 30 seconds of TOT during engagements or fall within the assigned engagement window  
PUI will conduct two (2) call for fire missions in support of terminal attack controller's objectives.  
PUI shall utilize mission planning software to conduct elevation analysis and line of sight communications considerations.  
IP shall validate, using the VTR, an effective IDF engagement of a point target.

Prerequisites. CAS-3302, ANSQ

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (500) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. TACP, FW and IDF

Crew. NSI+FAC(A)/PUI

CAS-3304    1.5    365    R,M                    (NS)            A/S-TEN+    2 AH-1Z

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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 4 RW CAS missions utilizing 5-line or 9-line attack briefs.  
PUI shall conduct urban targeting using a gridded reference graphic (GRG).  
PUI shall integrate with GCE maneuver and fire support plan.

Prerequisites. CAS-3301 (CAS-3302~NS, CAS-3303~LLL)

Ordnance (Optional). (1) Captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flare

Range Requirement. Live fire and LASER safe range if required, suitable urban environment or MOUT facility

External Syllabus Support. TACP with appropriate marking devices (if available)

Crew. WTO(NSI)/PUI.

2.15.5 Armed Reconnaissance (AR)

2.15.5.1 Purpose. To develop procedures and skills to tactically employ the aircraft while conducting Armed Reconnaissance (AR) missions under varying threat conditions.

2.15.5.2 General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of AR missions. In addition, the pilot will be proficient in the operation and employment of all organic weapon systems.

Aircraft should be configured with an operable FLIR, PGM system, FMV, CLDR, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, MACCS agencies and indirect fire support assets should be incorporated to the maximum extent practicable, 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 AH-1 Course Catalog.

AR-3305 1.5 365 R,M (NS) A 2 AH-1Z

Goal. OS - Conduct armed reconnaissance in a low to medium threat environment.

Requirements

Discuss

Primary purpose of AR  
AR Planning considerations  
Named area of interest (NAI)  
Target area 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 should give the entire OAS brief, but at a minimum shall brief the Weaponneering portion of the OAS brief.  
PUI shall demonstrate a basic knowledge of AR planning, execution and mechanics.  
PUI shall conduct 20mm weapons delivery utilizing HMSD.  
PUI shall achieve successful destruction of targets of opportunity (TOO) utilizing correct weapons-to-target match and standard weapons delivery profiles.  
IP shall validate, using the VTR, an effective PGM engagement of a point target.  
PUI shall consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. ACAD-3030, 3035, ANSQ

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (500) rounds 20mm, (60) chaff/flares

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

Crew. WTO(NSI)/PUI

2.15.6 Air Interdiction (AI)

2.15.6.1 Purpose. To develop procedures and skills to tactically employ the aircraft while conducting Air Interdiction (AI) missions under varying threat conditions.

2.15.6.2 General. Upon completion of this stage the pilot will be proficient

in the planning, briefing and execution aspects of AI missions. In addition, the pilot will be proficient in the operation and employment of all organic weapon systems.

Aircraft should be configured with an operable FLIR, PGM system, FMV, CLDR, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, MACCS agencies and indirect fire support assets should be incorporated to the maximum extent practicable, 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 AH-1 Course Catalog.

AI-3306      1.5      365      R,SC,M      NS      A      2 AH-1Z

Goal. OS - Conduct an air interdiction mission in a medium threat environment.

Requirements

Discuss

- Primary purpose of AI
- AI planning considerations
- RADAR terrain task analysis
- ROE/PID considerations
- JMEMs/JWS
- Weapon to target match
- High, medium, and low threat levels
- FARP procedures

Review

- IFREP/MISREP procedures
- Traveling, traveling overwatch, bounding overwatch procedures
- Intelligence collection and dissemination procedures

Performance Standards

- PUI shall conduct the OAS brief. OAS brief shall include a FARP brief.
- PUI shall demonstrate a basic knowledge of AI planning, execution and mechanics.
- PUI shall properly employ all ASE IAW AH-1Z NTTP/NTRP.
- All attacks shall utilize planned routes, BPs, and FPs as applicable.
- PUI shall achieve the successful destruction of selected known targets utilizing proper weapon to target engagements and weaponeering.
- PUI shall achieve the desired effects (as stipulated by the mission objectives) with timely, accurate engagements with minimal exposure time
- IP shall validate, using the VTR, an effective PGM engagement of a point target.
- PUI shall consolidate BDA and pass through appropriate MACCS channels.
- PUI shall conduct FARP operations utilizing MWSS or ADGR if

available.

PUI shall ensure all missions are within 10 seconds of TOT.

Prerequisites. ACAD-3030, ANSQ

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm,  
(60) chaff/flares

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

Crew. NSI/PUI

## 2.15.7 Strike Coordination and Reconnaissance (SCAR)

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

2.15.7.2 General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of SCAR missions. In addition, the pilot will be proficient in the operation and employment of all organic weapon systems.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, FMV, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, MACCS agencies and indirect fire support assets should be incorporated to the maximum extent practicable, 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 AH-1 Course Catalog.

SCAR-3307	1.5	365	R,M	(NS)	A/S-TEN+	2	AH-1Z
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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 Target Attack RADAR System (JSTARS)
- Targeting process
- MACCS integration for deep battlespace 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 AH-1Z 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 PGM engagement of a point target.  
PUI shall consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. ACAD-3030, 3035, ANSQ

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. RW or FW aircraft

Crew. WTO(NSI)/PUI

2.15.8 Tactical Recovery of Aircraft and Personnel (TRAP)

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

2.15.8.2 General. Upon completion of this stage the pilot will be proficient in the planning, briefing and execution aspects of TRAP missions. In addition, the pilot will be proficient in the operation and employment of all organic weapon systems.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, ground recovery forces, and indirect fire support asset should be incorporated to the maximum extent practicable, 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 AH-1 Course Catalog.

TRAP-3308 1.5 365 R,M (NS) A 2 AH-1Z

Goal. OS - Conduct a TRAP in a low to medium threat environment.

Requirements

Discuss

Survivor location and authentication  
ISOPREP data and procedures for authentication  
CSAR SPINS  
SARDOT  
SARNEG  
TRAP zones  
GCE TRAP force composition  
Fire support coordination  
ASTACSOP TRAP matrix

Introduce

Isolated person 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 EFL portion of the AMC brief  
PUI shall properly plan for and employ escort assets in objective area.  
PUI shall utilize CSAR SPINS and ISOPREP data to properly authenticate downed aircrew.  
PUI shall properly employ escort techniques and patterns for the assigned mission.  
PUI shall integrate fire support assets in objective area.  
PUI shall use correct terminology and techniques for LZ clearance and coverage.

Prerequisites. ACAD-3038, 3039, ANSQ, ESC-3100 (ESC-3101~NS)

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm (60) chaff/flares

Range Requirements. Live fire and 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

2.15.9 Forward Air Controller (Airborne) FAC(A)

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

2.15.9.2 General. At the completion of this stage, the PUI should have

demonstrated a thorough knowledge of CAS and FAC(A) procedures used to control RW and FW aircraft and supporting arms under varied environmental and threat conditions. At the completion of this stage the PUI will have met the certification requirements of the Joint FAC(A) MOA. The PUI may be designated a FAC(A) by the squadron commanding officer. Outlined requirements are listed in the most recent JCAS AP MOA-JFAC(A), and the T&R Program Manual Chapter 3. The JFAC(A) MOA can be found on the MAWTS-1 intranet via the TECOM Webpage at:  
[https://vcepub.tecom.usmc.mil/sites/msc/magtftc/mawts1/jfaca/SitePages/JFAC\(A\).aspx](https://vcepub.tecom.usmc.mil/sites/msc/magtftc/mawts1/jfaca/SitePages/JFAC(A).aspx).

Pilots shall be designated PQM (DESG-6300) to conduct FACA-3400, and AHC (DESG-6398) for all subsequent events.

Nonqualified aircrew shall fly FACA-3401 through FACA-3404 with a FAC(A)I. The FAC(A)I may simulate the ground FAC if one is not available.

One event (FACA-3401 through FACA-3404) shall be flown in support of a qualified JTAC. Four of the controls during the initial POI shall be under non-permissive conditions. A "non-permissive" control is defined as a control where the target area threat level dictates that the FAC(A) must use threat counter-tactics and countermeasures. The FAC(A) must use a tactical scenario which requires a full 9-line CAS attack brief (IP to target area).

Upon successful completion of this stage of training through FACA-3404 and compliance with JFAC(A) MOA certification requirements, the commanding officer may issue a T&R FAC(A) qualification as well as a JFAC(A) MOA FAC(A) certification.

In order to ensure compliance with the JFAC(A) MOA qualification standards, FAC(A)s shall complete a SOTC-6906 every 24 months and a standardized ATF shall be written by the supervising FAC(A)I. A SOTC-6906 should be logged at the completion of the initial FAC(A) POI. **FAC(A)s shall lose their qualification if they fail the recurring evaluation or if their evaluation period lapses.** In order to regain qualification, FAC(A)s shall meet the T&R and the JFAC(A) MOA requirements as well as complete a subsequent re-evaluation under the supervision of a FAC(A)I.

Aircrew who have lost the FAC(A) qualification due to failure to meet JFAC(A) MOA currency requirements shall regain the FAC(A) qualification by successfully completing events as delineated in the appropriate T&R syllabus under the supervision of a current and qualified FAC(A) or FAC(A)I. At a minimum, such aircrew must complete the number and category (appropriate night, control type, ordnance, etc.) of controls the individual failed to accomplish during the appropriate six-month currency period (reference the current JFAC(A) MOA).

Aircrew who have lost the FAC(A) qualification due to exceeding the refly interval in all associated qualification events, or who have been FAC(A) unqualified for 24 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the refresher FAC(A) syllabus under the supervision of a FAC(A)I and conduct a minimum of six successful live controls IAW the current JFAC(A) MOA.

FACA-3400 is annotated A/S. If this event is an initial sortie for the PUI, it SHALL be flown in the aircraft. Subsequent flights of this event

can be flown in the simulator to maintain proficiency.

FACA-3401 and 3402 are annotated A/S\* sorties. If these events are initial sorties for the PUI, they SHALL be flown in the aircraft. Subsequent flights for these two events can be flown in the simulator to log controls for JFAC(A) proficiency requirements. Controls logged during simulator events SHALL only be daytime, type 2 or 3. The FFS/FTD SHALL be operated by a TSI 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.

An aircraft control for the purpose of defining requirements is a mission that ends with a "cleared hot," "continue dry," "cleared to engage" or "abort" issued from the terminal attack controller. If a FAC(A) sortie is flown with a FAC(A)I and PUI, and terminal attack control is conducted by PUI, credit for each control will go to both pilots. Also, if the crew consists of two FAC(A) proficient, qualified pilots, both shall receive control credit.

Aircraft should be configured with an operable FLIR, CLDR, FMV, HMSD, VTR and IR Pointer (night events).

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

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

FACA-3400 1.5 365 R,M (NS) A/S-TEN 1 AH-1Z

Goal. OS - Introduce indirect fire supporting arms control.

Requirements

Discuss

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

Introduce

Call for fire procedures

Performance Standards

PUI shall demonstrate a basic knowledge of indirect fire support planning, preparation and execution.  
PUI shall conduct a minimum of four (4) fire missions, two (2) of which shall be adjust fire missions, one (1) shall be a SEAD mission.  
PUI shall achieve desired effects (destroy, neutralize or suppress) on selected targets.

Prerequisites. ACAD 3041, 3042, DESG-6300

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm (60) chaff/flares

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

External Syllabus Support. One (1) indirect fire asset with eight (8) rounds

Crew. WTO (NSI)+FAC(A)/PUI (TSI (NSI)+FAC(A)/PUI~SIM)

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FACA-3401 1.5 365 R,M (NS) A/S\*-TEN+ 1 AH-1Z & 1 H-1

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Goal. OS - Introduce control of RW aircraft.

Requirements

Discuss

RW CAS and FAC(A) aircraft capabilities, limitations and employment  
Use and submission of the Joint Tactical Airstrike Request (JTAR)  
CAS specific Rules of Engagement, Proportional Response and Collateral Damage Considerations  
Marine and Joint Command and Control Structure and impact on CAS/FAC(A) planning  
Types of Terminal Attack Control, Bomb on Coordinate (BOC) and Bomb on Target (BOT) methods of attack and their application to RW CAS assets  
RW FAC(A) Crew coordination  
Task shedding/sharing in the FAC(A) environment  
FAC(A) section game-plan  
JFAC(A) MOA certification and qualification requirements

Introduce

Integration of RW CAS assets into objective area mechanics  
RW communication and control procedures

Performance Standards

PUI shall demonstrate a basic knowledge of RW CAS aircraft planning, preparation and execution.  
PUI shall conduct a minimum of four (4) RW controls consisting of at least:  
(1) type 1 RW control  
(1) type 2 RW control  
(1) type 3 RW control  
PUI shall utilize a minimum of one (1) 9-Line CAS attack brief.  
PUI shall utilize at least two (2) 5-Line CAS attack briefs.

Prerequisites. ACAD 3041, 3042, DESG-6398

Ordnance. (7) 2.75 inch RP rockets, (300) rounds 20mm

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

External Syllabus Support. 2 RW CAS aircraft with ordnance, Ground  
Maneuver Unit with TACP

Crew. FAC(A) I/PUI

FACA-3402 1.5 365 R,M D A/S\*-TEN+ 1 AH-1Z & 1 H-1

Goal. OS - Introduce control of FW aircraft.

Requirements

Discuss

FW CAS aircraft ordnance capabilities, limitations and  
employment  
Marine and Joint UAS capabilities, limitations and employment  
Effects of weather, terrain and threat on FW CAS assets and RW  
FAC(A)  
Types of Terminal Attack Control, Bomb on Coordinate (BOC) and  
Bomb on Target (BOT) methods of attack and their application  
to FW CAS assets  
Airspace Control Order (ACO), Air Tasking Order (ATO) and their  
impact on CAS/FAC(A) planning  
Laser guided, sensor guided, coordinate dependant and non-  
precision weapons deliveries  
Visual and sensor target marking  
SEAD in support of FW CAS attacks  
Target location procedures in support of CAS  
FAC(A) coordination within the flight and intracockpit  
Task shedding/sharing in the FAC(A) environment

Introduce

Integration of FW CAS assets  
FW lase for Hellfire setup and execution  
Objective area mechanics  
Communication and control procedures  
LASER designation for LST/LGB

Performance Standards

PUI shall brief a FAC(A) game plan.  
PUI shall demonstrate a basic knowledge of FW CAS aircraft planning,  
preparation and execution.  
PUI shall conduct a minimum of four (4) FW Type 1 controls, with  
emphasis on utilization of forward firing or unguided "free-fall"  
ordnance.  
PUI shall utilize a minimum of two (2) 9-Line CAS attack briefs.

Prerequisites. ACAD 3041, 3042, DESG-6398

Ordnance. (7) 2.75 inch RP rockets, (300) rounds 20mm

Range Requirements. Live fire and 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

FACA-3403 1.5 365 R,M NS A 1 AH-1Z & 1 H-1

Goal. OS - Introduce control of FW aircraft at night.

Requirements

Discuss

FW CAS aircraft sensor capabilities, limitations and employment  
Effects of weather, terrain and threat at night to FW CAS assets  
and RW FAC(A)  
Types of Terminal Attack Control, Bomb on Coordinate (BOC) and  
Bomb on Target (BOT) methods of attack and their application to  
FW CAS assets  
Laser guided, sensor guided, coordinate dependant and non-  
precision weapons deliveries  
Visual and sensor target marking  
Ground and aviation delivered illumination in support of CAS  
Urban CAS considerations  
AC-130 integration and Call For Fire  
SEAD in support of FW CAS attacks  
Target location procedures in support of CAS  
Night FAC(A) coordination within the flight and intracockpit

Introduce

RW lase for FW ordnance

Review

FW aircraft ordnance capabilities, limitations and employment  
Marine and Joint UAS capabilities, limitations and employment  
FAC(A) crew coordination  
Task shedding/sharing in the FAC(A) environment  
Integration of FW CAS assets  
Objective area mechanics  
Communication and control procedures

Performance Standards

PUI shall brief a FAC(A) gameplan.  
PUI shall demonstrate a basic knowledge of FW CAS aircraft planning,  
preparation, execution and night considerations.  
PUI shall conduct a minimum of four (4) FW controls, with emphasis  
on utilization of LASER guided, sensor guided or coordinate  
dependant ordnance. Of those at least two (2) should be FW Type  
1 and at least two (2) should be FW Type 2 controls, one (1) of  
which should be BOC.  
PUI shall utilize a minimum of (2) 9-Line CAS attack briefs.  
PUI shall utilize onboard systems to generate coordinates for a  
coordinate dependant weapon delivery, either live or simulated.

Prerequisites. ACAD 3041, 3042, DESG-6398

Ordnance. (7) 2.75 inch RP rockets, (300) rounds 20mm

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

External Syllabus Support. 2 FW CAS aircraft with LASER guided, sensor guided or coordinate dependant ordnance, Ground Maneuver unit with TACP

Crew. FAC(A) I/PUI

FACA-3404 1.5 365 R,M (NS) A 1 AH-1Z & 1 H-1

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

Requirements

Discuss

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

Review

Discussion items from previous FAC(A) flights  
Integration of multiple 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 conduct a minimum of four (4) FW controls of which at least two (2) are FW Type 1 controls and at least two (2) are FW Type 2 controls, one (1) of which should also be BOC.  
If utilizing RW CAS, PUI shall conduct a minimum of four (4) RW controls, either Type 1 or 2, integrated with FW attacks.  
If utilizing IDF, PUI shall conduct a minimum of two (2) calls for fire integrated with CAS attacks. At least one (1) shall be SEAD.  
PUI shall utilize a minimum of two (2) 9-Line CAS attack briefs.  
PUI shall coordinate SEAD in support of FW target engagement.

Prerequisites. FACA-3400 through FACA-3402 (FACA-3403~NS)

Ordnance. (7) 2.75 inch RP rockets, (300) rounds 20mm

Range Requirements. Live fire and 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

2.15.10 Expeditionary Shore-based Site Operations (EXP)

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

2.15.10.2 General. IAW applicable directives, PUI will emphasize proper communication procedures, patterns, and aviation operations in a FARP environment. Refer to appropriate NATOPS, NTTP, ASTACSOP and Aircraft Refueling NATOPS Manual for FARP operations. An actual FARP, ADGR site is preferred but not required. Squadrons may elect to simulate one of these environments at an outlying field, austere landing zone(s) or other appropriate landing sites.

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

EXP-3602 and 3603 are annotated A/S\* sorties. If these events are initial sorties for the PUI, they SHALL be flown in the aircraft. Subsequent flights for these two events can be flown in the simulator to maintain proficiency.

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

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

EXP-3600    0.0    \*    R    D    A/S-TEN    1 AH-1Z

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

Introduce

- Day FARP operations
- Inbound & outbound formations and approaches

Review

- Landing procedures to an unprepared surface

Performance Standards

- PUI shall conduct a FARP brief.
- PUI shall conduct a minimum of one (1) landing and one (1) takeoff.

PUI should conduct refueling.

Prerequisites. ACAD-3045, ACPM-8310, 8311, TERF-2100

External Syllabus Support. Actual or simulated FARP

Crew. BIP/PUI

EXP-3601 0.0 180 R,SC,M NS A/S-TEN 1 AH-1Z

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
- Landing point markings
- Movement within the FARP
- Ordnance procedures
- FARP emergency procedures
- MMT communications/nets
- FARP OIC communications/nets
- ADGR platforms, equipment and capabilities

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) night landing and one (1) night takeoff
- PUI should conduct refueling

Prerequisites. ACAD-3045, ACPM-8310, 8311, TERF-2101 (ANSQ-2701~LLL)

External Syllabus Support. Actual or simulated FARP

Crew. NSI/PUI

EXP-3602 0.0 \* R D A/S\*-TEN 1 AH-1Z

Goal. OS - Conduct Reduced Visibility Landings (RVL)

Requirements

Discuss

Reduced visibility landing profile and CRM  
Use of HMSD & hover aid graphic symbology during approach,  
landing and takeoff  
Recommended waveoff parameters and use of HMSD  
Landing zone selection criteria

Demonstrate/Introduce

Reduced visibility landings  
Waveoffs

Review

Landings to an unimproved landing site.

Performance Standards

PUI shall conduct a minimum of one (1) RVL approach  
PUI shall conduct a minimum of one (1) reduced visibility takeoff  
PUI shall conduct a minimum of one (1) waveoff

Prerequisites. TERF-2100

Crew. BIP/PUI

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EXP-3603 0.0 120 R, SC, M NS A/S\*-TEN 1 AH-1Z

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

Requirements

Discuss

Reduced visibility landing profile and CRM  
Use of HMSD & hover aid graphic symbology during approach,  
landing and takeoff  
Recommended waveoff parameters and use of HMSD  
Landing zone selection criteria  
Aircraft lighting use  
Use of searchlight

Demonstrate/Introduce

NVD Reduced visibility landings  
Waveoffs

Review

Landings to an unimproved landing site.

Performance Standards

PUI shall conduct a minimum of one (1) RVL approach  
PUI shall conduct a minimum of one (1) reduced visibility takeoff  
PUI shall conduct a minimum of one (1) waveoff

Prerequisites. TERF-2100 (ANSQ-2701~LLL)

Crew. NSI/PUI

2.16 CORE PLUS ACADEMIC PHASE (4000)

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

2.16.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 AH-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 AH-1 Course Catalog is the master document for stage academic requirements.

2.16.3 Core Plus academic events are listed below.

<b>CORE PLUS ACADEMIC PHASE</b>	
<b>TRAINING CODES</b>	<b>COURSEWARE</b>
<b>GENERAL REQUIREMENTS</b>	
ACAD-4001	(S) Airborne Early Warning
<b>ESC</b>	
No Lectures	
<b>OAS</b>	
ACAD-4021	Review Raid Planning
ACAD-4022	Review Problem Framing
ACAD-4023	Review (S) Urban CAS
ACAD-4024	Review Objective Area Planning
ACAD-4025	Review ROE Planning
ACAD-4026	Review (S) RW OAS*
<b>AR/SCAR</b>	
ACAD-4027	Review HMLA AR & SCAR TTPs
<b>DACM</b>	
ACAD-4030	DACM Planning Considerations
ACAD-4031	DACM Parts 1-4
ACAD-4032	DACM Example RW Flight Brief
ACAD-4033	(S) RW Threat to the MAGTF
ACAD-4034	(S) Attack Helo Threat to RW A/C
ACAD-4035	(S) FW Threat to the MAGTF
ACAD-4036	(S) FW Threat to RW A/C
<b>CBRN</b>	
No Lectures	
<b>CQ</b>	
No Lectures	
*Indicates classes that should be presented to all pilots annually.	

2.17 CORE PLUS/MISSION PLUS PHASE (4000)

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

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

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

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

Completion of SCBRN-4400 meets the requirements for the PUI to be CBRN qualified. At the discretion of the squadron commanding officer a letter assigning the PUI as CBRN qualified shall be placed in the NATOPS jacket and APR.

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

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

	<b>CORE PLUS SKILL PHASE</b>
<b>PAR NO.</b>	<b>STAGE NAME</b>
2.17.3	Escort (ESC)
2.17.4	Close Air Support (CAS)
2.17.5	Armed Reconnaissance (AR)
2.17.6	Air Interdiction (AI)
2.17.7	Strike Coordination and Reconnaissance (SCAR)
2.17.8	Offensive Anti-Air Warfare (OAAW)
2.17.9	Rotary Wing Defensive Air Combat Maneuvering (RWDACM)
2.17.10	Fixed Wing Defensive Air Combat Maneuvering (FWDACM)
2.17.11	Chemical, Biological, Radiological and Nuclear Warfare (CBRN)
2.17.12	Carrier Qualified (CQ)

2.17.2.2 Ordnance Delivery. At the completion of this phase, the PUI will have demonstrated increased accuracy during ordnance delivery and proper use of the FLIR under medium to high threat conditions with mixed ordnance loads. For the Core Plus Skills Phase, the PUI shall meet the ordnance metrics outlined for the Mission Skill Phase (See Paragraph 2.15.4). VTR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

2.17.3 Escort (ESC)

2.17.3.1 Purpose. To refine proficiency in escort missions.

2.17.3.2 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 escort missions under varied environmental and higher threat conditions.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, FMV, 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 AH-1 Course Catalog.

ESC-4200 1.5 730 R,M (NS) A/S-TEN+ FFS/FTD 2 AH-1Z

Goal. OS - Refine armed escort responsibilities during assault support 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  
AIM-9 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. SL-6498

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. 2 or more assault support aircraft

Crew. WTI/PUI

2.17.4 Close Air Support (CAS)

2.17.4 Purpose. To refine proficiency in Close Air Support missions.

2.17.4 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.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, HMSD, VTR, FMV, APR-39, AAR-47, ALE-47 and IR Pointer (night events).

Actual fixed wing aircraft, TACP, and indirect fire assets should be incorporated to the maximum extent practicable, 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 AH-1 Course Catalog.

CAS-4201      1.5      730      R,M                      (NS)                      A/S-TEN+      2 AH-1Z

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

Requirements

Discuss

- Aircraft flight profiles
- Weapon selection
- Organic MAGTF EW capabilities and limitations
- RADAR Terrain Mask Analysis
- Assault support escort considerations
- Preemptive expendables use
- SEAD/DEAD employment
- GCE SOM integration
- Fires Synchronization Meeting/Combined Arms Rehearsal
- FAC(A) gameplan in 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) RW 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 mission briefs.
- PUI shall conduct all missions utilizing CAS procedures and communication.
- 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. SL-6498

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (200) rounds 20mm, (60) chaff/flares.

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

External Syllabus Support. JTAC with appropriate marking devices (if available)

Crew. WTI/PUI (TSI+WTI/PUI~SIM)

2.17.5 Armed Reconnaissance (AR)

2.17.5.1 Purpose. To refine proficiency in Armed Reconnaissance missions.

2.17.5.2 General. At the completion of this stage, the PUI will have demonstrated the ability to plan, brief, and locate/destroy TOO in the execution of AR missions under varied environmental and higher threat conditions.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, HMSD, VTR, FMV, 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 AH-1 Course Catalog.

AR-4205      1.5    730    R,M                      (NS)                      A                      2 AH-1Z

Goal. OS - Conduct an Armed Reconnaissance mission in a medium to high threat environment.

Requirements

Discuss

Threat RADAR planning considerations  
RADAR terrain masking and RADAR resolution cell (RRC)  
Global Area Reference System (GARS) & Kill boxes  
Named Areas of Interest (NAI)  
Target Areas of Interest (TAI)  
Modified Combined Obstacle Overlay (MCOO)  
High Value Target List (HVTL), High Payoff Target List (HPTL),  
Target Priority List (TPL), Reactive Attack Guidance Matrix  
(RAGM).  
Joint Surveillance Attack Target RADAR System (JSTARS)  
National imagery assets  
UAS/ISR integration

Review

IFREP/MISREP procedures  
Intelligence collection and dissemination procedures  
Battle Damage Assessment (BDA)

Performance Standards

PUI shall plan, brief and lead an armed reconnaissance mission in a medium to high threat environment.  
PUI shall achieve successful destruction of targets of opportunity (TOO) utilizing correct weapon to target match and standard weapons delivery profiles.  
IP shall validate, using the VTR, an effective PGM engagement of a point target.  
PUI shall consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. SL-6498

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm,  
(60) chaff/flares

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

Crew. WTI/PUI

2.17.6 Air Interdiction (AI)

2.17.6 Purpose. To refine proficiency in AI missions.

2.17.6 General. At the completion of this stage, the PUI will have  
demonstrated the ability to plan, brief, and destroy known targets in the  
execution of AI missions under varied environmental and higher threat  
conditions.

Aircraft should be configured with an operable FLIR, PGM system,  
CLDR, HMSD, VTR, FMV, 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 AH-1 Course Catalog.

AI-4206      1.5      730      R,M                      (NS)                      A                      2 AH-1Z

Goal. OS - Conduct an Air Interdiction 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 Estimate (CDE)  
Positive Identification (PID)  
Theater Air Control System (TACS)  
Target Location Error (TLE)

Review

Primary purpose of AI  
AI Planning considerations  
RADAR Terrain Mask analysis  
ROE/PID considerations in flight  
JMEMs/JWS  
Weapon to target match  
High, medium, and low threat levels

Performance Standards

PUI shall plan, brief and lead an AI mission in a medium to high  
threat environment.

All attacks shall utilize planned routes, BPs, and FPs as  
applicable.

PUI shall properly employ all ASE IAW AH-1Z NTTP/NTRP.  
PUI shall achieve successful destruction of selected known targets utilizing proper weapon to target engagements and weaponeering.  
PUI shall achieve the desired effects (as stipulated by the mission objectives) with timely, accurate engagements with minimal exposure time.  
IP shall validate, using the VTR, an effective PGM engagement of a point target.  
PUI shall consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. SL-6498

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

Crew. WTI/PUI

#### 2.17.7 Strike Coordination and Reconnaissance (SCAR)

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

2.17.7.2 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 FLIR, PGM system, CLDR, FMV, 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 AH-1 Course Catalog.

SCAR-4207 1.5 730 R,M (NS) A/S-TEN+ 2 AH-1Z

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)

##### Review

- Targeting process
- Joint Surveillance 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 AH-1Z 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 the VTR, an effective PGM engagement of a point target.  
Consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. DESG-6498

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (200) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. 2 OAS aircraft

Crew. WTI/PUI (TSI+WTI/PUI~SIM)

2.17.8 Offensive Anti-Air Warfare (OAAW)

2.17.8.1 Purpose. To refine proficiency in OAAW missions.

2.17.8.2 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 OAAW missions under varied environmental and higher threat conditions.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, FMV, HMSD, VTR, APR-39, ALE-47 and IR Pointer (night events).

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

Ground/Academic Training. ACAD-4020, IAW the MAWTS-1 Course Catalog.

OAAW-4209 2.0 730 R,M (NS) A/S-TEN+ 2 AH-1Z

Goal. OS - Conduct an Offensive Anti-Air Warfare (OAAW) mission in medium to high threat environment.

Requirements

Discuss

Definition of OAAW  
OAAW characteristics  
OAAW tasks & principles  
Types of OAAW missions

Intelligence Preparation of the Battlefield (IPB)

Review

Organic MAGTF EW Capabilities and Limitations  
Suppression of Enemy Air Defense  
Destruction of Enemy Air Defense  
JMEmS/JWS  
Weapon to target match  
High Value Target (HVT) list, High Payoff Target List (HPTL),  
Target Priority List (TPL) & Reactive Attack Guidance Matrix  
(RAGM).  
Time critical targets (TCT)

Demonstrate/Introduce

Preemptive and reactive OAAW targeting  
Time critical target attacks  
Reactive and preplanned SEAD

Performance Standards

PUI shall plan, brief and lead as Rotary Wing OAAW mission commander  
in a medium to high threat environment.  
Properly employ all ASE IAW AH-1Z NTTP/NTRP.  
Successful destruction of selected known targets utilizing proper  
weapon to target engagements and weaponeering.  
Achieve the desired effects (as stipulated by the mission  
objectives) with timely, accurate engagements with minimal  
exposure time.  
Validate, using TSS, VTR, an effective PGM engagement of a point  
target.  
Consolidate BDA and pass through appropriate MACCS channels.

Prerequisites. ACPM-8300, AI-4206, SCAR-4207

Ordnance. (1) captive PGM, (1) CATM-9, (60) chaff/flares

Range Requirements. Live fire and LASER safe range.

Crew. WTI/PUI.

2.17.9 Rotary Wing DACM (RWDACM)

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

2.17.9.2 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 operable TSS, HMSD,  
captive AIM-9, 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 AH-1 Course Catalog.

DACM-4300 1.5 485 R,M D A 2 AH-1Z

Goal. OS - Introduce outside weapons parameters air-to-air tactics.

Requirements

Discuss

Crew coordination considerations  
Aircraft control characteristics  
DACM flight leadership considerations  
Section tactics and gameplan  
V-Pole  
Inside weapons parameters vs. outside weapons parameters  
AIM-9

Demonstrate/Introduce

Outside weapons parameters air combat maneuvering.

Performance Standards

PUI shall conduct one complete line number sequence (from both friendly and bandit roles).  
PUI shall demonstrate appropriate tactics to engage adversary aircraft outside weapons parameters.

Prerequisites. SSWD-2603

Ordnance. (1) CATM-9, (30) flares

External Syllabus Support. Designated TERF area. High bird required for engagements greater than 1 v 1.

Crew. WTO/PUI

DACM-4301 1.0 \* SC D A 1 AH-1Z & 1 H-1

Goal. FS - 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  
V-Pole  
DACM training rules  
Control zone maneuvering  
Crew coordination considerations  
Aircraft control characteristics  
DACM flight leadership considerations

Introduce

A/C capabilities/limitations

Adversary 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 threat reactions to RW attacks.

Prerequisites. TERF, STCT-2201, SREC-2300, SSWD-2603

Ordnance. (1) CATM-9, (30) flares and TCTS pod (as required)

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

Crew. RW DACMI/PUI

DACM-4302 1.0 \* D A 1 AH-1Z 1 H-1

Goal. RS - Introduce 2 v 1 RWDACM

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 A/C  
Control zone maneuvering and the weave

Review

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

Prerequisites. DACM-4301

Ordnance. (1) CATM-9, (30) flares and TCTS pod (as required)

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

Crew. RW DACMI/PUI

DACM-4303 2.0 485 R,M D A 1 AH-1Z & 1 H-1

Goal. OS - Review 1 v 1 and 2 v 1 RWDACM

Requirements

Discuss

Crew coordination considerations  
Aircraft control characteristics  
DACM flight leadership considerations  
Section tactics and gameplan  
Roles and responsibilities of free and engaged A/C  
Control zone maneuvering and the weave

Review

Energy Maneuverability (EM)  
Specific excess power (Ps)  
Em & Ps tactical considerations  
High and low yo-yo  
Yo-Yo counter-tactics  
Weapons employment rules of thumb  
Range estimation techniques  
Line number setups  
V-Pole  
DACM training rules

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.

Prerequisites. ACAD-3013, 4030 through 4034, DACM-4302

Ordnance. (1) CATM-9, (60) flares and TCTS pod (as required)

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

Crew. RW DACMI/PUI

2.17.10 Fixed-Wing Defensive Air Combat Maneuvering (FWDACM)

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

2.17.10.2 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 TSS, HMSD, captive AIM-9, 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 AH-1 Course Catalog.

DACM-4304 1.0 \* SC D A 1 AH-1Z

Goal. FS - Perform 1 v 1 DACM against a FW adversary.

Requirements

Discuss

FW capabilities/limitations  
Weapon envelopes and tactics of adversary FW aircraft  
Tactical advantages derived from Ps/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 FW aircraft

Review

AIM-9 switchology and delivery

Performance Standards

PUI shall conduct a minimum of one (1) line number sequence.  
PUI shall execute proper switchology for AIM-9 employment by  
simulating a missile launch after achieving appropriate missile  
employment constraints.  
PUI shall execute proper reactions to FW threat attacks.

Prerequisites. TERF, STCT-2201, SREC-2300, SSWD-2603

Ordnance. (1) CATM-9, (60) flares and TCTS pod (as required)

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

Crew. FW DACMI/PUI

DACM-4305 1.0 485 R,M D A 2 AH-1Z

Goal. RS - Introduce 2 v 2 DACM against FW adversaries.

Requirements

Discuss

FW capabilities/limitations  
FW threat counter-tactics  
Ps/EM of threat/friendly aircraft  
FW DACM training rules

2 v 2 FW DACM line number set-up

Demonstrate/Introduce

RW section game plan  
RW v FW weapons employment  
Aircraft/section control  
Section awareness and communication  
DACM flight leadership

Performance Standards

PUI shall complete a minimum of one (1) line number sequence as lead and as wingman.

PUI shall execute proper switchology for AIM-9 employment by simulating a missile launch after achieving appropriate missile employment constraints.

PUI shall execute proper reactions to FW threat attacks.

Prerequisites. ACAD-4030 through 4032, 4035, 4036, DACM-4304

Ordinance. (1) CATM-9, (60) flares and TCTS pod (as required)

External Syllabus Support. 2 FW adversary and appropriate air-to-air training area

Crew. FW DACMI/PUI

2.17.11 Chemical, Biological, Radiological and Nuclear warfare (CBRN)

2.17.11.1 Purpose. To introduce the pilot to operations while wearing the aviator's CBR protective mask.

2.17.11.2 General. This event is designed to expand the capabilities of the aircrew in CBR operations.

Crew requirements. As listed at the end of the event.

Ground/academic training. Review appropriate section of AH-1Z NTRP on the CBRN protective mask prior to flight. The pilot will complete the protective mask familiarization lecture and aircraft egress with mask. Discuss capabilities and disadvantages of the mask to include emergency procedures. Review all MOPP conditions.

SCBRN-4400 1.0 \* R,M D/NS FFS/FTD S/A 1 AH-1Z

Goal. OS - CBR Protective mask introduction.

Requirements

Discuss

Advantages & disadvantages CBR protective mask  
CBR Protective Mask components and operation  
Psychological effects  
Operating in a CBRN environment  
Emergency procedures while using the CBR protective mask  
Emergency egress  
MOPP considerations  
NVD considerations

Battery failure

Demonstrate/Introduce

Wear of the CBR protective mask while conducting FAM maneuvers.

Performance standards

PUI shall perform all maneuvers IAW AH-1Z MDG and NATOPs.

PUI shall complete 5 autorotations IAW the AH-1Z MDG and NATOPs.

Prerequisites. (TERF-2101~AC)

Crew. TSI+NSI/PUI (NSI/PUI~AC)

2.17.12 Carrier Qualification (CQ)

2.17.12.1 Purpose. To introduce day and night flight operations from a carrier deck or air capable ship.

2.17.12.2 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 with each stage the pilot may be Day CQ, 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 AH-1 Course Catalog.

CQ-4600      1.0    365    R,SC            D                    A            1 AH-1Z

Goal. FS - 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 AH-1Z 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. FCLP-2501

External Syllabus Support. Landing platform afloat

Crew. BIP/PUI

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CQ-4601	1.0	365	R,SC,M	NS	A	1 AH-1Z
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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 AH-1Z NATOPS and shipboard NATOPS manuals.  
PUI should conduct one (1) 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. NSQ, FCLP-2502, CQ-4600

External Syllabus Support. Landing platform afloat

Crew. NSI/PUI

CQ-4602 1.0 365 R, SC N\* A 1 AH-1Z

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 AH-1Z NATOPS and shipboard NATOPS manuals.

PUI should conduct one (1) precision and one (1) non-precision approach, if available.

Prerequisites. FCLP-2502, CQ-4600

External Syllabus Support. Landing platform afloat

Crew. BIP/PUI

2.18 INSTRUCTOR UNDER TRAINING ACADEMIC PHASE (5000)

2.18.1 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.

2.18.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 AH-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 AH-1 Course Catalog is the master document for stage academic requirements.

2.18.3 Instructor Under Training academic events are listed below.

<b>INSTRUCTOR UNDER TRAINING ACADEMIC PHASE</b>	
<b>TRAINING CODES</b>	<b>COURSEWARE</b>
<b>GENERAL REQUIREMENTS</b>	
No Lectures	
<b>BIP</b>	
ACAD-5001	Training Management
ACAD-5002	Instructor Philosophy
ACAD-5003	Coach or Umpire
ACAD-5004	Student Trends
ACAD-5005	Briefing/Debriefing
<b>TERFI</b>	
ACAD-5011	Review H-1 Aerodynamics
ACAD-5012	How to Write an ATF
ACAD-5013	Instructional Standardization
<b>WTO</b>	
ACAD-5020	Review Lectures from TCT, REC, SWD, ESC and CAS stages
ACAD-5021	IUT will present a chalk talk or lecture
ACAD-5022	How to Give a Quality X
ACAD-5023	How to Build a Scenario
<b>TSI</b>	
ACAD-5026	AH-1Z IOS
ACAD-5027	TSI Introduction
ACAD-5028	Tactical Simulator Scenarios
<b>CSI</b>	
Refer to MATSS provided courseware	
<b>FRSI</b>	
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
<b>FRS-SI</b>	
ACAD-5070	Fleet Replacement Squadron Standardization Instructor Course (FRS-SIC)
* Indicates classes that should be presented to all pilots annually.	

2.19 INSTRUCTOR TRAINING PHASE (5000)

2.19.1 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.

2.19.2 General. Upon completion of this phase of training the IUT may be designated a BIP, TERFI, WTO, TSI, CSI, FRSI, FRS-SI, FAC(A)I, DACMI, 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 the 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 TSI stage meets the requirements for the IUT to be designated a TSI. At the discretion of the squadron commanding officer a letter designating the IUT as a TSI 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 squadron commanding officer a letter designating the IUT as a FRSI shall be placed in the NATOPS jacket and APR.

Completion of the FRS-SI stage meets the requirements for the IUT to be designated a FRS-SI. At the discretion of the squadron commanding officer a letter designating the IUT as a FRS-SI shall be placed in the NATOPS jacket and APR.

Refer to the MAWTS-1 AH-1 Course Catalog for FAC(A)I, DACMI, 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 technique and briefing and debriefing procedures.

2.19.2.1 Stages. The following stages are included in the Instructor Phase of training.

INSTRUCTOR PHASE	
PAR NO.	STAGE NAME
2.19.3	Basic Instructor Pilot (BIP)
2.19.4	Terrain Flight Instructor (TERFI)
2.19.5	Weapons Training Officer (WTO)
2.19.6	Tactical Simulator Instructor (TSI)
2.19.7	Contract Simulator Instructor (CSI)
2.19.8	Fleet Replacement Squadron Instructor (FRSI)
2.19.9	Fleet Replacement Squadron Standardization Instructor (FRS-SI)
2.19.10	Forward Air Controller (Airborne) Instructor [FAC(A)I]
2.19.11	Night Systems Familiarization Instructor (NSFI)
2.19.12	Defensive Air Combat Maneuvering Instructor (DACMI)
2.19.13	Night Systems Instructor (NSI)
2.19.14	Flight Lead Standardization Evaluator (FLSE)

2.19.2.2 Ordnance Delivery. For ordnance accuracy metrics, refer to paragraph 2.19.5.

2.19.3 Basic Instructor Pilot (BIP)

2.19.3.1 Purpose. To qualify the IUT to instruct basic FAM, INST, FORM, FCLP, and CQ.

2.19.3.2 General. To instruct CQ, IUT must meet currency requirements outlined in OPNAVINST 3710.7.

Aircraft should be equipped with an operable HMSD.

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

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

SBIP-5100	1.5	*	R,SC	D	FFS/FTD	1 AH-1Z
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Goal. OS - Emergency procedures standardization.

Requirements

Discuss

- Cockpit indications of all emergencies
- Instructor techniques
- CRM skills and behaviors
- ORM management as an instructor
- Human factor errors

Demonstrate/Introduce

- Procedures for running simulator

Review

- Systems failures
- Emergency procedures
- Full/power recovery autorotations

Aircrew responsibilities

Performance Standards

IUT shall demonstrate the ability to operate the aircraft under all emergency conditions per AH-1Z NATOPS.

IUT shall demonstrate a thorough knowledge of aircraft systems, emergency procedures and MDG procedures.

Utilizing a co-pilot, IUT shall demonstrate the ability to analyze and instruct proper responses & CRM during aircraft emergency procedures.

Prerequisites. DESG-6398

External Syllabus Support. Device operator

Crew. TSI/IUT/co-pilot

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SBIP-5101 1.5 \* D FFS/FTD S-TEN/A 1 AH-1Z

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Goal. OS - Instruct all FAM stage maneuvers and CQ procedures with emphasis on standardization IAW the AH-1Z NATOPS, MDG and LHA/LHD NATOPS.

Requirements

Discuss

Instructional techniques

Common PUI mistakes

FAM stage maneuvers IAW with the AH-1Z NATOPS & MDG

FCLP and CQ procedures

Review

Knowledge of AWE, TAMMAC

Local course rules

All FAM stage maneuvers

Shipboard operations

Performance Standards

IUT shall complete five (5) autorotations IAW the AH-1Z NATOPS and MDG.

IUT shall conduct a minimum of two (2) day CQ landings per the AH-1Z NATOPS and shipboard NATOPS manuals.

Utilizing a co-pilot, IUT shall demonstrate the ability to analyze and instruct proper CRM and FAM maneuvers emphasizing error analysis.

Prerequisites. SBIP-5100

External Syllabus Support. Device operator. If flown in the aircraft:  
FCLP pad

Crew. TSI/IUT/co-pilot (WTO/IUT~AC)

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SBIP-5102 1.5 \* (N\*) FFS/FTD S-TEN/A 1 AH-1Z

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Goal. OS - IUT will demonstrate the ability to instruct in the instrument flight regime.



Performance Standards

The IUT shall brief and lead the flight.  
The IP will act as the PUI for a portion of the parade and tactical sequences.  
The IUT shall demonstrate all formation stage maneuvers with emphasis on instructional technique, accurate maneuver description, formation signals and parade/tactical formation maneuvering.  
IUT shall properly perform all briefed maneuvers from both lead and wingman position IAW the AH-1Z NATOPS, NTPP and MDG.  
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.

Prerequisites. SBIP-5100

Crew. WTO/IUT

BIP-5104 1.5 \* R,SC D A 1 AH-1Z

Goal. OS - IUT will demonstrate the ability to accurately identify and correct PUI BAW errors, tendencies and procedural errors during FAM maneuvers.

Requirements

Discuss

Error detection and correction techniques  
OPNAVINST 3710.7 chapters 3-8, and 13  
Aviation Training Jacket (ATJ) requirements and organization  
NATOPs Jacket requirements and organization

Demonstrate/Introduce

Error detection, correction of airwork and procedural deficiencies

Performance Standards

IP will act as the PUI.  
IUT shall satisfactorily demonstrate the ability to recognize, analyze and correct all errors through demonstration or verbal commands.

Prerequisites. BIP-5101-5103

Crew. WTO/IUT

2.19.4 Terrain Flight Instructor (TERFI)

2.19.4.1 Purpose. To qualify the IUT as a TERF instructor.

2.19.4.2 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.

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

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

STERF-5110 1.5 \* D FFS/FTD S-TEN/A 1 AH-1Z

Goal. OS - Review all TERF maneuvers and profiles.

Requirements

Discuss

Crew coordination  
Comfort level  
Common PUI mistakes  
Map preparation  
Low altitude emergencies  
Single engine operation

Review

All TERF maneuvers  
Tactical decisions to fly TERF  
Threat considerations that influence TERF profiles

Performance Standards.

Utilizing a co-pilot, IUT shall satisfactorily demonstrate the ability to recognize, analyze and correct all errors through demonstration or verbal commands.

Prerequisites. ACAD 5011 through 5013, BIP-5104

External Syllabus Support. Authorized TERF maneuvering area

Crew. TSI/IUT/co-pilot (WTO/IUT~AC)

TERF-5111 1.5 \* R D A 1 AH-1Z & 1 H-1

Goal. OS - Instruct TERF navigation, maneuvers, profiles and procedures.

Requirements

Discuss

TERF navigation techniques and procedures  
CRM in the TERF environment  
Comfort level  
Terrain flight illusions and hazards

Review

Boundary features  
Intermediate checkpoints  
EGI navigation functions

Performance Standards

IUT shall plan, brief and lead the flight.  
IUT shall navigate in low level, contour and NOE profile, 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 onboard navigation systems 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 AH-1Z NATOPS, MDG and NTTP.

Prerequisites. STERF-5110

External Syllabus Support. Authorized TERF route

Crew. WTO/IUT

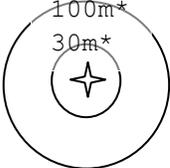
2.19.5 Weapons Training Officer (WTO)

2.19.5.1 Purpose. To qualify the IUT as a WTO.

2.19.5.2 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, TSI, NSFI, NSI, DACMI, or WTI qualifications. As such, the WTO shall demonstrate 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 TSS under all threat conditions with mixed ordnance loads. At the completion of the WTO syllabus, prior to WTO designation, the PUI shall refly SWD-2605 and will be required to meet the instructor under training accuracy metric. SWD should be conducted on rated/scored ranges whenever possible. Focus should be on weapons delivery profiles and ordnance accuracy, not tactical scenarios. VTR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

IPs shall evaluate ordnance effectiveness based on the following accuracy metrics.

CORE PLUS SKILLS	UNGUIDED ROCKET STANDARD	GUN STANDARD	PURPOSE
 <p>*Radius</p>	<ul style="list-style-type: none"> <li>-In correct profile per NTTP</li> <li>-No miss greater than 100 meters</li> <li>-CE90&lt;30 meters**</li> <li>-(1) rocket per pass must impact within 10 meters</li> </ul>	<ul style="list-style-type: none"> <li>-On target within 3 seconds of trigger pull</li> </ul>	<ul style="list-style-type: none"> <li>-Based upon M151 Effective Casualty Radius (ECR) ***</li> <li>-Demonstrates the capacity to instruct Specific Weapons Delivery</li> </ul>

\*\* CE90 example: SWD-2605 requires (7) 2.75" rockets. CE90<sub><</sub>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. This constitutes failure to meet performance standards.

\*\*\* 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.

PGMs - Correct switchology, proper LASER placement, profile IAW AH-1 NTP direct hit.

TOTs - Initial ordnance impacts delivered within ± 30 seconds of established TOT.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, FMV, HMSD, VTR, APR-39, AAR-47 and ALE-47.

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

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

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SWTO-5200 1.5 \* R,SC D FFS/FTD S-TEN 1 AH-1Z

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Goal. OS - Review all AH-1Z systems (weapons, ASE, navigation, sensors).

Requirements

Discuss

- AH-1Z Targeting Sight System components, operation, and malfunctions
- AH-1Z navigation system, with emphasis placed on setup and operation for target engagement
- TRM/CRM and instructor techniques during ordnance delivery
- Weapons systems malfunctions
- Common Switchology Errors
- Weapons delivery and error analysis
- How to build a scenario
- How to give a quality X
- Instructing vs. evaluating

Review

All weapons systems components, operation and employment (e.g. APKWS, flechette, PGMs)  
Ordnance delivery from low and medium altitude profiles

Performance Standards

Utilizing a co-pilot, demonstrate instructional techniques to correct weapons delivery errors working towards instructor under training accuracy metric.  
IUT will identify and correct ordnance systems malfunctions and switchology problems.  
Emphasize CRM during weapons delivery and weapons troubleshooting.

Prerequisites. TERF-5111

External Syllabus Support. Device operator

Crew. TSI+NSI/IUT/co-pilot

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SWTO-5201 1.5 \* D FFS/FTD S-TEN/A 1 AH-1Z

Goal. OS - Review all AH-1Z systems (weapons, ASE, navigation, sensors).

Requirements

Discuss

All weapons systems components, operation and employment  
All ASE components, operation, and malfunctions  
TRM/CRM and instructor techniques during ordnance delivery  
Weapons systems malfunctions  
Common Switchology Errors  
Weapons delivery and error analysis

Review

All weapons systems components, operation and employment, with emphasis placed on systems malfunctions, switchology errors, common PUI errors, and weapons delivery error analysis

Performance Standards

Utilizing a co-pilot, demonstrate instructional techniques to correct weapons delivery errors working towards instructor under training accuracy metric.  
IUT will identify and correct ordnance systems malfunctions and switchology problems.  
Emphasize CRM during weapons delivery and weapons troubleshooting.

Prerequisites. SWTO-5200

External Syllabus Support. Device operator

Crew. TSI+NSI/IUT/co-pilot

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WTO-5202 1.5 \* D A 1 AH-1Z & 1 H-1

Goal. OS - Review SWTO-5200 in the aircraft with emphasis on instructional techniques.

Requirements

Discuss

Standardized attack terminology and communication  
CRM and instructor techniques during ordnance delivery  
Range procedures for local ranges

Demonstrate

Instructional techniques in the employment of all weapon systems  
during a SWD flight  
Common attack patterns errors and misconceptions  
Common PUI cockpit mistakes and switchology errors

Review

All weapons systems components, operation and employment (e.g.  
APKWS, flechette, PGMs)  
Ordnance delivery from low and medium altitude profiles

Performance Standards

IP will act as the PUI.  
IUT will have a thorough understanding of all weapon systems,  
switchology, system malfunctions and failures.  
IUT will ensure that all ordnance is delivered IAW published range  
regulations and squadron SOPs.  
IUT shall employ instructional techniques to correct weapons  
delivery errors working towards instructor under training  
accuracy metric.  
IUT shall identify and correct ordnance systems malfunctions and  
switchology problems.

Prerequisites. SWTO-5201

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm,  
(30) chaff/flares

Crew. NSI/IUT

WTO-5203 1.5 \* R,SC D E A 2 AH-1Z

Goal. OS - Demonstrate the ability to instruct a tactical event with  
emphasis on instructional techniques and tactics standardization.

Requirements

Discuss

Terrain flight ordnance delivery techniques  
CRM and instructor techniques during tactical missions

Review

All weapons systems components, operation and employment  
Instructional techniques in the employment of all weapon systems  
during a tactical flight  
Common attack patterns errors and misconceptions  
Common PUI cockpit mistakes and switchology errors

Performance Standards

IUT will plan, brief and lead the flight under a tactical scenario. The IP will act as the PUI.

IUT will ensure that all ordnance is delivered IAW published range regulations and squadron SOPs.

IUT will properly identify and correct weapons switchology errors initiated by the IP and meet the instructor under training accuracy metrics listed above.

Demonstrate knowledge and instructional techniques in all weapons training areas including the MACCS, FSCMs, escort, electronic warfare, intercept procedures, PGM delivery, weaponing and crew coordination.

Prerequisites. WTO-5202

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (30) chaff/flares

Range Requirement. Live fire and LASER safe range

Crew. NSI/IUT

2.19.6 Tactical Simulator Instructor (TSI)

2.19.6.1 Purpose. To qualify the IUT as a TSI capable of providing tactical simulation training in the AH-1Z FFS/FTD.

2.19.6.2 General. IUT shall be in the BIP syllabus prior to beginning TSI training and shall be designated a WTO prior to designation as a TSI. Designated BIPs who are STSI-5210 complete may instruct the SFCLP-2500 event in the simulator.

The TSI is qualified to instruct all phases of flight simulation except those requiring FAC(A)I, NSFI, NSI, DACMI, or WTI qualifications. The TSI shall demonstrate sound knowledge of all aircraft weapons systems, threat systems, and current tactics, techniques and procedures.

The IUT will assist in developing, controlling and instructing tactical simulator events designed to meet the performance requirements of the Core Skills Phase, Mission Skills Phase and Core Plus/Mission Plus Skills Phase simulator events.

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

Ground/Academic Training. IAW MAWTS-1 AH-1 Course Catalog & MATSS provided training requirements.

STSI-5210 1.5 \* R D FFS/FTD S-TEN 1 AH-1Z

Goal. Simulator control position - Introduce simulator control functions and capabilities.

Requirements

Discuss

Learning objectives



IUT shall select and control enemy threat systems.  
IUT shall select and control friendly systems.

Prerequisites. STSI-5210

Crew. MATSS-TSI/IUT/co-pilot

#### 2.19.7 Contract Simulator Instructor (CSI)

2.19.7.1 Purpose. To develop qualified Contract Simulator Instructors (CSIs) using a standardized instructor program. This syllabus is designed to prepare CSIs to instruct Core Skills Introduction Phase, and select Core Skills Phase, events in the simulator.

2.19.7.2 General. CSIs will complete all events in the simulator. The events may be conducted from the simulator command position (CP) or the designated AH-1Z crew position at the discretion of the IP.

CSIs shall conduct CSI-5300 and 5301 with a designated NATOPS Instructor or Assistant NATOPS Instructor.

CSIs shall conduct CSI-5302, 5303 with a designated WTI.

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

Ground/Academic Training. IAW MAWTS-1 AH-1 Course Catalog and MATSS provided training requirements.

SCSI-5300	1.5	365	M	D	E	FFS/FTD S-TEN	1	AH-1Z
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Goal. OS - Emergency procedures & FAM stage standardization.

#### Requirements

##### Discuss

- Cockpit indications of all emergencies
- Aircraft limitations
- Aircraft systems
- MDG FAM maneuvers and systems failures
- Day/Night shipboard patterns

##### Review

- Systems failures
- Emergency procedures
- Full/power recovery autorotations
- Aircrew responsibilities
- All FAM stage maneuvers
- Shipboard specific crew coordination
- Shipboard airspace

#### Performance Standards

IUT shall demonstrate the ability to operate the aircraft under all emergency conditions per AH-1Z NATOPS.  
IUT shall demonstrate a thorough knowledge of aircraft systems, emergency procedures and MDG procedures.  
IUT shall emphasize CRM during emergency procedures execution.  
IUT shall perform all maneuvers IAW AH-1Z MDG and NATOPS.

IUT shall conduct a minimum of 2 day and 2 night shipboard landings per the AH-1Z NATOPS and shipboard NATOPS manuals.

Prerequisites. Candidate CSI

Crew. NI or ANI/IUT

SCSI-5301 1.5 365 M (N\*) E FFS/FTD S-TEN 1 AH-1Z

Goal. OS - Instrument Standardization.

Requirements

Discuss

- Applicable instrument publications
- Instrument flight checklist
- Instrument flight procedures
- Instructional techniques
- Squadron flight operations SOP

Review

- IFR flight planning and enroute procedures

Performance Standards

- IUT shall satisfactorily demonstrate the ability to execute, analyze and correct all standard instrument maneuvers under simulated IMC conditions IAW AH-1Z NATOPS and MDG.
- IUT shall maintain established BAW parameters.
- IUT shall conduct a minimum of 3 instrument approaches (1 precision, 2 non-precision).

Prerequisites. Candidate CSI

Crew. NI or ANI/IUT

SCSI-5302 1.5 365 M D E FFS/FTD S-TEN 1 AH-1Z

Goal. OS - Introduce ASE functionality and operation.

Requirements

Discuss

- ASE suite operation (NATOPS checklists, visual displays and audio messages for power on and BIT).
- AWE threat database
- Expendables
  - Nomenclature (training and tactical)
  - General purpose/applicable threat types
- AAR-47 and APR-39
  - General purpose/applicable threat types
  - Displays, controls, detectors and other components
  - Visual and audio threat information
  - Automatic and manual threat reaction capabilities & operation
  - APR-39, AAR-47, and ALE-47 integration
  - AAR-47 operating environment & principles of operation
  - Software - version reporting & significance
- ALE-47

General purpose  
Controls, displays and other components  
System modes of operation  
BIT, maintenance BIT and failure messages  
MAG ID setting, reporting and implications  
Dispense switch function

Demonstrate

RADAR search, acquire, track and launch visual and audio indications  
Successful IR missile, RADAR missile and RADAR ADA engagement and indications  
Automatically and manually dispense chaff to disrupt RADAR threat engagement  
Automatically and manually dispense flares to disrupt IR missile engagement  
Time permitting, execute ASTACSOP threat reactions (communication, maneuvering, and expendables) to visually acquired non-RADAR ADA, RADAR ADA, RADAR SAMs and IR SAMs.

Introduce

ASE suite power on, BIT, settings and power off per NATOPS and TPG checklists  
ASE suite cockpit control switchology and related display information (EW page setup)  
Inventory reset  
Threat intervisibility

Performance Standards

IUT shall successfully operate (energize and BIT) and troubleshoot APR-39, AAR-47 and ALE-47 systems. Observe various threat system indications.  
IUT shall load a mission card with editable points from a local database and threats as directed by IP.  
IUT shall load a vector overlay with threat rings.

Prerequisites. ACAD-1012, Candidate CSI

Crew. WTI+TSI/IUT

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SCSI-5303	1.5	365	M		D	E	FFS/FTD S-TEN	1 AH-1Z
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Goal. OS - Review specific weapons delivery.

Requirements

Discuss

Rocket and fixed 20mm range settings  
Rocket and 20mm trouble shooting considerations  
SOP ordnance procedures  
Target/reticle fixation  
CRM during ordnance evolutions  
Flechette rocket delivery profiles  
Illumination delivery profiles  
Hellfire switchology and delivery  
AIM-9 switchology and delivery

Review

Rocket and 20mm ordnance emergencies  
HMSD symbology  
20mm fixed forward using running, pop-up, and diving fire  
Rocket delivery using pop-up, and diving fire per the NTTP.

Performance Standards

IUT shall successfully employ the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch HE rockets at ranges from 500-2000 meters, exhibiting proper impact detection and adjustment, working towards core skill accuracy metric while adhering to all range regulations.

Prerequisites. Candidate CSI

Crew. WTI+TSI/IUT

2.19.8 Fleet Replacement Squadron Instructor (FRSI)

2.19.8.1 Purpose. To certify the IUT as a Fleet Replacement Squadron Instructor capable of instructing Core Skills Introduction Phase events. Emphasis will be placed on instructor proficiency, training standardization, and aircraft recovery from various regimes.

2.19.8.2 General. IUT must have been designated WTO prior to beginning FRSI training. If an IUT needs a refresher syllabus, IUT must be designated PQM prior to beginning FRSI training. The IUT may be designated to instruct within the Core Skills Introduction Phase once complete with all related FRSI events for that stage.

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

Ground/Academic Training. IAW HMLAT-303 FRS Course Catalog.

SFRSI-5310	1.5	*	D	FFS/FTD S-TEN	1 AH-1Z
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Goal. RS - Emergency procedures review.

Requirements

Discuss

RAC tendencies on CRM/EP sims

Review

Engine driven suction pump failure  
Single engine failure  
Dual engine failure at high power and airspeed  
Dual engine failure in flight  
Rotor brake pressurized 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 AH-1Z NATOPS and MDG.

Prerequisites. WTO-5203

Crew. CSI or FRSI/IUT

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FRSI-5311 2.0 \* D A 1 AH-1Z

Goal. RS - Review familiarization maneuvers

Requirements

Discuss

FAM stage RAC tendencies

Review

Fixed pitch tail rotor malfunctions  
Collective control interference  
High speed low level autorotation  
Waveoff procedures  
Confined/unimproved area landings  
Confined/unimproved area takeoff  
Slope landing and takeoff  
20 to 30 degree dives  
DECU lockout  
Sliding landings  
Single Engine Failure (Rwy, spot, away from pattern)  
High altitude emergencies  
Pattern autorotations  
Hovering/Taxiing autorotations  
Maximum power takeoff  
High Speed Approach and Landing  
No hover takeoff  
No hover landings  
Precision (steep) approach  
Normal Approach  
Normal takeoff  
Low work  
Course rules/area fam

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.

IUT shall demonstrate a high level of proficiency in all maneuvers before proceeding to FRSI-5312.

Prerequisites. FRSI-5310

Crew. FRSI/IUT

FRSI-5312 2.0 \* D A 1 AH-1Z

Goal. FS - Review familiarization maneuvers

Requirements

Discuss

FAM stage RAC tendencies

Review

Fixed pitch tail rotor malfunctions  
Collective control interference  
High speed low level autorotation  
Waveoff procedures  
Confined/unimproved area landings  
Confined/unimproved area takeoff  
Slope landing and takeoff  
20 to 30 degree dives  
DECU lockout  
Sliding landings  
Single Engine Failure (Rwy, spot, away from pattern)  
High altitude emergencies  
Pattern autorotations  
Hovering/Taxiing autorotations  
Maximum power takeoff  
High Speed Approach and Landing  
No hover takeoff  
No hover landings  
Precision (steep) approach  
Normal Approach  
Normal takeoff  
Low work  
Course rules/area fam

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.  
IUT shall demonstrate a high level of proficiency in all maneuvers before proceeding to FRSI-5313.

Prerequisites. FRSI-5311

Crew. FRSI/IUT

FRSI-5313 2.0 \* D E A 1 AH-1Z

Goal. FS - Familiarization evaluation

Requirements

Discuss

Standardization regarding FAM stage demonstrate items  
Risk mitigation during high risk maneuvers.  
FAM event time management.  
Any NATOPS EP, system, limit, or MDG FAM stage procedure.

Review

Fixed pitch tail rotor malfunctions  
Collective control interference  
High speed low level autorotation  
Waveoff procedures  
Confined/unimproved area landings  
Confined/unimproved area takeoff  
Slope landing and takeoff  
20 to 30 degree dives  
DECU lockout  
Sliding landings  
Single Engine Failure (Rwy, spot, away from pattern)  
High altitude emergencies  
Pattern autorotations  
Hovering/Taxiing autorotations  
Maximum power takeoff  
High Speed Approach and Landing  
No hover takeoff  
No hover landings  
Precision (steep) approach  
Normal Approach  
Normal takeoff  
Low work  
Course rules/area fam  
Crew Brief  
Mission brief

Performance Standards.

IUT shall have a detailed understanding and functional knowledge of  
all procedures and maneuvers IAW the AH-1Z NATOPS and MDG.  
IUT shall give mission and crew brief. IP to act as RAC.

Prerequisites. FRSI-5312

Crew. ASI/IUT

FRSI-5314    2.0    \*        R                    (N)    E        A        1 AH-1Z

Goal. RS - Evaluate instrument flight procedures

Requirements

Discuss

Any INST stage discussion item, maneuver or procedure  
Conduct and performance standards of SINST-1205  
IP/RAC CRM expectations during INST stage  
INST stage RAC tendencies  
Intracockpit brief emergencies considerations for flights in IMC

Review

Emergencies - ASAPossible  
Emergencies - ASAPractical  
Airway navigation  
Missed Approach  
No-Gyro Approach  
Airport Surveillance Radar (ASR)

Precision Approach Radar (PAR)  
TACAN approaches and procedures  
Standard Instrument Departures (SIDs)  
Instrument autorotation  
Partial panel  
Instrument takeoff (ITO)  
Instrument checklists

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS, MDG and OPNAV 3710.

To the max extent possible, IUT will conduct approaches away from homefield and file DD-175.

IUT shall conduct a minimum of 2 instrument approaches.

IUT shall plan and execute an instrument flight IAW OPNAV 3710.

Prerequisites. FRSI-5310

Crew. ASI/IUT

FRSI-5315 2.0 \* R D A 2 AH-1Z

Goal. FS - Review formation flight and tactical formation flight maneuvering.

Requirements

Discuss

Any FORM stage discussion item, maneuver or procedure  
Conduct and performance standards of FORM-1304  
IP/RAC CRM expectations during FORM stage  
FORM stage RAC tendencies

Review

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

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all procedures and maneuvers IAW the AH-1Z NATOPS, MDG, ASTACSOP and NTPP.

IUT should perform all maneuvers as lead and wingman.

Prerequisites. FRSI-5310

Crew. ASI/IUT

FRSI-5316 2.0 \* R D A 1 AH-1Z

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Goal. RS - Review TERF maneuvers.

Requirements

Discuss

Any TERF stage discussion item, maneuver or procedure  
IP/RAC CRM expectations during TERF stage  
TERF stage RAC tendencies

Introduce

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

Performance Standards

IUT shall have a detailed understanding and functional knowledge of  
all procedures and maneuvers IAW the AH-1Z NATOPS, MDG, and NTTP.

Prerequisites. FRSI-5310

External Syllabus Support. Authorized TERF maneuvering area

Crew. FRSI/IUT

SFRSI-5317 1.5 \* D FFS/FTD S-TEN 1 AH-1Z

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Goal. OS - Review weapons systems operation as required. Review  
instrument procedures in IMC conditions.

Requirements

Discuss

CRM during ordnance delivery  
Arm/DeArm checklist  
After arming checklist  
WPNS page setup  
Conduct of flight and tendencies on RAC INST-1204

Review

20mm delivery  
Rocket delivery  
Weapons emergencies  
Ordnance communication procedures

Ordnance checklists  
Instrument procedures

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all SWD stage procedures, and checklists IAW the AH-1Z NATOPS, MDG, ASTACSOP, and NTTP.

Conduct of the flight based on IUT's currency and proficiency in weapons system operation and IFR flight in IMC conditions.

Intent for instrument portion of the flight is to build IUT confidence and proficiency in IMC.

Prerequisites. FRSI-5310

Crew. CSI or FRSI/PUI

FRSI-5318 1.5 \* R D E A 2+ AH-1Z

Goal. FS - Weapon systems evaluation.

Requirements

Discuss

Any SWD stage discussion item, maneuver or procedure  
Conduct and performance standards of SWD-1604  
CRM expectations during SWD stage  
SWD stage RAC tendencies

Introduce

20mm delivery  
Rocket delivery  
Weapons emergencies  
Ordnance comm procedures  
Range operations  
Ordnance checklists  
Weapons preflight

Performance Standards

IUT shall have a detailed understanding and functional knowledge of all SWD stage procedures, and checklists IAW the AH-1Z 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.

IP will act as RAC.

Prerequisites. FRSI-5317

Ordnance. (7) 2.75 inch rockets, (300) rounds 20mm

Range Requirements. Live fire and LASER safe

Crew. FRSI/IUT

FRSI-5319 2.0 \* R NS A 1 AH-1Z

Goal. RS - Review NVD familiarization maneuvers.

## Requirements

### Discuss

Any Core Skills Introduction Phase NVD event discussion item,  
maneuver or procedure  
RAC NVD tendencies  
Standardization with regards to Core Skills Introduction Phase NVD  
events

### Introduce

Fixed pitch tail rotor malfunctions  
Collective control interference  
Sliding landings  
Single Engine Failure (Rwy, spot, away from pattern)  
High speed low level autorotation  
Pattern autorotations  
Hovering/Taxiing autorotations  
High Speed Approach and Landing  
No hover takeoff  
No hover landings  
Precision (steep) approach  
Normal Approach  
Normal takeoff  
Low work

### Performance Standards

IUT shall have a detailed understanding and functional knowledge of  
all procedures and maneuvers IAW the AH-1Z NATOPS, MDG, and  
MAWTS-1 NVD Manual  
IUT shall demonstrate a high level of proficiency in all maneuvers  
before completing this event (RAT as required)

Prerequisites. NSI or NSFI, FRSI-5313, FRSI-5315, FRSI-5316

Crew. ASI+NSFI or NSI/IUT

## 2.19.9 Fleet Replacement Squadron Standardization Instructor (FRS-SI)

2.19.9.1 Purpose. To certify the IUT as an FRS-SI or an FRS-ASI capable of  
instructing Core Skill Introduction evaluation events and specified FRSI  
events. Emphasis will be placed on Core Skill Introduction instructional  
standardization, Core Skill Introduction` evaluation standardization,  
scenario based training, and role playing during evaluation flights with a  
pilot in command-based standard.

2.19.9.2 General. IUT must have been designated FRSI, NSFI/NSI, and ANI  
prior to beginning the FRS-SI syllabus. The lead standardization instructor  
will be indicated by FRS-SI, and assistant standardization instructors will  
be indicated by FRS-ASI. The FRS-SI/FRS-ASI relationship is similar to the  
NI and ANI relationship as described in OPNAV 3710.

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

Ground/Academic Training. IAW the HMLAT-303 FRS Course Catalog.

FRSSI-5320 2.0 \* D A 2 AH-1Z

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Goal. FS - Introduce the conduct of the FORM-1304 formation stage evaluation.

Requirements

Discuss

Safety considerations  
Considerations for executing in conjunction with actual FORM-1300  
Scenario based training management and role playing  
Grading and pass/fail standardization  
RAC tendencies

Review

Refer to performance standards.

Performance Standards

Event shall be conducted cross cockpit in conjunction with a FORM-1301 PUI event and a FORM-1304 PUI event. FRS-ASI under training shall give the 1301 and be the section leader, and IP shall give the 1304.

FRS-ASI under training will coordinate with IP for the conduct of the flight. IUT shall give special attention to planning, briefing, and debriefing and the execution of contingency items for the FORM-1304.

Prerequisites. ACAD-5337

Crew. ASI/IUT

SFRSSI-5321 1.5 \* D FFS/FTD S-TEN 1 AH-1Z

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Goal. Introduce the conduct of the CSIX-1900 and CSIX-1901 evaluation.

Requirements

Discuss

Differences between CSIX-1900 and CSIX-1901 and aircraft related safety considerations  
Scenario based training management and role playing  
Grading and pass/fail standardization  
RAC tendencies

Review

Refer to performance standards

Performance Standards

Under the supervision of and in coordination with the IP, the IUT shall give the CSIX-1900 to an actual RAC PUI.

Prerequisites. ACAD-5337

Crew. ASI/IUT/RAC PUI (FAM-1115 complete)

2.19.10 Forward Air Controller (Airborne) Instructor (FAC(A)I)

2.19.10.1 Purpose. To certify the IUT as a FAC(A)I capable of conducting ground and airborne instruction of FAC(A) missions. Emphasis will be placed on the ability to coordinate simultaneous FW and RW CAS, surface fires (direct and indirect), while working with a TACP and operating within the MACCS.

2.19.10.2 General. IUT shall be FAC(A) qualified IAW NAVMC P3500.48 and current/proficient per the JFAC(A) MOA. IUT will be designated an NSI prior to beginning the 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 FLIR, CLDR, VTR, HMSD, and IR Pointer (night events).

Crew Requirements. IAW MAWTS-1 AH-1 Course Catalog.

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

FACAI-5400 1.5 \* (NS) A 1 AH-1Z & 1 H-1

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the FAC(A)I POI.

Ordnance. (1) captive PGM, (7) 2.75 inch RP rockets, (300) rounds 20mm, (60) chaff/flares

FACAI-5401 1.5 \* R (NS) E A 1 AH-1Z & 1 H-1

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the FAC(A)I POI.

Ordnance. (1) captive PGM, (7) 2.75 inch RP rockets, (300) rounds 20mm, (60) chaff/flares

Prerequisite. FACAI-5400

2.19.11 Night Systems Familiarization Instructor (NSFI)

2.19.11.1 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 Skill Introduction Phase.

2.19.11.2 General. IUT will be Night Systems Qualified(NSQ) and TERFI prior to beginning training.

Crew Requirements. IAW MAWTS-1 AH-1 Course Catalog.

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

NSFI-5600 1.5 \* NS A 1 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSFI  
POI.

NSFI-5601 1.5 \* NS A 2 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSFI  
POI.

NSFI-5602 1.5 \* R NS E A 1 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSFI  
POI.

2.19.12 Defensive Air Combat Maneuvering Instructor (DACMI)

2.19.12.1 Purpose. To certify the IUT as a Rotary Wind 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 AH-1Z air-to-air flight syllabus.

2.19.12.2 General. IUT will be RWDACM qualified and designated WTO prior  
to beginning RWDACMI training. IUT will be FWDACM qualified and designated  
WTO prior to beginning FWDACMI 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 FLIR, captive AIM-9,  
VTR, APR-39, and ALE-47.

Crew Requirements. IAW MAWTS-1 AH-1 Course Catalog.

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

DACMI-5800 1.5 \* D A 2 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the DACMI  
POI.

Ordnance (Optional). (1) captive AIM-9, (60) flares and TCTS pod

DACMI-5801 1.5 \* D A 2 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the DACMI  
POI.

Ordnance (Optional). (1) captive AIM-9, (60) flares and TCTS pod

DACMI-5802 1.5 \* R D E A 2 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the DACMI

POI.

Ordnance (Optional). (1) captive AIM-9, (60) flares and TCTS pod

DACMI-5803 1.5 \* R D E A 2 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the DACMI POI.

Ordnance (Optional). (1) captive AIM-9, (60) flares and TCTS pod

### 2.19.13 Night Systems Instructor (NSI)

2.19.13.1 Purpose. To certify the IUT as an NSI capable of safely conducting ground and airborne instruction of the AH-1Z night vision device (NVD) flight syllabus.

2.19.13.2 General. IUT will be Advanced Night Systems Qualified (ANSQ) and designated WTO prior to beginning training.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, VTR, APR-39, ALE-47 and IR Pointer.

Crew Requirements. IAW MAWTS-1 AH-1 Course Catalog.

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

NSI-5900 1.0 \* SC NS A/S 1 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSI POI.

NSI-5901 1.0 \* NS A 1 AH-1Z

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSI POI.

NSI-5902 1.5 \* NS A 1 AH-1Z & 1 H-1

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSI POI.

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

NSI-5903 1.5 \* SC NS A 1 AH-1Z & 1 H-1

Requirement. Reference the MAWTS-1 Course AH-1 Catalog for the NSI POI.

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

SNSI-5904 1.5 \* R NS E FFS/FTD S-TEN+

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSI

POI.

Ordinance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm,  
(60) chaff/flares

NSI-5905 2.0 \* R NS E A 1 AH-1Z & 1 H-1

Requirement. Reference the MAWTS-1 AH-1 Course Catalog for the NSI  
POI.

Ordinance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm,  
(60) chaff/flares

2.19.14 Flight Lead Standardization Evaluator (FLSE)

2.19.14.1 Purpose. To certify and designate the pilot as a FLSE.

2.19.14.2 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 referresher training. Designated FLSEs are required to complete annual standardization training with the Program Coordinator. Refer to NAVMC 3500.14 and the MAWTS-1 AH-1 Course Catalog.

Re-designation. FLSE re-designation criteria for aircrew that do not require Core Skill Introduction Refresher training is at the discretion of the MAG CO. For aircrew who require Core Skill 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 AH-1 Course Catalog.

FLSE-5920 2.0 \* R (NS) E A 1 AH-1Z & 1 H-1

Goal. To certify the IUT to be designated a FLSE.

Requirement. IAW MAWTS-1 AH-1 Course Catalog

Performance Standard. IAW MAWTS-1 AH-1 Course Catalog

Prerequisite. DL-6598 (Designated DL and NSI)

External Syllabus Support. Program Coordinator

FLSE-5921 0.0 365 Annual FLSE Training

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. FLSE-5920

External Syllabus Support. Program Coordinator

2.20 REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS (RQD) ACADEMIC PHASE (6000)

2.20.1 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.

2.20.2 General. These academics are intended to be an integrated series of academic lectures, readings and practical application contained within each phase of training. The lectures, readings and chalk-talks are contained in the MAWTS-1 AH-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 AH-1 Course Catalog is the master document for stage academic requirements.

2.20.3 Flight leadership academic events are listed below.

<b>REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS ACADEMIC PHASE</b>	
<b>TRAINING CODES</b>	<b>COURSEWARE</b>
<b>INST/NATOPS</b>	
No Lectures	
<b>FCP</b>	
No Lectures	
<b>PQM</b>	
No Lectures	
<b>AHC</b>	
No Lectures	
<b>SECTION LEADER</b>	
ACAD-6040	Review Intel Prep of the Battlespace
ACAD-6041	(S) MAGTF Targeting and Fire Support Planning*
ACAD-6042	JTAC-Aircrew Integration
<b>DIVISION LEADER</b>	
ACAD-6050	Review ROE Planning
ACAD-6051	Review Objective Area Planning*
ACAD-6052	Review (S) Weaponneering
<b>FLIGHT LEADER</b>	
ACAD-6060	Review TRAP TTPs
ACAD-6061	Review Execution Checklist
<b>FLIGHT LEADERSHIP</b>	
ACPM-8630	Tactical Air Command Center (TACC)
ACPM-8660	Joint Ops Intro
ACPM-8640	Joint Data Network
ACPM-8641	MAGTF Theater and National ISR Employment
ACPM-8620	ESG/CSG Integration
ACAD-6070	Review Rapid Response Planning
ACAD-6071	Air Mission Commander
ACAD-6072	Review NEO Execution
*Indicates classes that should be presented to all pilots annually.	

2.21 REQUIREMENTS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE (6000)

2.21.1 Purpose. To outline the requirements for qualifications, designations, and flight leadership.

2.21.2 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 Skills Phase and the Mission Skills Phase meet the requirements for the PUI to be eligible for the AHC 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 AHC 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.

2.21.2.7 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 DESG-6598 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.

CRP is not awarded for 6000-level sorties, however, CRP credit may be obtained by logging the appropriate training code(s) in the 2000-4000 phase syllabi.

2.21.2.1 Stages. The following stages are included in the Requirements, Qualifications and Designation (RQD) phase.

REQUIREMENTS, QUALIFICATIONS AND DESIGNATIONS PHASE	
PAR NO.	STAGE NAME
2.21.3	Instrument Rating (INST)
2.21.4	NATOPS Qualification (NATOPS)
2.21.5	Crew Resource Management Training (CRM)
2.21.6	Functional Check Pilot (FCP)
2.21.7	Pilot Qualified in Model (PQM)
2.21.8	Attack Helicopter Commander (AHC)
2.21.9	Section Leader (SL)
2.21.10	Division Leader (DL)
2.21.11	Flight Leader (FL)
2.21.12	Air Mission Commander (AMC)
2.21.13	Specific Operations Tracking Codes (SOTC)

2.21.2.2 Ordnance Delivery. At the completion of applicable stages, the PUI will have demonstrated increased accuracy during ordnance delivery and proper use of the TSS under varied threat conditions with mixed ordnance loads. For the AHC, SL, DL and FL stages, the PUI shall meet the ordnance metrics outlined for the Mission Skill Phase (See Paragraph 2.15.4). VTR debrief should be used to the maximum extent possible. Emphasis will be on CRM and Tactical Risk Management (TRM) while utilizing the ordnance systems.

2.21.3 Instrument Rating (INST)

2.21.3.1 Purpose. To certify the PUI as instrument rated in the AH-1Z.

2.21.3.2 General. The instrument rating is an annual requirement. PUI shall log annual instrument minimum requirements prior to event IAW OPNAVINST 3710. A designated instructor who is a member of the IFB shall evaluate the 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 OPNAVINST 3710.7.

INST-6000	8.0	365	R,M	Instrument Ground School
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Goal. Attend an TYCOM approved instrument ground school per OPNAVINST 3710.7.

Performance Standards. Achieve a grade of qualified IAW OPNAVINST 3710.7.

INST-6001	1.0	365	R,M	Instrument Ground School Exam
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Goal. To evaluate the airman's knowledge of instrument flight and procedures.

Performance Standards. Achieve a grade of qualified IAW OPNAVINST 3710.7.

INST-6100	1.5	365	R,M	(N)	E	A/S-TEN	1 AH-1Z
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Goal. OS - Conduct an annual instrument check.



Performance Standards. IAW OPNAVINST 3710.7 and NATOPS

Prerequisites. Grade of qualified on NTPS-6002 & 6003

Crew. BIP+NI/ANI (NSI required if flown using NVDs)/PUI

2.21.5 Annual Crew Resource Management (CRM) Evaluation

2.21.5.1 Purpose. Conduct annual CRM ground training and flight evaluation.

2.21.5.2 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 OPNAVINST 1542.7 series.

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CRM-6005	1.0	365	R, SC, M				Annual CRM Ground Training
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Goal. Receive annual CRM training.

Requirement. IAW OPNAVINST 1542.7 series receive instruction in CRM history, Seven Critical Skills, OPNAVINST 1542.7 series and a T/M specific case study or scenario.

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CRM-6102	0.0	365	R, SC, M	E	S/A	1	AH-1Z CRM EVAL
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Goal. OS - Conduct an annual Crew Resource Management evaluation.

Requirement. Successfully conduct the evaluation IAW OPNAVINST 3710.7 and NATOPS. The evaluation should be conducted in conjunction with the annual NATOPS evaluation flight when possible.

Performance Standards. IAW OPNAVINST 3710.7 and NATOPS.

2.21.6 Functional Check Pilot (FCP)

2.21.6.1 Purpose. To introduce, develop proficiency in, and evaluate FCF procedures.

2.21.6.2 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 the FCP-6205 and with the AMO's recommendation



External Syllabus Support. Device Operator

Crew. BIP+FCP/PUI

SFCP-6201 1.5 \* D FTD/FFS S-TEN/A 1 AH-1Z

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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<sub>R</sub> 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, OPNAVINST 4790, and local SOPs.
- PUI shall demonstrate familiarity with systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.

Prerequisite. SFCP-6200

External Syllabus Support. Device Operator

Crew. BIP+FCP/PUI

FCP-6202 1.5 \* D A 1 AH-1Z

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Goal. OS - Introduce main rotor track & balance and vibration diagnostics.

Requirements

Discuss

- IMD-HUMS procedures for main 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



All FCF procedures  
Completion of track & balance and vibration diagnostics may be simulated

Performance Standards

IAW NATOPS, OPNAVINST 4790, and local SOPs.  
PUI shall demonstrate knowledge of systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.

Prerequisites. SFCP-6201, 6202, 6203

External Syllabus Support. Device Operator

Crew. BIP+FCP/PUI

FCP-6205    1.5    \*    R, SC    D    E    A    1 AH-1Z

Goal. RS - Conduct FCP Evaluation.

Requirement

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, OPNAVINST 4790, and local SOPs.  
PUI shall demonstrate familiarity with systems, FCF checklists, procedures, and maneuvers while conducting an "A" profile.

Prerequisites. FCP-6007, 6204

Crew. BIP+FCP/PUI

2.21.7 Pilot Qualified in Model (PQM)

2.21.7.1 Purpose. Tracking code for PQM.

2.21.7.2 General. Completion of the Core Skill Introduction Phase meets the requirements for the PUI to be PQM. Upon completion of the CSIX-1901 and at the discretion of 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 Skill Introduction Phase.

DESG-6300    0.0    \*    SC    D    A    1 AH-1Z

Goal. RS - Qualify PUI as PQM.

Requirement. Completion of the Core Skill Introduction Phase

Prerequisites. CSIX-1901

2.21.8 Attack Helicopter Commander (AHC)

2.21.8.1 Purpose. To qualify the PUI as an Attack Helicopter Commander (AHC).

2.21.8.2 General. Completion of the Core Skills Phase and the ESC, CAS, AR, AI, SCAR, TRAP and EXP stages through TRAP-3308 and EXP 3603 of the Mission Skill Phase meet the requirements for the PUI to be eligible for the AHC designation. Upon completion of the DESG-6398 event and reply 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 AHC shall be placed in the NATOPS jacket and APR.

The AHC 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 shall be configured with an operable FLIR, PGM system, CLDR, FMV, HMSD, VTR, APR-39, AAR-47, ALE-47 and IR pointer (night event).

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

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

DESG-6398 1.5 \* R,SC (NS) E A 1 AH-1Z & 1 H-1

Goal. RS - To qualify the PUI as an Attack Helicopter Commander (AHC).

Requirements

Discuss

All aircraft ordnance and ASE systems

Review

Ordnance pre-flight checks  
Ordnance emergencies  
SWD and ordnance delivery profiles  
Knowledge of local range regulations  
SOPs for ordnance delivery

Performance Standards.

PUI shall conduct cockpit brief with focus on weapons considerations.

PUI shall demonstrate knowledge of local range regulations and SOPs for ordnance delivery.

PUI shall demonstrate successful employment of the 20mm weapon system at ranges from 500-2000 meters and 2.75 inch rockets at ranges from 500-2000 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 AH-1Z 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. Upon completion of this event during the series conversion syllabus, all flight leadership and FAC(A) qualifications will convert.

Prerequisites. ACPM-8300, 8310, 8321 through 8326, 8340, 8350, 8351, DESG-6300, Core Skills Phase and Mission Skills Phase complete, refly of SWD-2605 IAW Mission Skills Phase ordnance accuracy standards (may be flown in conjunction with the DESG-6398).

Ordnance. (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

Range Requirement. Live fire and LASER safe range.

Crew. WTO(NSI)/PUI

#### 2.21.9 Section Leader

2.21.9.1 Purpose. To prepare and evaluate a prospective section lead's ability to plan, brief, lead and debrief a section.

2.21.9.2 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 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 Section Leader syllabus meets the requirements for designation as a Section Leader. At the discretion of the squadron commanding officer, a letter designating the pilot as a 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 of the events shall be conducted with 2 AH-1Zs and at least one of the events should be a mixed section.

PUI shall have a minimum of 50 hours as designated AHC and three flights in wingman position as a designated AHC. 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.

PUI shall be evaluated on ordnance delivery accuracy utilizing Core Plus/Mission Plus Skills ordnance accuracy standards.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, FMV, HMSD, VTR, APR-39, AAR-47 and ALE-47 and IR Pointer (night events).

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

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

SL-6400 1.5 \* D A 1 AH-1Z & 1 H-1

Goal. OS - Tactically employ a section in a low to medium threat environment during the conduct of a day OAS or escort mission. Emphasis shall be placed on safety, route planning, CRM/TRM critical skills, flight member responsibilities, threat counter-tactics, ASTACSOP, fuel management and communications.

Requirements

Plan, brief, lead and debrief a day OAS or escort mission  
Develop a plan that supports the ground SOM and commander's intent of the supported unit  
Plan and brief section mechanics, attacks and objective area maneuver  
Plan and brief section threat reactions  
Plan and brief rendezvous & join-up per ASTACSOP and NTPP  
Brief penetration/de-penetration/offensive checklist procedures  
Use all available planning tools to plan & 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 & join-up  
Demonstrate applicable threat counter-tactics  
Locate, plot and effectively engage target(s) within the section  
Direct attacks against target(s)  
Control section during enroute 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/NTPP.  
PUI shall maintain situational awareness of wingman and mutual support during enroute 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.  
PUI shall engage targets using TTPs appropriate for the scenario.

Prerequisite. Minimum of 50 hours as designated AHC and three flights in wingman position as a designated AHC. 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.

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

Range Requirement. Live fire and LASER safe range

External Syllabus Support. One or more assault support aircraft (if escort mission)

Crew. NSI/PUI

SL-6401 1.5 \* NS A 1 AH-1Z & 1 H-1

Goal. OS - Tactically employ a section in a medium to high threat environment during the conduct of a night OAS or escort mission. Emphasis shall be placed on safety, range regulations, night formation considerations, sensor acquisition and hand-off, night rendezvous & join-up procedures, aircraft lighting, section IIMC procedures and wingman awareness.

Requirements

- Plan, brief, lead and debrief a night OAS or escort mission
- Develop a plan that supports the ground SOM and commander's intent of the supported unit
- Plan and brief section mechanics, attacks and objective area maneuver
- Plan and brief fire support plan
- Plan and brief section threat reactions
- Use all available planning tools to plan & brief night considerations including illumination, shadowing, sensor effectiveness, and target acquisition/engagement
- 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) within the section
- Control section during enroute 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 enroute 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. Minimum of 50 hours as designated AHC and three flights in wingman position as a designated AHC. 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.

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. One or more assault support aircraft (if escort mission)

Crew. NSI/PUI

SL-6498      1.5      \*      R                      (NS)      E      A              1 AH-1Z & 1 H-1

Goal. OS - Section Leader Evaluation - Tactically employ a section in a low to medium threat environment during the conduct of a day or night OAS or escort mission. Emphasis shall be placed on safety, range regulations, mission planning, weapons effects/SDZs, PGM employment, identification of targets & friendly personnel, FARP operations, ASTACSOP and wingman awareness.

Requirements

- Plan, brief, lead and debrief a day OAS or escort mission
- Develop a plan that supports the ground SOM and commander's intent of the supported unit
- Plan and brief section mechanics, attacks and objective area maneuver
- Plan and brief section threat reactions
- Plan and brief rendezvous & join-up per ASTACSOP and NTPP
- Brief penetration/de-penetration/offensive checklist procedures
- Use all available planning tools to plan & 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 & join-up
- Demonstrate applicable threat counter-tactics
- Locate, plot and effectively engage target(s) within the section
- Direct attacks against target(s)
- Control section during enroute 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/NTPP.
- PUI shall maintain situational awareness of wingman and mutual support during enroute 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. ACPM-8630, 8660, SL-6400, 6401

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. One or more assault support aircraft (if escort mission)

Crew. FLSE/PUI

#### 2.21.10 Division Leader

2.21.10.1 Purpose. To prepare and evaluate a prospective division lead's ability to plan, brief, lead and debrief a division.

2.21.10.2 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 is authorized. DL-6598 shall be evaluated by a 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 Division Leader syllabus meets the requirements for designation as a Division Leader. At the discretion of the squadron commanding officer, a letter designating the pilot as a 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.

One of the three Division Leader stage flights should be conducted with 3+ AH-1Zs. During the conduct of all OAS/ESC missions at least one attack shall be conducted as a division.

PUI shall have lead three flights as a designated Section Leader (SL). 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 accuracy utilizing Core Plus/Mission Plus ordnance accuracy standards.





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. SL-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). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. One or more assault support aircraft (if escort mission)

Crew. NSI+DL/PUI

DL-6598      1.5      \*      R      (NS)      E      A      1 AH-1Z & 2+ H-1s

Goal. OS - Division Leader Evaluation - Tactically employ a division in a low to medium threat environment during the conduct of a day or night OAS or escort mission. Emphasis should be placed on 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 an OAS or escort mission  
Develop a plan that supports the ground SOM and commander's intent of the supported unit  
Plan and brief division mechanics, attacks and objective area maneuver  
Plan and brief division threat reactions  
Plan and brief rendezvous & join-up per ASTACSOP and NTPP  
Brief penetration/de-penetration/offensive checklist procedures  
Use all available planning tools to plan & 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 & join-up  
Demonstrate applicable threat counter-tactics  
Locate, plot and effectively engage target(s) within the division  
Direct attacks against target(s)  
Control division during enroute 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/NTPP.

PUI shall maintain situational awareness of wingmen and mutual support during enroute 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. ACPM-8640, 8641, DL-6500, 6501

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. One or more assault support aircraft (if escort mission)

Crew. FLSE/PUI

#### 2.21.11 Flight Leader

2.21.11.1 Purpose. To prepare and evaluate a prospective flight lead's ability to plan, brief, lead and debrief a flight.

2.21.11.2 General. PUI shall conduct the following 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 criteria 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 a Flight Leader. At the discretion of the squadron commanding officer, a letter designating the pilot as a Flight Leader shall be placed in the NATOPS jacket and APR.

PUI shall have lead three flights as a designated Division Leader. PUI shall also have a minimum of 750 total flight hours.

PUI shall be evaluated on ordnance delivery accuracy utilizing Core Plus/Mission Plus ordnance accuracy standards.

Aircraft should be configured with an operable FLIR, PGM system, CLDR, FMV, HMSD, VTR, APR-39, AAR-47 and ALE-47 and IR Pointer (night events).

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

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

FL-6698 1.5 \* R (NS) E A 1 AH-1Z & 4+ H-1s

Goal. OS - Flight Lead Evaluation - Tactically employ a flight in a low to medium threat environment during the conduct of a day or night OAS or escort mission. Emphasis should be placed on ASTACSOP, flight/element integration, routing, objective area mechanics, flight member responsibilities, attack patterns and communication.

Requirements

Plan, brief, lead and debrief an OAS or escort mission  
Develop a plan that supports the ground SOM and commander's intent of the supported unit  
Plan and brief flight mechanics, attacks and objective area maneuver  
Plan and brief flight threat reactions  
Plan and brief rendezvous & join-up per ASTACSOP and NTPP  
Brief penetration/de-penetration/offensive checklist procedures  
Use all available planning tools to plan & 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 & join-up  
Demonstrate applicable threat counter-tactics  
Locate, plot and effectively engage target(s) within the flight  
Direct attacks against target(s)  
Control flight during enroute 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/NTPP.  
PUI shall maintain situational awareness of wingmen and mutual support during enroute 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. DL-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). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

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

External Syllabus Support. One or more assault support aircraft (if escort mission)

Crew. FLSE/PUI

2.21.12 Air Mission Commander (AMC)

2.21.12.1 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.

2.21.12.2 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.

Crew Requirements. The AMC-6798 evaluation must be evaluated by an AMC. There is no requirement for the PUI to conduct aircrew duties during the evaluation.

Ground/Academic Training. The PUI shall demonstrate familiarity with OAS, assault support operations, MACCS and MAGTF integration.

AMC-6798      1.5      \*      R      (NS)      E      ANY AMC PLATFORM 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 6 functions of Marine Aviation and shall lead the mission from a airborne platform or COC (as appropriate).

Discuss

Prolem Framing and METT-TSL  
Marine Corps Planning Process (MCPPE)/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  
Mission Coordination Area (MCA) selection

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 ground scheme of maneuver and Essential Fire Support Tasks (EFSTs).  
The AMCUI shall conduct an AMC brief IAW NTTP series publications  
The AMCUI shall maintain SA on mission progress/execution  
The AMCUI shall maximize C&C platform capabilities  
The AMCUI shall demonstrate proper decision making and task delegation in response to immediate missions and/or contingencies  
The AMCUI shall 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 shall possess the tactical and operational knowledge required of an AMC.

Prerequisites. ACAD-6070, 6071, DL-6598

Ordnance (Optional). (1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares

Range Requirement. Live fire and 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

2.21.13 Specific Operations Tracking Codes (SOTC)

2.21.13.1 Purpose. To provide a vehicle for Tracking Codes associated with specific operations. All codes will be logged in conjunction with the appropriately flown sortie.

2.21.13.2 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.

Ground/Academic Training. N/A.

SOTC-6900            \*        R                    NS                    A            1 AH-1Z

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

SOTC-6901            \*        R                    (NS)                    A            1 AH-1Z

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

SOTC-6902            \*        R                    (NS)                    A            1 AH-1Z

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 guided rocket

Crew. WTO(NSI)/PUI

SOTC-6904            \*        R                    (NS)                    A            1 AH-1Z

Goal. OS - Track proficiency in shooting a Hellfire missile.

Requirement. Shoot one (1) Hellfire Missile

Ordnance. (1) live Hellfire Missile

Crew. WTO(NSI)/PUI

SOTC-6905            \*        R                    (NS)                    A            1 AH-1Z

Goal. OS - Track proficiency in shooting an AIM-9 missile.

Requirement. Shoot one (1) AIM-9 missile

Ordnance. (1) live AIM-9 missile

Crew. WTO (NSI) /PUI

SOTC-6906 0.0 730 R,M (NS) A/S-TEN+ 1 AH-1Z & 1 H-1

Goal. OS - Track standardization in the conduct of FAC(A).

Requirement. Conduct one standardization FAC(A) sortie

Ordinance. AS required

Crew. FAC(A) I/PUI

SOTC-6998 \* R, SC D A/S 1 AH-1Z

Goal. OS - Day autorotation tracking code.

Requirement. Conduct one daytime autorotation.

Ordinance. As required

Crew. BIP/PUI or PQM/PQM

SOTC-6999 \* R, SC NS A/S 1 AH-1Z

Goal. OS - NS autorotation tracking code.

Requirement. Conduct one NS autorotation.

Ordinance. As required

Crew. NSI/PUI or PQM/PQM

2.22 AVIATION CAREER PROGRESSION MODEL (8000)

2.22.1 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.

2.22.2 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 AHC.

8600 academics must be complete prior to each corresponding flight leadership stage.

The ACPM courseware can be found on the web sites listed below:  
<https://vcepub.tecom.usmc.mil/sites/msc/magtftc/mawts1/Aviation%20Career%20Progression%20Model/Forms/AllItems.aspx>.

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

2.22.3 ACPM academic events, along with their identifying pre-requisite association with other training phases/stages/events are listed below.

<b>AVIATION CAREER PROGRESSION MODEL</b>	
<b>TRAINING CODES</b>	<b>COURSEWARE</b>
<b>CORE SKILL</b>	
ACPM-8200	MACCS Agencies, Functions, and Control of Aircraft and Missiles
ACPM-8201	MWCS Brief
ACPM-8202	ACA and Airspace
ACPM-8210	Aviation Ground Support
ACPM-8230	ACE Battle Staff
ACPM-8231	Battle Command Display
ACPM-8240	Six Functions of Marine Aviation
ACPM-8241	ASR/JTAR Introduction and Practical Application
ACPM-8242	Site Command Primer
ACPM-8250	Theater Air Ground System (TAGS)
<b>MISSION SKILL</b>	
ACPM-8300	Air Defense
ACPM-8310	Forward Arming Refueling Point (FARP) Operations
ACPM-8311	Marine Corps Tactical Fuel Systems
ACPM-8320	Joint Structure and Joint Air Operations
ACPM-8321	Joint Air Tasking Cycle, Phase 1: Strategy Development
ACPM-8322	Joint Air Tasking Cycle, Phase 2: Target Development
ACPM-8323	Joint Air Tasking Cycle, Phase 3: Weaponing and Allocation
ACPM-8324	Joint Air Tasking Cycle, Phase 4: Joint ATO Production
ACPM-8325	Joint Air Tasking Cycle, Phase 5: Force Execution
ACPM-8326	Joint Air Tasking Cycle, Phase 6: Combat Assessment
ACPM-8340	Integrating Fires and Airspace within the MAGTF
ACPM-8350	Phasing Control Ashore
ACPM-8351	TACRON Organizations and Functions
<b>SECTION LEADER</b>	
ACPM-8630	Tactical Air Command Center (TACC)
ACPM-8660	Joint Ops Intro
<b>DIVISION LEADER</b>	
ACPM-8640	Joint Data Network
ACPM-8641	MAGTF Theater and National ISR Employment
<b>FLIGHT LEADER</b>	
ACPM-8620	ESG/CSG Integration

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.

2.22.4 ACPM Core Skill Training Phase

2.22.4.1 Purpose. To provide and introduce basic integration of the ACE within the MAGTF and ACE Battle Staff planning.

2.22.4.2 General. The PUI must be complete the ACPM-8200 series prior to PQM designation.

ACPM-8200 0.5 \* MACCS Agencies, Functions, and Control of Aircraft and Missiles

Learning Objectives

Understand the organization of the MACG and the agencies provided by the MACG that form the MACCS.  
Understand the mission and tasks of the Tactical Air Command Center (TACC).  
Understand the mission and tasks of the Tactical Air Operations Center (TAOC).  
Understand the mission and tasks of marine Air Traffic Control (MATC) and the marine Air Traffic Control Mobile Team (MMT).  
Understand the mission and tasks of the Direct Air Support Center (DASC).  
Understand the mission and tasks of the Low Altitude Air Defense (LAAD) Battalion.  
Understand the mission and tasks of the Marine Unmanned Aerial Vehicle (VMU) squadron.  
Understand the mission and tasks of the Marine Wing Communication Squadron (MWCS).

ACPM-8201 0.5 \* MWCS Brief

Learning Objectives

From a list be able to identify the core competencies of the MWCS.  
Without the aid of reference, describe the organization of the MWCS.  
Without the aid of reference, identify key equipment used by the MWCS to support the MACCS.

ACPM-8202 0.8 \* ACA and Airspace

Learning Objectives

List the three fundamental principles of airspace command and control.  
List and explain the three tenets of the integrated combat airspace command and control system.  
Describe the responsibilities of the ACA.  
Describe the responsibilities of the AMCT.  
Understand the definitions of Air Direction and Air Control as well as the subsets of those two major categories.  
List a variety of items encompassed within the ACP.

ACPM-8210 0.7 \* Aviation Ground Support

Learning Objectives

Identify the organization responsible for providing Aviation Ground Support (AGS) to the MAW.  
Identify the four concepts for MAGTF Forward Operating Bases (FOBs).  
Identify the five activities the Marine Wing Support Squadron (MWSS) performs for the ACE when deployed.  
Identify the four classifications of FOBs and state the distinguishing characteristics of each.  
Identify the fourteen functions of AGS.

ACPM-8230 1.0 \* ACE Battle Staff

Learning Objectives

To introduce and explain the intel capabilities/products available to the ACE/MAGTF.  
To introduce ALSA comm brevity terms.  
Introduce functions and responsibilities of ACE Battle Staff.

2.22.5 ACPM MISSION SKILL TRAINING EVENTS

2.22.5.1 Purpose. To provide and introduce basic integration of the ACE within the MAGTF and Joint environment.

2.22.5.2 General. The PUI must be complete the ACPM-8300 series prior to AHC designation.

ACPM-8300 0.8 \* Air Defense

Learning Objectives

Outline the principles of Air Defense.  
Understand the composition of an Integrated Air Defense System (IADS).  
Define Active and Passive Air Defense.  
Identify the (4) primary pillars of Passive Air Defense operations.

ACPM-8310 0.8 \* Forward Arming Refueling Point (FARP) Operations

Learning Objectives

State the mission and objective of a FARP.  
Explain the planning considerations of a FARP.  
Explain the techniques of employment.  
Describe the procedures necessary for movement of aircraft through a FARP and various layouts.

ACPM-8311 0.8 \* Marine Corps Tactical Fuel Systems

Learning Objectives

State the basic history of the Bulk Fuel community.  
Identify the four major fuel systems and their capabilities.  
State the job description of the Bulk Fuel Specialist.

ACPM-8320 1.0 \* Joint Structure & Joint Air Operations

Learning Objectives

Understand the criteria used by the Joint Force Commander (JFC) when selecting the Joint Forces Air Component Commander (JFACC).  
Understand the duties and responsibilities of the five divisions of Joint Air and Space Operations Center (JAOC).  
Know the types of sorties the MAGTF Commander must make available to the JFACC for tasking.  
Understand the primary responsibilities of the Area Air Defense Commander (AADC).  
Understand the purpose of the Airspace Control Order (ACO).  
Become familiar with the six phases of the Joint Air Tasking Cycle.

ACPM-8321 0.3 \* Joint Air Tasking Cycle Phase 1: Strategy Development

Learning Objectives

Understand how the JFC normally provides air apportionment guidance to the Joint Forces Air Component Commander (JFACC).  
Understand the air apportionment process.  
Understand who drafts the AOD and what the AOD provides the JAOC.  
Understand how objectives and tasks are prioritized.

Prerequisite. ACPM-8320.

ACPM-8322 0.3 \* Joint Air Tasking Cycle Phase 2: Target Development

Learning Objectives

Understand the purpose of the Joint Integrated Prioritized Target List (JIPTL).  
Understand the purpose for the joint targeting coordination board and its participants.  
Understand the target development process.  
Know the product of phase 2 of the joint air tasking cycle.  
Understand what provides the foundation for phase 2 of the joint air tasking cycle.

Prerequisite. ACPM-8321.

ACPM-8323 0.3 \* Joint Air Tasking Cycle Phase 3: Weaponing and Allocation

Learning Objectives

Understand weaponing and how it is conducted within the joint air tasking cycle.  
Understand the Allocation Request Message (ALLOREQ) and how it is used in producing the MAAP.  
Understand the air allocation process.  
Understand the purpose of the MAAP team and what is contained in the MAAP.  
Understand the purpose of the Sortie Allocation (SORTIEALLOT) message.

Prerequisite. ACPM-8322.

ACPM-8324 0.3 \* Joint Air Tasking Cycle Phase 4: Joint ATO Production

Learning Objectives

Understand the role of joint ATO production within the joint air tasking cycle.  
Understand the responsibilities of the joint ATO production team.  
Understand the processes used in the production of the joint air tasking order.  
Understand how TBMCS 1.1.3 is used to produce the joint air tasking order.

Prerequisite. ACPM-8323.

ACPM-8325 0.3 \* Joint Air Tasking Cycle Phase 5: Force Execution

Learning Objectives

Understand the primary functions and responsibilities of the AOC.  
Understand how the JAOC organizes for the execution phase.  
Understand how TBMCS 1.1.3 is used during the execution phase.

Prerequisite. ACPM-8324.

ACPM-8326 0.3 \* Joint Air Tasking Cycle Phase 6: Combat Assessment

Learning Objectives

Understand the three inter-related components of combat assessment.  
Understand the key factors concerning the three components of combat assessment.  
Understand the purpose of BDA based upon current doctrine.  
Understand physical damage, functional damage, and the target system assessment process.  
Understand the purpose of the re-attack recommendation.

Prerequisite. ACPM-8325.

ACPM-8340 0.5 \* Integrating Fires & Airspace within the MAGTF

Learning Objectives

List the (14) Fire Support Principles.  
Identify and discuss the (2) types of FSCMs.  
Identify where most of the fire support coordination occurs within the MAGTF.  
Discuss the purpose of ACMs.  
Discuss the need for integrating FSCMs and ACMs.  
Identify the required components of the JFA as an FSCM.  
Identify the differences between the JFA and GARS.

ACPM-8350 0.8 \* Phasing Control Ashore

Learning Objectives

Identify the Navy agency most akin to the LF FSCC.  
Identify what must be established ashore for control to be phased  
from the Navy TACC to the landing force.

ACPM-8351 1.0 \* TACRON Organizations and Functions

Learning Objectives

TBD

ACPM-8231 1.0 \* Battle Command Display

Learning Objectives

Introduce the Battle Command Display.

ACPM-8240 1.7 \* Six Functions of Marine Aviation

Learning Objectives

To better understand the 6 functions of Marine Corps Aviation.

ACPM-8241 1.3 \* JTAR/ASR Introduction and Practical Application

Learning Objective

Understand the ATO cycle and the request process.  
Write a technically correct JTAR.  
Write a technically correct EW JTAR.  
Write a technically correct EARF.  
Write a technically correct ASR.  
Track submitted air requests using various web-based programs.  
Introduce the Automated Tracking System.

ACPM-8242 1.0 \* Site Commander Primer

Learning Objectives

Introduce fundamentals and functions of Site Command.

ACPM-8250 0.8 \* Theater Air Ground System (TAGS)

Learning Objectives

Identify the primary characteristics of TAGS.  
Identify the primary surveillance agency within the Theater Air  
Control System.  
Identify the element within the Army Air and Ground System  
responsible for integrating operational fires and synchronizing  
deep operations.  
Identify the element within the Navy's Tactical Air Control System  
responsible for coordinating power projection.  
Identify the commander within an amphibious task force who is  
subordinate to the Air Defense Commander (ADC) and responsible  
for the detection and engagement of hostile tracks in the AOA.  
Identify the Marine Corps' contribution to overall Theater Air  
Ground System.

2.22.6 ACPM Flight Leadership Training Events

2.22.6.1 Purpose. To provide the prospective flight leader the concepts of basic integration of the MAGTF within the Joint environment.

2.22.6.2 General. Completion of Flight Leadership Training Events is required prior to the following flight leadership designations:

Section Leader: ACPM-8630, ACPM-8660.

Division Leader: ACPM-8640, ACPM-8641.

Flight Leader: ACPM-8620.

However, the PUI does not need to be in a specific flight leader syllabus in order to receive 8600 level training events.

ACPM-8630 1.0 \* Tactical Air Command Center (TACC)

Learning Objectives

- Without aid of references, identify the mission of the TACC.
- Without aid of references, identify the major tasks/duties of the TACC.
- Without aid of references, identify the three sections being supported by intelligence.
- Without aid of references, identify the key TACC personnel and their responsibilities.
- Without aid of references, identify the equipment associated with a full TACC capability.

ACPM-8660 0.4 \* Joint Ops Introduction

Learning Objectives

- Understand Joint Operation Command relationships.
- Understand the main responsibilities for each Functional Component Commander.

ACPM-8620 1.0 \* ESG/CSG Integration

Learning Objectives

TBD

ACPM-8640 0.8 \* Joint Data Network

Learning Objectives

- Understand the four components of the JDN.
- Understand the differences between the Single Integrated Air Picture (SIAP), Common Tactical Picture (CTP), and Common Operational Picture (COP).
- Understand the differences between Sensor Network(s), Joint Data Network (JDN), and Joint Planning Network (JPN).

Understand how the ACE builds its CTP and how information is shared throughout the ACE and the Marine Air Command and Control System (MACCS).

Know the primary system that will "tie in" the intelligence flow throughout the Marine Aviation Command and Control System (MACCS).

ACPM-8641 1.3 \* MAGTF Theater and National ISR Employment

Learning Objectives

Define priority intelligence requirement.

Identify basic tenets of the National Imagery Interpretability Rating Scale.

Recognize strengths and weaknesses of the EO, SAR, and IR sensors found on national satellites.

Know the three categories of SIGINT.

Identify the information requirements used in the UAS planning process.

Identify what effective planning of UAS employment involves.

Identify key planning considerations outlined for UAS employment.

Define "Non-Traditional ISR".

Identify the most common shortfalls on JTARs submitted for NTISR support.

Identify the most common shortfalls on JTARs submitted for ATARS support.

Identify different imagery products ATARS can provide

2.23 SYLLABUS EVALUATION FORMS. Syllabus event forms will reside at MAWTS-1. Forms will reside on the unclassified site.

2.24 SYLLABUS MATRICES

2.24.1 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." 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 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. 2701~LLL, are only chain-updated if the chaining code is flown using night systems during LLL.

2.24.2 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.

25 Jul 14

2.24.3 AH-1Z T&R Matrix (2000-8000)

AH-1Z T&R MATRIX (2000-8000 Phase)																						
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)
				B	R	SC		#	TIME	#	TIME	#	TIME									
<b>CORE SKILLS (2000 Phase)</b>																						
ACAD	ACAD	AN/ARC-210 HQ/SG	2000	X				1.0					(N)		G		*			2000	2000	
	ACAD	Introduction to NVG Tactical Environment	2001	X				1.0					(N)		G		*			2001	2001	
	ACAD	Aeromedical Aspects of NVG Aided Flight	2002	X				1.0					(N)		G		*			2002	2002	
	ACAD	NVD Design Consideration	2003	X				1.0					(N)		G		*			2003	2003	
	ACAD	FLIR System and Image Optimazation	2004	X				1.0					(N)		G		*			2004	2004	
	ACAD	Operational Considerations and Sensor Integration	2005	X				1.0					(N)		G		*			2005	2005	
	ACAD	NVG RELATED MISHAP LESSONS LEARNED (T/M/S SPECIFIC)	2006	X				1.0					(N)		G		*			2006	2006	
	ACAD	ROC-V (Day)	2011	X				1.0					(N)		G		*			2011	2011	
	ACAD	H-1 Aerodynamics	2012	X				1.0					(N)		G		*			2012		
	ACAD	Night Op Environment	2013	X				1.0					(N)		G		*			2013	2013	
	ACAD	NVG Sys & Image Char	2014	X				1.0					(N)		G		*			2014	2014	
	ACAD	Human Factors	2015	X				1.0					(N)		G		*			2015	2015	
	ACAD	FLIR Intro & Theory	2016	X				1.0					(N)		G		*			2016	2016	
	ACAD	NVG Components/Prefl	2017	X				1.0					(N)		G		*			2017	2017	
	ACAD	NVG Illusions	2018	X				1.0					(N)		G		*			2018	2018	
	ACAD	Circadian Rythm	2019	X				1.0					(N)		G		*			2019	2019	
	ACAD	Night Ops & Planning	2020	X				1.0					(N)		G		*			2020	2020	
	ACAD	Evasive Maneuvers	2021	X				1.0					(N)		G		*			2021	2021	
	ACAD	HMLA ASE	2023R	X	X		X	1.0					(N)		G		365			2023R	2023R	
	ACAD	AGM-114 Hellfire	2063	X				1.0					(N)		G		*			2063	2063	
ACAD	AIM-9	2064	X				1.0					(N)		G		*			2064	3013		
ACAD	Rockets	2066	X				1.0					(N)		G		*			2066	2066		
ACAD	20mm	2067	X				1.0					(N)		G		*			2067	2067		
<b>ACAD SKILL TOTAL</b>								<b>17</b>	<b>17.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>									
TERF	TERF	Rev TERF	2100R	X	X								2.0	D	OS	A	1	180			2100R	2100R
	TERF	Rev NVD TERF	2101R	X	X	X	X						2.0	NS	OS	A	1	180				2101R
<b>TERF SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>4.0</b>									
TCT	STCT	Intro ASE RADAR/IR	S2200	X									1.5	D	OS	S	1	*			S2200	S2200
	STCT	Tactical ASE Employ	S2201R	X	X	X	X						1.5	(NS)	OS	S/A	2	365				S2201R
<b>TCT SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>2</b>	<b>3.0</b>	<b>0</b>	<b>0.0</b>									
REC	SREC	Intro Day RECCE	S2300	X									1.5	D	OS	S/A	1	*			S2300	S2300
	REC	Intro NVD RECCE	2301R	X	X	X	X						1.5	NS	OS	A	2	120				2301R
<b>REC SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>1</b>	<b>1.5</b>	<b>1</b>	<b>1.5</b>									
FCLP	SFCLP	Intro FCLP	S2500	X									1.5	D/NS/N*	OS	S	1	*			S2500	S2500
	FCLP	Day FCLP	2501R	X	X								1.0	D	FS	A	1	365			2501R	2501R
	FCLP	Night FCLP	2502R	X	X		X						1.0	N*/NS	FS	A	1	365			2502R	2502R
<b>FCLP SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>1</b>	<b>1.5</b>	<b>2</b>	<b>2.0</b>									

AH-1Z T&R MATRIX (2000-8000 Phase)

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)	
				B	R	SC		#	TIME	#	TIME	#	TIME										
SWD	SSWD	Intro Hellfire	S2600	X						1.5			D	OS	S/A	1	*			S2600	S2600		
	SSWD	Review Hellfire/Intro APKWS	S2601R	X	X		X			1.5			D	OS	S/A	1	180			2601R			
	SWD	Live Hellfire & 20mm	2602R	X	X		X					1.5	(NS)	OS	A	1	730			2602R	2602		
	SSWD	RKT/Gun Del Prof	S2603	X		X				1.5			D/NS	FS	S	1	*				2603		
	SWD	RKT/Gun Del Prof	2604R	X	X	X						1.5	D	FS	A	1	*				2604R		
	SWD	Scored RKT Del	2605R	X	X	X	X					1.5	D	FS	A	1	180				2605R		
	SWD	NVD RKT/Gun Del	2606	X								1.5	NS	OS	A	1	*			2606	2606		
	SWD	Refine NVD RKT/Gun	2607R	X	X	X	X					1.5	NS	OS	A	2	180				2607R		
	SWD	Moving Target Gunnery	2610R	X	X		X					1.5	(NS)	OS	A/S	1	365			2610R			
SWD SKILL TOTAL								0	0.0	3	4.5	6	9.0										
ANSQ	SANSQ	NVD LLL Eps	S2700	X		X					1.5		NS	OS	S	1	*				S2700		
	ANSQ	NVD LLL FAM/Nav	2701R	X	X	X	X					2.0	NS	FS	A	1	180				2701R		
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X					1.5	NS	OS	A	2	180			2702R	2702R		
	SANSQ	Intro NVD LLL Ord	S2704	X							1.5		NS	OS	S/A	1	*			S2704	S2704		
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X	X	X					1.5	NS	OS	A	2	180				2705R		
ANSQ SKILL TOTAL								0	0.0	2	3.0	3	5.0										
FAM	FAM	FAM/INST Proficiency	2800	X	X	X	X					1.5	(NS)	OS	A	1	90				2800		
	SFAM	EP Simulator	S2801R	X	X	X	X				1.5		(NS)	OS	S/A	1	90				S2801R		
FAM SKILL TOTAL								0	0.0	1	1.5	1	1.5										
CORE SKILL TOTAL								17	17.0	10	15.0	15	23.0										

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AH-1Z T&R MATRIX (2000-8000 Phase)																							
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)	
				B	R	SC		#	TIME	#	TIME	#	TIME										
MISSION SKILLS (3000 Phase)																							
ACAD	ACAD	Intel Prep Battlefield	3000	X										(N)		G		*			3000	2001	
	ACAD	Problem Framing	3001	X					1.0					(N)		G		*			3001	2005	
	ACAD	ROE Planning	3002	X					1.0					(N)		G		*			3002	3022	
	ACAD	GCE RAID Planning	3003	X					1.0					(N)		G		*			3003	3004	
	ACAD	Execution Checklist	3004	X					1.0					(N)		G		*			3004	3005	
	ACAD	Objective Area Plan	3005R	X	X		X		1.0					(N)		G		365			3005R	2006R	
	ACAD	NEO Execution	3006	X					1.0					(N)		G		*			3006	3007	
	ACAD	Rapid Response Plan	3007	X					1.0					(N)		G		*			3007	3008	
	ACAD	(S) RADAR Surface to Air Threat	3008	X					1.0					(N)		G		*			3008	2024	
	ACAD	(S) REC Threat to the MAGTF	3009	X					1.0					(N)		G		*			3009	2002	
	ACAD	(S) IR Threat to RW Aircraft	3010R	X	X		X		1.0					(N)		G		365			3010R	2003R	
	ACAD	(S) ADA Threat to RW Aircraft	3011R	X	X		X		1.0					(N)		G		365			3011R	2004R	
	ACAD	(S) Laser Threat	3012	X					1.0					(N)		G		*			3012	3003	
	ACAD	(S) Electronic Warfare	3013	X					1.0					(N)		G		*			3013		
	ACAD	Assault Support Escort Tactics	3019R	X	X		X		1.0					(N)		G		365			3019R	3010R	
	ACAD	RW OAS	3030R	X	X		X		1.0					(N)		G		365			3030R	3030R	
	ACAD	Urban CAS	3031R	X	X		X		1.0					(N)		G		365			3031R	3031R	
	ACAD	Close Air Support	3032	X					1.0					(N)		G		*			3032		
	ACAD	CAS Standardization	3033R	X	X		X		1.0					(N)		G		365			3033R		
	ACAD	Weaponneering	3034	X					1.0					(N)		G		*			3034	2064	
ACAD	HMLA AR and SCAR TTPs	3035	X					1.0					(N)		G		*			3035	3035		
ACAD	(S) Personnel Recovery	3038	X					1.0					(N)		G		*			3038	3020		
ACAD	(S) TRAP	3039	X					1.0					(N)		G		*			3039	3021		
ACAD	JFAC(A) Courseware	3041R	X	X		X		1.0					(N)		G		365			3041R	3041R		
ACAD	FAC(A) TTPs	3042	X										(N)		G		*			3042	3042		
ACAD	HMLA FARP Ops	3045	X					1.0					(N)		G		*			3045			
ACAD SKILL TOTAL								24	24.0	0	0.0	0	0.0										
ESC	ESC	ASPT ESC	3100	X									1.5	D	OS	A	2	*			3100	3101	
	ESC	NVD ASPT ESC	3101R	X	X	X							1.5	NS	OS	A	2	365				3102R	
	SESC	SIM ASPT ESC	3102R	X	X	X	X			1.5				(NS)	OS	S/A	2	365				3100R	
	ESC	Surface ESC	3103R	X	X								1.5	(NS)	OS	A	2	*				3103R	3103R
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X															2702R	2702R
ESC SKILL TOTAL								0	0.0	1	1.5	3	4.5										

AH-1Z T&R MATRIX (2000-8000 Phase)

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)
				B	R	SC		#	TIME	#	TIME	#	TIME									
CAS	SCAS	Intro CAS	S3300	X	X	X			1.5				D/NS	OS	S	2	*				S3300	
	CAS	Intro Day CAS	3301R	X	X	X	X					1.5	D	OS	A	2	180				3301R	
	CAS	Intro NVD CAS HLL	3302	X								1.5	NS	OS	A	2	*				3302	
	CAS	Intro NVD CAS LLL	3303R	X	X	X	X					1.5	NS	OS	A	2	180				3303R	
	CAS	Intro Urban CAS	3304R	X	X		X					1.5	(NS)	OS	A/S	2	365				3304R	
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X	X	X															2705R
CAS SKILL TOTAL								0	0.0	1	1.5	4	6.0									
AR	AR	Armed Recon	3305R	X	X		X					1.5	(NS)	OS	A	2	365				3305R	
	SSWD	Review Hellfire/Intro APKWS	S2601R	X	X		X														S2601R	
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X	X	X														2705R	
AR SKILL TOTAL								0	0.0	0	0.0	1	1.5									
AI	AI	Aerial Interdiction	3306R	X	X	X	X					1.5	NS	OS	A	2	365				3306R	
	SSWD	Review Hellfire/Intro APKWS	S2601R	X	X		X														S2601R	
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X														2702R	
AI SKILL TOTAL								0	0.0	0	0.0	1	1.5									
SCAR	SCAR	SCAR	3307R	X	X		X					1.5	(NS)	OS	A/S	2	365				3307R	
	SSWD	Review Hellfire/Intro APKWS	S2601R	X	X		X														S2601R	
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X	X	X														2705R	
SCAR SKILL TOTAL								0	0.0	0	0.0	1	1.5									
TRAP	TRAP	TRAP	3308R	X	X		X					1.5	(NS)	OS	A	2	365				3308R	
	ESC	ASPT ESC	3102	X	X	X	X														3100	
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X														2702R	
TRAP SKILL TOTAL								0	0.0	0	0.0	1	1.5									
FAC (A)	FAC (A)	IDF Control	3400R	X	X		X					1.5	(NS)	OS	A/S	1	365				3400R	
	FAC (A)	RW Control	3401R	X	X		X					1.5	(NS)	OS	A/S	2	365				3401R	
	FAC (A)	FW Control	3402R	X	X		X					1.5	D	OS	A/S	2	365				3402R	
	FAC (A)	NVD FW Control	3403R	X	X		X					1.5	NS	OS	A	2	365				3403R	
	FAC (A)	Sup Arms Consolidate	3404R	X	X		X					1.5	(NS)	OS	A	2	365				3404R	
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X	X	X															2705R
FAC (A) SKILL TOTAL								0	0.0	0	0.0	5	7.5									
EXP	EXP	EXP (FARP) Ops	3600	X								0.0	D	OS	A/S	1	*				3600	
	EXP	EXP (FARP) Ops NVD	3601R	X	X	X	X					0.0	NS	OS	A/S	1	180				3601R	
	EXP	EXP RVL Day	3602	X					0	0.0		0.0	D	OS	A/S	1	*				3602	
	EXP	EXP RVL NVD	3603R	X	X	X	X					0.0	NS	OS	A/S	1	120					
	ANSQ	NVD LLL FAM/Nav	2701R	X	X	X	X															2701R
EXP SKILL TOTAL								0	0.0	0	0.0	4	0.0									
<b>MISSION SKILL TOTAL</b>								<b>24</b>	<b>24.0</b>	<b>2</b>	<b>3.0</b>	<b>20</b>	<b>24.0</b>									

AH-1Z T&R MATRIX (2000-8000 Phase)																						
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)
				B	R	SC		#	TIME	#	TIME	#	TIME									
<b>CORE PLUS (4000 Phase)</b>																						
ACAD	ACAD	(S) Airborne Early Warning	4001	X				1.0						(N)		G		*			4001	4020
	ACAD	Review Raid Planning	4021	X				1.0						(N)		G		*			4021	
	ACAD	Review Prolem Framing	4022	X				1.0						(N)		G		*			4022	
	ACAD	Review (S) Urban CAS	4023	X				1.0						(N)		G		*			4023	
	ACAD	Review Objective Area Planning	4024	X				1.0						(N)		G		*			4024	
	ACAD	Review ROE Planning	4025	X				1.0						(N)		G		*			4025	
	ACAD	Review (S) RW OAS	4026	X				1.0						(N)		G		*			4026	
	ACAD	Review HMLA AR & SCAR TTPs	4027	X				1.0						(N)		G		*			4030	
	ACAD	DACM Planning Considerations	4030	X				1.0						(N)		G		*			4030	4030
	ACAD	DACM Parts 1-4	4031	X				1.0						(N)		G		*			4031	4031
	ACAD	DACM Example RW Flight Brief	4032	X				1.0						(N)		G		*			4032	4032
	ACAD	(S) RW Threat to MAGTF	4033	X				1.0						(N)		G		*			4033	4033
	ACAD	(S) Attack Helo Threat	4034	X				1.0						(N)		G		*			4034	4034
	ACAD	(S) FW Threat to MAGTF	4035	X				1.0						(N)		G		*			4035	4035
ACAD	(S) FW Threat to RW A/C	4036	X				1.0						(N)		G		*			4036	4036	
ACAD SKILL TOTAL								14	14.0	0	0.0	0	0.0									
ESC	ESC	Helio ESC Med/High Threat	4200R	X	X		X						1.5	(NS)	OS	A/S	2	730			4200R	4200R
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X														2702R	2702R
ESC SKILL TOTAL								0	0.0	0	0.0	1	1.5									
CAS	CAS	CAS Med/High Threat	4201R	X	X		X						1.5	(NS)	OS	A/S	2	730			4201R	4201R
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X		X														2705R	2705R
CAS SKILL TOTAL								0	0.0	0	0.0	1	1.5									
AR	AR	AR Med/High Threat	4205R	X	X		X						1.5	(NS)	OS	A	2	730			4205R	4205R
	SSWD	Review Hellfire/Intro APKWS	2601R	X	X		X														2601R	
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X		X														2705R	2705R
AR SKILL TOTAL								0	0.0	0	0.0	1	1.5									
AI	AI	AI Med/High Threat	4206R	X	X		X						1.5	(NS)	OS	A	2	730			4206R	4206R
	SSWD	Review Hellfire/Intro APKWS	2601R	X	X		X														2601R	
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X														2702R	2702R
AI SKILL TOTAL								0	0.0	0	0.0	1	1.5									
SCAR	SCAR	SCAR	4207R	X	X		X			1.5				(NS)	OS	A/S	2	730			4207R	4207R
	SSWD	Review Hellfire/Intro APKWS	2601R	X	X		X														2601R	
	ANSQ	Rev NVD LLL Ord Del	2705R	X	X		X														2705R	2705R
SCAR SKILL TOTAL								0	0.0	1	1.5	0	0.0									
OAAW	OAAW	OAAW	4209R	X	X		X						2.0	(NS)	OS	A/S	2	730			4209R	4209R
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X														2702R	2702R
OAAW SKILL TOTAL								0	0.0	0	0.0	1	2.0									

**AH-1Z T&R MATRIX (2000-8000 Phase)**

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)
				B	R	SC		#	TIME	#	TIME	#	TIME									
AAD	RWDACM	OWP DACM	4300	X	X		X					1.5	D	OS	A	2	485			4300	2610	
	RWDACM	1v1 RW	4301	X		X						1.0	D	FS	A	2	*				4301	
	RWDACM	2v1 RW	4302	X								1.0	D	RS	A	2	*			4302	4302	
	RWDACM	Rev 1v1/2v1 RW	4303R	X	X		X					2.0	D	OS	A	2	485			4303R	4303R	
	FWDACM	1v1 FW	4304	X		X						1.0	D	FS	A	1	*				4304	
	FWDACM	2v2 FW	4305R	X	X		X					1.0	D	RS	A	2	485			4305R	4305R	
	ANSQ	NVD LLL TACFORM/TERF	2702R	X	X		X													2702R	2702R	
<b>AAD SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>6</b>	<b>7.5</b>									
CBRN	SCBRN	CBRN	S4400R	X	X		X				<b>1.0</b>		D/NS	OS	S/A	1	*			S4400R	S4400R	
<b>CBRN SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>1</b>	<b>1.0</b>	<b>0</b>	<b>0.0</b>									
CQ	CQ	Day CQ	4600R	X	X	X						1.0	D	FS	A	1	365				4600R	
	CQ	NVD CQ	4601R	X	X	X	X					1.0	NS	OS	A	1	365				4601R	
	CQ	Unaided CQ	4602R	X	X	X						1.0	N*	OS	A	1	365				4602R	
	ANSQ	NVD LLL FAM/Nav	2701R	X	X	X	X														2701R	
<b>CQ SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>3</b>	<b>3.0</b>									
<b>CORE PLUS TOTAL</b>								<b>14</b>	<b>14.0</b>	<b>2</b>	<b>2.5</b>	<b>14</b>	<b>18.5</b>									
<b>INSTRUCTOR TRAINING (5000 Phase)</b>																						
ACAD	ACAD	Training Mngt	5001	X								1.0	(N)		G		*			5001	5001	
	ACAD	Inst Philosophy	5002	X								1.0	(N)		G		*			5002	5002	
	ACAD	Coach or Umpire	5003	X								1.0	(N)		G		*			5003	5003	
	ACAD	Student Trends	5004	X								1.0	(N)		G		*			5004	5024	
	ACAD	Briefing/Debriefing	5005	X								1.0	(N)		G		*			5005	5025	
	ACAD	Review H-1 Aerodynamics	5011	X								1.0	(N)		G		*			5011		
	ACAD	How to Write an ATF	5012	X								1.0	(N)		G		*			5012	5012	
	ACAD	Instructional Stan	5013	X								1.0	(N)		G		*			5013	5013	
	ACAD	Rev Lec: TCT, REC, SWD, ESC and CAS stages	5020	X								1.0	(N)		G		*			5020	5020	
	ACAD	IUT chalk talk/lecture	5021	X								1.0	(N)		G		*			5021	5021	
	ACAD	How to Give a Quality X	5022	X								1.0	(N)		G		*			5022	5022	
	ACAD	How to Build a Scenario	5023	X								1.0	(N)		G		*			5023	5023	
	ACAD	AH-1Z IOS	5026	X								1.0	(N)		G		*					
	ACAD	TSI Introduction	5027	X								1.0	(N)		G		*			5027		
	ACAD	Tactical Simulator Scenarios	5028	X								1.0	(N)		G		*			5028		
	ACAD	FRSI Course	5060	X								1.0	(N)		G		*			5060		
	ACAD	Fam Stage Lectures	5061	X								1.0	(N)		G		*			5061		
	ACAD	Inst Stage Lectures	5062	X								1.0	(N)		G		*			5062		
	ACAD	Form Stage Lectures	5063	X								1.0	(N)		G		*			5063		
	ACAD	TERF Stage lectures	5064	X								1.0	(N)		G		*			5064		
ACAD	Nav Stage Lectures	5065	X								1.0	(N)		G		*			5065			
ACAD	SWD Stage Lectures	5066	X								1.0	(N)		G		*			5066			
ACAD	FRS-Stan Instr Course	5070	X								1.0	(N)		G		*			5070			

AH-1Z T&R MATRIX (2000-8000 Phase)

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)																				
				B	R	SC		#	TIME	#	TIME	#	TIME																													
ACAD SKILL TOTAL																						23	23.0	0	0.0	0	0.0															
BIP	SBIP	EP Stan	S5100R	X	X	X				1.5			D	OS	S	1	*				S5100R																					
	SBIP	FAM/FCLP Maneuvers	S5101	X						1.5			D	OS	S/A	1	*				S5101	S5101																				
	SBIP	INST Rev	S5102	X						1.5			(N*)	OS	S/A	1	*				S5102	S5102																				
	BIP	IUT FORM Flt Rev	5103	X								1.5	D	OS	A	2	*				5103	5103																				
	BIP	FAM Maneuvers Rev	5104R	X	X	X						1.5	D	OS	A	2	*					5104R																				
BIP SKILL TOTAL																						0	0.0	3	4.5	2	3.0															
TERFI	STERFI	TERF Maneuvers	S5110	X						1.5			D	OS	S/A	1	*				S5110	S5110																				
	TERFI	TERF Nav	5111R	X	X							1.5	D	OS	A	2	*				5111R	5111R																				
TERFI SKILL TOTAL																						0	0.0	1	1.5	1	1.5															
WTO	SWTO	Rkt/Gun/Sys Rev	S5200R	X	X	X				1.5			D	OS	S	1	*				S5200R																					
	SWTO	F/S Ord Del Rev	S5201	X						1.5			D	OS	S/A	1	*				S5201	S5201																				
	WTO	F/S Ord Del IUT Tech	5202	X							1.5	D	OS	A	2	*					5202	5202																				
	WTO	R/S Ord Del IUT Tech	5203R	X	X	X					1.5	D	OS	A	2	*	X				5203R																					
WTO SKILL TOTAL																						0	0.0	2	3.0	2	3.0															
TSI	STSI	Intro Sim Functions	S5210R	X	X					1.5			D	CP	S		*				S5210R	S5210R																				
	STSI	Rev Sim Functions	S5211R	X						1.5			D	CP	S		*				S5211R	S5211R																				
TSI SKILL TOTAL																						0	0.0	2	3.0	0	0.0															
CSI	SCSI	EP & FAM Stan	S5300	X		X				1.5			D	OS	S		365	X			S5300	S5300																				
	SCSI	INST Stan	S5301	X		X				1.5			D	OS	S		365	X			S5301	S5301																				
	SCSI	Sys/ASE Rev	S5302	X		X				1.5			D	OS	S		365	X			S5302	S5302																				
	SCSI	Rev Ord Delivery	S5303	X		X				1.5			D	OS	S		365	X			S5303	S5303																				
CSI SKILL TOTAL																						0	0.0	4	6.0	0	0.0															
FAC(A) I	FAC(A) I	FAC(A) I UT	5400	X								2.0	(NS)	OS	A	2	*	X			5400	5400																				
	FAC(A) I	FAC(A) I Check	5401R	X	X							2.0	(NS)	OS	A	2	*	X			5401R	5401R																				
FAC(A) I SKILL TOTAL																						0	0.0	0	0.0	2	4.0															
DACMI	DACMI	1v1 & 2v1 RW	5800	X								2.0	D	OS	A	2	*				5800	5800																				
	DACMI	1v1 & 2v1 FW	5801	X								2.0	D	OS	A	2	*				5801	5801																				
	DACMI	1v1 & 2v1 RW Eval	5802R	X	X							2.0	D	OS	A	2	*	1			5802R	5802R																				
	DACMI	1v1 & 2v1 FW Eval	5803R	X	X							2.0	D	OS	A	2	*	1			5803R	5803R																				
DACMI SKILL TOTAL																						0	0.0	0	0.0	4	8.0															
NSI	NSI	EPs & FAM Stan	5900	X		X						1.0	NS	OS	A	1	*					5900																				
	NSI	NVD Nav	5901	X								1.0	NS	OS	A	1	*				5901	5901																				
	NSI	TACFORM/Ord Del low threat	5902	X								1.5	NS	OS	A	2	*				5902	5902																				
	NSI	TACFORM/Ord Del Med/High threat	5903	X		X						1.5	NS	OS	A	2	*					5903																				
	NSI	NSI Standization Sim	5904R	X							1.5		NS	OS	S	1	*	X			5904R																					
	NSI	NSI Check	5905R	X	X							2.0	NS	OS	A	2	*	X				5905R	5904																			
NSI SKILL TOTAL																						0	0.0	1	1.5	5	7.0															
FLSE	FLSE	FLSE certification	5920R	X	X							2	2.0	(NS)	OS	A	2	*	X																							
	FLSE	FLSE Annual Training	5921	X								0.0			G																											
FLSE SKILL TOTAL																						1	0.0	2	0.0	2	2.0															

AH-1Z T&R MATRIX (2000-8000 Phase)

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)
				B	R	SC		#	TIME	#	TIME	#	TIME									
<b>REQUIREMENTS, CERTIFICATIONS, DESIGNATIONS, AND QUALIFICATIONS {R,C,Q,D} (6000 Phase)</b>																						
INST	INST	INST Grd Sch	6000R	X	X		X		8.0					(N)		G		365		X	6000R	6000R
	INST	INST Grd Sch Exam	6001R	X	X		X		1.0					(N)		G		365	X	X	6001R	6001R
	INST	Annual INST Check	6100R	X	X		X					1.5		(N)		A	1	365	X	X	6100R	6100R
<b>INST SKILL TOTAL</b>								<b>2</b>	<b>9.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>1.5</b>									
NTPS	NTPS	Open Book NATOPS	6002R	X	X	X	X		2.0					(N)		G		365	X	X		6002R
	NTPS	Closed Book NATOPS	6003R	X	X	X	X		1.0					(N)		G		365	X	X		6003R
	NTPS	Oral NATOPS	6004R	X	X	X	X		1.0					(N)		G		365	X	X		6004R
	NTPS	NATOPS Check	6101R	X	X	X	X					1.5		(N)		A	1	365	X	X		6101R
<b>NTPS SKILL TOTAL</b>								<b>3</b>	<b>4.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>1.5</b>									
CRM	CRM	Crew Resource Mngt	6005R	X	X	X	X		1.0					(N)		G		365				6005R
	CRM	CRM Eval	6102R	X	X	X	X					0.1		(N)		A	1	365	X			3102R
<b>CRM SKILL TOTAL</b>								<b>1</b>	<b>1.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.1</b>									
FCP	FCP	FCP Open Book Exam	6006	X					1.0					(N)		G		*	X			6006
	FCP	FCP Closed Book Exam	6007	X					1.0					(N)		G		*	X			6007
	SFCP	Demo FCF Procedures	S6200R	X	X	X					1.5			D	OS	S/A	1	*				S6200R
	FCP	Intro FCF Procedures	6201	X							1.5			D	RS	S/A	1	*				6201
	FCP	Conduct FCF	6202	X								1.5		D	OS	A	1	*				6202
	FCP	Rev FCF Procedures	6203	X								1.5		D	OS	A	1	*				6203
	FCP	Main/Tailrotor Track	6204	X			X					1.5		D	RS	A	1	*				6204
	FCP	FCP Eval	6205R	X	X	X						1.5		D	RS	A	1	*	X			6205R
<b>FCP SKILL TOTAL</b>								<b>2</b>	<b>2.0</b>	<b>2</b>	<b>3.0</b>	<b>4</b>	<b>6.0</b>									
ACAD	ACAD	Review Intel Prep Battlefield	6040	X					1.0					(N)		G		*				6040
	ACAD	(S) MAGTF Targeting	6041R	X	X				1.0					(N)		G		365				6041R
	ACAD	JTAC Aircrew Integration	6042	X					1.0					(N)		G		*				6042
	ACAD	Review ROE Planning	6050	X										(N)		G		*				6050
	ACAD	Review Objective Area Planning	6051R	X	X									(N)		G		365				6051R
	ACAD	Review (S) Weaponneering	6052	X										(N)		G		*				6052
	ACAD	Review TRAP TTPs	6060	X					1.0					(N)		G		*				6060
	ACAD	Review Exection Checklist	6061	X					1.0					(N)		G		*				6061
	ACAD	Review Rapid Response Planning Process	6070	X					1.0					(N)		G		*				6070
	ACAD	Air Mission Commander	6071	X					1.0					(N)		G		*				6071
ACAD	Review NEO Execution	6072	X					1.0					(N)		G		*				6072	
<b>ACAD SKILL TOTAL</b>								<b>5</b>	<b>5.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>									
DESG	DESG	PQM Eval	6300	X		X						0.0		D	RS	A	1	*	X			6300
	DESG	AHC Eval	6398R	X	X	X						1.5		(NS)	RS	A	1	*	X			6398R
<b>DESG SKILL TOTAL</b>								<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>1.5</b>									
SL	SL	Sec Ldr Day	6400	X								1.5		D	OS	A	2	*				6400
	SL	Night Sec Ldr	6401	X								1.5		NS	OS	A	2	*				6401
	SL	Sec Ldr Eval	6498R	X	X							2.0		(NS)	OS	A	2	*	X			6498R

AH-1Z T&R MATRIX (2000-8000 Phase)																							
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)	
				B	R	SC		#	TIME	#	TIME	#	TIME										
SL SKILL TOTAL								0	0.0	0	0.0	3	5.0										
DL	DL	Div Ldr Day	6500	X								1.5	D	OS	A	3	*			6500	6500		
	DL	Div Ldr Night	6501	X								1.5	NS	OS	A	3	*			6501	6501		
	DL	Div Ldr Eval	6598R	X	X							1.5	(NS)	OS	A	3	*	X		6598R	6598R		
DL SKILL TOTAL								0	0.0	0	0.0	3	4.5										
FL	FL	Flt Ldr Eval	6698R	X	X							1.5	(NS)	OS	A	5	*	X		6698R	6698R		
FL SKILL TOTAL								0	0.0	0	0.0	1	1.5										
AMC	AMC	AMC Eval	6798R	X	X							1.5	(NS)	OS	A	1	*	X		6798R	6798R		
AMC SKILL TOTAL								0	0.0	0	0.0	1	1.5										
SOTC	SOTC	Illum Rkt	6900R	X	X							0.0	NS	OS	A	1	*			6900R	6900R		
	SOTC	Guided Rkt Prof	6901R	X	X							0.0	(NS)	OS	A	1	*			6901R	6901R		
	SOTC	Flechette Rkt	6902R	X	X							0.0	(NS)	OS	A	1	*			6902R	6902R		
	SOTC	JAGM Prof	6903R	X	X							0.0	(NS)	OS	A	1	*			6903R	6903R		
	SOTC	Hellfire Prof	6904R	X	X							0.0	(NS)	OS	A	1	*			6904R	6904R		
	SOTC	AIM-9 Prof	6905R	X	X							0.0	(NS)	OS	A	1	*			6905R	6905R		
	SOTC	FAC(A) Standardization	6906R	X	X							0.0	(NS)	OS	A/S	1	*			6906R			
SOTC SKILL TOTAL								0	0.0	0	0.0	7	0.0										
AUTOTRK	AUTOTRK	Day Auto Rotation	6998R	X	X	X						0.1	D		A	1	*						
	AUTOTRK	Night Auto Rotation	6999R	X	X	X						0.1	N		A	1	*						
AUTOTRK SKILL TOTAL								0	0.0	0	0.0	2	0.2										

AH-1Z T&R MATRIX (2000-8000 Phase)

SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	ATTAIN			MAINTAIN	ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	EVAL	EOM	MIRROR (W-->Z)	EVENT CONV (Z-->Z)
				B	R	SC		#	TIME	#	TIME	#	TIME									
<b>AVIATION CAREER PROGRESSION MODEL (ACPM) (8000 Phase)</b>																						
ACPM	ACPM	MACCS AGENCIES, FUNCTIONS & CONTROL OF A/C & MISSILES	8200	X				0.5					(N)		G		*			8200	8200	
	ACPM	MWCS BRIEF	8201	X				0.5					(N)		G		*			8201	8201	
	ACPM	ACA AND AIRSPACE	8202	X				0.8					(N)		G		*			8202	8202	
	ACPM	AVIATION GROUND SUPP	8210	X				0.7					(N)		G		*			8210	8210	
	ACPM	ACE BATTLESTAFF	8230	X				1.0					(N)		G		*			8230	8230	
	ACPM	BATTLE COMMAND DISPL	8231	X				1.0					(N)		G		*			8231	8231	
	ACPM	SIX FUNCTIONS OF MAR	8240	X				1.7					(N)		G		*			8240	8240	
	ACPM	ASR/JTAR INTRO AND PRAC APP	8241	X				1.3					(N)		G		*			8241	8241	
	ACPM	SITE COMMAND PRIMER	8242	X				1.0					(N)		G		*			8242	8242	
	ACPM	THEATER AIR GROUND SYSTEM	8250	X				0.9					(N)		G		*			8250	8250	
	ACPM	AIR DEFENSE	8300	X				0.9					(N)		G		*			8300	8300	
	ACPM	FORWARD ARMING AND REFUELING	8310	X				0.8					(N)		G		*			8310	8310	
	ACPM	JOINT AIR TASKING 1	8321	X				0.4					(N)		G		*			8321	8321	
	ACPM	JOINT AIR TASKING 2	8322	X				0.4					(N)		G		*			8322	8322	
	ACPM	JOINT AIR TASKING 3	8323	X				0.4					(N)		G		*			8323	8323	
	ACPM	JOINT AIR TASKING 4	8324	X				0.4					(N)		G		*			8324	8324	
	ACPM	JOINT AIR TASKING 5	8325	X				0.4					(N)		G		*			8325	8325	
	ACPM	JOINT AIR TASKING 6	8326	X				0.4					(N)		G		*			8326	8326	
	ACPM	INTEGRATING FIRES AND AIRSPACE	8340	X				0.5					(N)		G		*			8340	8340	
	ACPM	PHASING CONTROL ASHORE	8350	X				0.9					(N)		G		*			8350	8350	
	ACPM	TACRON ORGANIZATIONS & FUNCTIONS	8351	X				1.0					(N)		G		*			8351	8351	
ACPM	ESG/CSG INTEGRATION	8620	X				1.0					(N)		G		*			8620	8620		
ACPM	TACTICAL AIR COMMAND CENTER	8630	X				1.0					(N)		G		*			8630	8630		
ACPM	JOINT DATA NETWORK	8640	X				0.9					(N)		G		*			8640	8640		
ACPM	MAGTF THEATER AND NATIONAL ISR EMPLOYMENT	8641	X				1.3					(N)		G		*			8641	8641		
ACPM	JOINT OPS INTRO	8660	X				0.5					(N)		G		*			8660	8660		
ACPM SKILL TOTAL								26	20.6	0	0.0	0	0.0									

2.24.4 AH-1Z Prerequisites And Chaining Table

AH-1Z PREREQUISITES AND CHAINING TABLE										
SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
ACAD	ACAD	2000-2006	X							
	ACAD	2011	X							
	ACAD	2012	X							
	ACAD	2013	X							
	ACAD	2014	X							
	ACAD	2015	X							
	ACAD	2016	X							
	ACAD	2017	X							
	ACAD	2018	X							
	ACAD	2019	X							
	ACAD	2020	X							
	ACAD	2021	X							
	ACAD	2023R	X	X		X				
	ACAD	2063	X							
	ACAD	2064	X							
ACAD	2066	X								
ACAD	2067	X								
TERF	TERF	2100R	X	X			2012			
	TERF	2101R	X	X	X	X	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2100		2100	
TCT	STCT	S2200	X				2021, 2023			
	STCT	S2201R	X	X	X	X	2200, 2101~NS	2100~AC		
REC	SREC	S2300	X				2011	2100~AC		
	REC	2301R	X	X	X	X	2101, 2300		2100, 2101	
FCLP	SFCLP	S2500	X							
	FCLP	2501R	X	X			2500			
	FCLP	2502R	X	X		X	2501		2501	

AH-1Z PREREQUISITES AND CHAINING TABLE

SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
SWD	SSWD	S2600	X				2063,2064,2066,2067,2300	2100~AC		
	SSWD	S2601R	X	X		X	2600	2100~AC		
	SWD	2602R	X	X		X	2100,2601,2301~NS,2101~NS		2301~NS	
	SSWD	S2603	X		X		2200,2301			
	SWD	2604R	X	X	X		2100,2603			
	SWD	2605R	X	X	X	X	2604		2604	
	SWD	2606	X				2101,2604		2301	
	SWD	2607R	X	X	X	X	2606		2301	
	SWD	2610R	X	X		X	2603,2607~NS,2705~LLL		2607~NS	
ANSQ	SANSQ	S2700	X		X		NSQ			
	ANSQ	2701R	X	X	X	X	2700			
	ANSQ	2702R	X	X		X	2701		2701	
	SANSQ	S2704	X				NSQ	2702~AC		
	ANSQ	2705R	X	X	X	X	2702,2704		2301,2607,2701,2702	
FAM	FAM	2800	X	X	X	X	1901		2701~LLL	
	SFAM	S2801R	X	X	X	X	1901			

AH-1Z PREREQUISTES AND CHAINING TABLE										
SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
ACAD	ACAD	3000	X							
	ACAD	3001	X							
	ACAD	3002	X							
	ACAD	3003	X							
	ACAD	3004	X							
	ACAD	3005R	X	X		X				
	ACAD	3006	X							
	ACAD	3007	X							
	ACAD	3008	X							
	ACAD	3009	X							
	ACAD	3010R	X	X		X				
	ACAD	3011R	X	X		X				
	ACAD	3012	X							
	ACAD	3013	X							
	ACAD	3019R	X	X		X				
	ACAD	3030R	X	X		X				
	ACAD	3031R	X	X		X				
	ACAD	3032	X							
	ACAD	3033R	X	X		X				
	ACAD	3034	X							
	ACAD	3035	X							
	ACAD	3038	X							
	ACAD	3039	X							
ACAD	3041R	X	X		X					
ACAD	3042	X								
ACAD	3045	X								
ESC	ESC	3100	X				3008, 3009, 2603	2604~ORD		2600~ORD
	ESC	3101R	X	X	X		3010, 3011, 3100, NS~NSQ, LLL~ANSQ		2301	2600, 2607~ORD NS, 2600, 2607, 2705~ORD LLL
	SESC	S3102R	X	X	X	X	3003, 3004, 3005, 3019, 3101		2201, 2601, 2602, 3101	
	ESC	3103R	X	X			2603, NS~NSQ, LLL~ANSQ		2301~NS, LLL~2702	2602~ORD, 2607~ORD NS, 2705~ORD LLL
	ANSQ	2702R	X	X		X				

AH-1Z PREREQUISITES AND CHAINING TABLE										
SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
CAS	SCAS	S3300	X		X		3030, 3031, 3032, 3033, 2600, 2704		2600, 2601, 2602	
	CAS	3301R	X	X	X	X	3300		2601, 2602	
	CAS	3302	X				3301, NS~NSQ, LLL~ANSQ		2301, 2601, 2602, 2607, 3301	
	CAS	3303R	X	X	X	X	3302, ANSQ		2301, 2601, 2602, 2607, 2705, 3301, 3302	
	CAS	3304R	X	X			3301, NS~3302, LLL~3303		2601, 2602, 3301, NS~2301, NS~2607, LLL~2705, LLL~3303	
	ANSQ	2705R	X	X	X	X				
AR	AR	3305R	X	X		X	3030, 3035, ANSQ		2601, 2602, 2301~NS	2607~ORD NS, 2705~ORD LLL
	SSWD	S2601R	X	X		X				
	ANSQ	2705R	X	X	X	X				
AI	AI	3306R	X	X	X	X	3030, ANSQ		2601, 2602, 2301~NS	2607~ORD NS, 2705~ORD LLL
	SSWD	S2601R	X	X		X				
	ANSQ	2702R	X	X		X				
SCAR	SCAR	3307R	X	X		X	3030, 3035, ANSQ		2601, 2602, 2301~NS	2607~ORD NS, 2705~ORD LLL
	SSWD	S2601R	X	X		X				
	ANSQ	2705R	X	X	X	X				
TRAP	TRAP	3308R	X	X		X	3038, 3039, ANSQ, 3100, NS~3101		2601, 2602, 2301~NS	2607~ORD NS, 2607, 2705~ORD LLL
	ESC	3102	X	X	X	X				
	ANSQ	2702R	X	X		X				
FAC (A)	FAC (A)	3400R	X	X		X	3041, 3042, 6300		2301~NS	
	FAC (A)	3401R	X	X		X	3041, 3042, 6398		3301, 2301~NS	
	FAC (A)	3402R	X	X		X	3041, 3042, 6398		3301	
	FAC (A)	3403R	X	X		X	3041, 3042, 6398		3301, 3402, 2301~NS, 3303~NS	
	FAC (A)	3404R	X	X		X	3400, 3401, 3402, 3403~NS		3301, 3402, 2301~NS, 3303~NS, 3403~NS	
	ANSQ	2705R	X	X	X	X				
EXP	EXP	3600	X				3045, 8310, 8311, 2100			
	EXP	3601R	X	X	X	X	3045, 8310, 8311, 2101~NS, 2701~LLL		2701~LLL	
	EXP	3602	X				2100			
	EXP	3603R	X	X	X	X	2101, 2701~LLL		2701~LLL	
	ANSQ	2701	X	X	X	X				

AH-1Z PREREQUISITES AND CHAINING TABLE										
SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
ACAD	ACAD	4001	X							
	ACAD	4021	X							
	ACAD	4022	X							
	ACAD	4023	X							
	ACAD	4024	X							
	ACAD	4026	X							
	ACAD	4030	X							
	ACAD	4030	X							
	ACAD	4031	X							
	ACAD	4032	X							
	ACAD	4033	X							
	ACAD	4034	X							
	ACAD	4035	X							
	ACAD	4036	X							
ESC	ESC	4200R	X	X		X	6498			
	ANSQ	2702R	X	X		X				
CAS	CAS	4201R	X	X		X	6498			
	ANSQ	2705R	X	X	X	X				
AR	AR	4205R	X	X		X	6498			
	SSWD	S2601R	X	X		X				
	ANSQ	2705R	X	X	X	X				
AI	AI	4206R	X	X		X	6498			
	SSWD	S2601R	X	X		X				
	ANSQ	2702R	X	X		X				
SCAR	SCAR	4207R	X	X		X	6498			
	SSWD	S2601R	X	X		X				
	ANSQ	2705R	X	X	X	X				
OAAW	OAAW	4209R	X	X		X	8300, 4206, 4207			
	ANSQ	2702R	X	X		X				

AH-1Z PREREQUISITES AND CHAINING TABLE

SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
AAD	RWDACM	4300	X	X		X	2603			
	RWDACM	4301	X		X		TERF, 2201, 2300, 2603			
	RWDACM	4302	X				4301			
	RWDACM	4303R	X	X		X	3013, 4030, 4031, 4032, 4033, 4034, 4302			
	FWDACM	4304	X		X		TERF, 2201, 2300, 2603			
	FWDACM	4305R	X	X		X	4030, 4031, 4032, 4035, 4036, 4304			
	ANSQ	2702R	X	X		X				
CBRN	SCBRN	S4400R	X	X		X		2101~AC		
CQ	CQ	4600R	X	X	X		2501		2501	
	CQ	4601R	X	X	X	X	NSQ, 2502, 4600		2501, 2502, 4600, 4602	
	CQ	4602R	X	X	X		2502, 4600		2501, 2502, 4600	
	ANSQ	2701R	X	X	X	X				
ACAD	ACAD	5001	X							
	ACAD	5002	X							
	ACAD	5003	X							
	ACAD	5004	X							
	ACAD	5005	X							
	ACAD	5011	X							
	ACAD	5012	X							
	ACAD	5013	X							
	ACAD	5020	X							
	ACAD	5021	X							
	ACAD	5022	X							
	ACAD	5023	X							
	ACAD	5026	X							
	ACAD	5027	X							
	ACAD	5028	X							
	ACAD	5060	X							
	ACAD	5061	X							
	ACAD	5062	X							
	ACAD	5063	X							
	ACAD	5064	X							
ACAD	5065	X								

AH-1Z PREREQUISITES AND CHAINING TABLE										
SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
	ACAD	5066	X							
	ACAD	5070	X							
BIP	SBIP	S5100R	X	X	X		6498		2801	
	SBIP	S5101	X				5100		2500,2801	
	SBIP	S5102	X				5100		2801	
	BIP	5103	X				5100			
	BIP	5104R	X	X	X		5101-5103		2800	
TERFI	STERFI	S5110	X				5011,5012,5013,5104			
	TERFI	5111R	X	X			5110		2100	
WTO	SWTO	S5200R	X	X	X		5111		2600	
	SWTO	S5201	X				5200		2200,2603	
	WTO	5202	X				5201		2604	
	WTO	5203R	X	X	X		5202		2604	
TSI	STSI	S5210R	X	X			5026, In BIP syllabus			
	STSI	S5211R	X				5210			
CSI	SCSI	S5300	X			X	Candidate CSI			
	SCSI	S5301	X			X	Candidate CSI			
	SCSI	S5302	X			X	Candidate CSI			
	SCSI	S5303	X			X	Candidate CSI			
FAC(A) I	FAC(A) I	5400	X				IAW MAWTS-1 Course Catalog			
	FAC(A) I	5401R	X	X			IAW MAWTS-1 Course Catalog			
DACMI	DACMI	5800	X				IAW MAWTS-1 Course Catalog		4300,4301,4302,4303	
	DACMI	5801	X				IAW MAWTS-1 Course Catalog		4304,4305	
	DACMI	5802R	X	X			5800		4303	
	DACMI	5803R	X	X			5801		4304,4305	
NSI	NSI	5900	X		X				2101,2700,2701,2800,2801	
	NSI	5901	X				IAW MAWTS-1 Course Catalog		2101,2700,2701,2800,2801	
	NSI	5902	X				IAW MAWTS-1 Course Catalog		2201,2301,2607,2700,2701,2705,2800,2801	
	NSI	5903	X		X		IAW MAWTS-1 Course Catalog		2101,2201,2301,2607,2700,2701,2705	
	NSI	5904R	X				5900,5901,5902,5903		2101,2201,2301,2607,2700,2701,2705	

AH-1Z PREREQUISITES AND CHAINING TABLE

SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
	NSI	5905R	X	X			5904		2101,2201,2301,2607,2700,2701,2705,2800,2801	
FLSE	FLSE	5920R	X	X			6598,5905			
	FLSE	5921	X				5920			
INST	INST	6000R	X	X		X				
	INST	6001R	X	X		X	6000			
	INST	6100R	X	X		X	6000			
NTPS	NTPS	6002R	X	X	X	X				
	NTPS	6003R	X	X	X	X				
	NTPS	6004R	X	X	X	X				
	NTPS	6101R	X	X	X	X	6002,6003,6004		2800	
CRM	CRM	6005R	X	X	X	X				
	CRM	6102R	X	X	X	X				
FCP	FCP	6006	X							
	FCP	6007	X							
	SFCP	S6200R	X	X	X		6300		2801	
	FCP	6201	X				6200			
	FCP	6202	X				6201			
	FCP	6203	X				6202			
	FCP	6204	X		X		6200			
	FCP	6205R	X	X	X		6006,6007,6200,6201,6202,6203,6204			
ACAD	ACAD	6040	X							
	ACAD	6041R	X	X						
	ACAD	6042	X							
	ACAD	6050	X							
	ACAD	6051R	X	X						
	ACAD	6052	X							
	ACAD	6060	X							
	ACAD	6061	X							
	ACAD	6070	X							
	ACAD	6071	X							
DESG	DESG	6300	X		X		1901			
	DESG	6398R	X	X	X		8300,8310,8321,8322,8323,8324,8325,8326,8340,8350,8351,6300,Core and Misison Skills Complete			

AH-1Z PREREQUISITES AND CHAINING TABLE										
SKILL	STAGE	EVENT NUMBER	ATTAIN			MAINTAIN	PREREQUISITE	PREREQ NOTES	CHAINING	CHAINING NOTES
			B	R	SC					
SL	SL	6400	X				6398			2603~ORD
	SL	6401	X				6398		2702	2607~ORD NS, 2705~ORD LLL
	SL	6498R	X	X			8630, 8660, 6400, 6401			2702~NS, 2607~ORD NS, 2705~ORD LLL
DL	DL	6500	X				6498			2601, 2603~ORD
	DL	6501	X				6498		2702	2601, 2603~ORD, 2607~ORD NS, 2705~ORD LLL
	DL	6598R	X	X			8640, 8641, 6500, 6501			2601, 2603~ORD, 2607~ORD NS, 2705~ORD LLL
FL							6598			
	FL	6698R	X	X						2702~NS, 2601, 2603~ORD, 2607~ORD NS, 2705~ORD LLL
AMC	AMC	6798R	X	X			6070, 6071, 6598			
SOTC	SOTC	6900R	X	X						
	SOTC	6901R	X	X						
	SOTC	6902R	X	X						
	SOTC	6903R	X	X						
	SOTC	6904R	X	X						
	SOTC	6905R	X	X						
	SOTC	6906R	X	X						
AUTOTRK	AUTOTRK	6998R	X	X	X					
	AUTOTRK	6999R	X	X	X					

## 2.24.5 AH-1Z Ordnance And Range Table

AH-1Z RANGES AND ORDNANCE TABLE							
SKILL	STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
<b>CORE SKILLS (2000 Phase)</b>							
TERF	TERF	2100R			Authorized TERF route		
	TERF	2101R			Authorized TERF route		
TCT	STCT	S2200					
	STCT	S2201R	(1) Captive HF, (60) Chaff/Flares ~AC			Live fire range, Remote RADAR and IR stimulator	
REC	SREC	S2300			Authorized TERF area, LASER safe range	Thermally augmented threat vehicles, if available	
	REC	2301R			Authorized TERF area, LASER safe range	Thermally augmented threat vehicles, if available	
FCLP	SFCLP	S2500					
	FCLP	2501R				FCLP pad	
	FCLP	2502R				FCLP pad	
SWD	SSWD	S2600	(1) Captive HF ~AC		LASER safe range		
	SSWD	S2601R	(1) Captive HF, (2) 2.75" APKWS, (300) 20mm ~AC		Live fire and LASER safe range with thermally significant targets		
	SWD	2602R	(1) Live HF, (400) 20mm		Live fire and LASER safe range with thermally significant targets		
	SSWD	S2603			Live fire and LASER safe range with thermally significant targets		
	SWD	2604R	(7) 2.75" rockets, (300) 20mm		Live fire and LASER safe range with thermally significant targets		
	SWD	2605R	(19) 2.75 rockets, (300) 20mm		Live fire and LASER safe range with thermally significant targets		
	SWD	2606	(7) 2.75" rockets, (300) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets		
	SWD	2607R	(7) 2.75" rockets, (300) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets		
	SWD	2610R	(7) 2.75" rockets, (500) 20mm		Live fire and LASER safe range with thermally significant targets		Moving target or one aircraft for shadow
ANSQ	SANSQ	S2700					
	ANSQ	2701R				Unlit field	
	ANSQ	2702R			Authorized TERF area		
	SANSQ	S2704			Live fire and LASER safe range with thermally significant		

AH-1Z RANGES AND ORDNANCE TABLE							
SKILL	STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
					targets		
	ANSQ	2705R	(7) 2.75" rockets, (500) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets		
FAM	FAM	2800					
	SFAM	S2801R					
MISSION SKILLS (3000 Phase)							
During this Phase:							
1. One of the night aircraft ordnance events shall employ (7) 2.75 inch Illumination rockets (i.e. M257/M278).							
2. One of the aircraft ordnance events shall employ (4) 2.75 inch Advanced Precision Kill Weapons System (APKWS) rockets.							
3. One of the aircraft ordnance events shall employ (7) 2.75 inch flechette rockets.							
ESC	ESC	3100	(1) Captive PGM, (1) CATM-9, (7) 2.75 inch rockets, (300) 20mm, (60) chaff/flare	Optional	Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft	
	ESC	3101R	(1) Captive PGM, (1) CATM-9, (7) 2.75 inch rockets, (300) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft	
	SESC	3102R	(1) Captive PGM, (1) CATM-9, (7) 2.75 inch rockets, (300) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets		One or more assault support aircraft~AC
	ESC	3103R	(1) Captive PGM, (7) 2.75" rockets, (300) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets		One ground/amphibious unit (minimum three vehicles) ~AC
	ANSQ	2702R					
CAS	SCAS	S3300					
	CAS	3301R	(1) Captive PGM, (7) 2.75" rockets, (200) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets	TACP	
	CAS	3302	(1) Captive PGM, (7) 2.75" rockets, (500) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets	TACP	
	CAS	3303R	(1) Captive PGM, (7) 2.75" rockets, (500) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets	Thermally significant tarhets,TACP, FW, IDF	
	CAS	3304R	(1) Captive PGM, (7) 2.75" rockets, (300) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets	TACP with appropriate marking devices (if available), suitable urban environment or MOUT facility	
	ANSQ	2705R					
AR	AR	3305R	(1) Captive PGM, (7) 2.75" rockets, (500) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets		
	SSWD	2601R					
	ANSQ	2705R					
AI	AI	3306R	(1) Captive PGM, (7) 2.75" rockets, (300) 20mm, (60)		Live fire and LASER safe range with thermally significant		

AH-1Z RANGES AND ORDNANCE TABLE							
SKILL	STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
			chaff/flare		targets		
	SSWD	2601R					
	ANSQ	2702R					
SCAR	SCAR	3307R	(1) Captive PGM, (7) 2.75" rockets, (300) 20mm, (60) chaff/flare		Live fire and LASER safe range with thermally significant targets	RW or FW aircraft and thermally significant targets	
	SSWD	2601R					
	ANSQ	2705R					
TRAP	TRAP	3308R	(1) Captive PGM, (7) 2.75" rockets, (300) 20mm, (60) chaff/flare	Optional	Live fire and LASER safe range with thermally significant targets	One or more external Assault Support aircraft or one ground/amphibious unit (minimum three vehicles)	
	ESC	3102R					
	ANSQ	2702R					
FAC (A)	FAC (A)	3400R	(1) Captive PGM, (7) 2.75" rockets, (300) 20mm, (60) chaff/flare	Optional	Live fire and LASER safe range with thermally significant targets	One (1) indirect fire asset with eight (8) rounds	
	FAC (A)	3401R	(1) Captive PGM, (7) 2.75" RP rockets, (300) 20mm		Live fire and LASER safe range with thermally significant targets, if available	2 RW CAS aircraft with ordnance, Ground Maneuver Unit with TACP	
	FAC (A)	3402R	(1) Captive PGM, (7) 2.75" RP rockets, (300) 20mm		Live fire and LASER safe range with thermally significant targets	2 FW CAS aircraft with ordnance, prefer forward firing or unguided free-fall, Ground Maneuver unit with TACP	
	FAC (A)	3403R	(1) Captive PGM, (7) 2.75" RP rockets, (300) 20mm		Live fire and LASER safe range with thermally significant targets	2 FW CAS aircraft with LASER guided, sensor guided or coordinate dependant ordnance, Ground Maneuver unit with TACP	
	FAC (A)	3404R	(1) Captive PGM, (7) 2.75" RP rockets, (300) 20mm		Live fire and LASER safe range with thermally significant targets	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	
	ANSQ	2705R					
EXP	EXP	3600				Actual or simulated FARP	
	EXP	3601R				Actual or simulated FARP	
	EXP	3602					
	EXP	3603R					
	ANSQ	2701R					
<b>CORE PLUS (4000 Phase)</b>							
ESC	ESC	4200R	(1) captive PGM, (7) 2.75" rockets, (300) 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	2 or more assault support aircraft	

AH-1Z RANGES AND ORDNANCE TABLE							
SKILL	STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
	ANSQ	2702R					
CAS	CAS	4201R	(1) captive PGM, (7) 2.75" rockets, (200) 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	JTAC with appropriate marking devices (if available), suitable urban environment or MOUT facility	
	ANSQ	2705R					
AR	AR	4205R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets		
	SSWD	2601R					
	ANSQ	2705R					
AI	AI	4206R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets		
	SSWD	2601R					
	ANSQ	2702R					
SCAR	SCAR	4207R	(1) captive PGM, (7) 2.75 inch rockets, (200) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	2 OAS aircraft	
	SSWD	2601R					
	ANSQ	2705R					
OAAW	OAAW	4209R	(1) captive PGM		Live fire and LASER safe range	Designated TERF area	
	ANSQ	2702R					
AAD	RWDACM	4300	(1) CATM-9, (30) flares		Authorized TERF area		
	RWDACM	4301	(1) CATM-9, (30) flares and TCTS pod (as required)		Appropriate air-to-air training area	One adversary helicopter and appropriate air-to-air training area	
	RWDACM	4302	(1) CATM-9, (30) flares and TCTS pod (as required)		Appropriate air-to-air training area	One adversary helicopter and appropriate air-to-air training area	
	RWDACM	4303R	(1) CATM-9, (30) flares and TCTS pod (as required)		Appropriate air-to-air training area	One adversary helicopter and appropriate air-to-air training area	
	ANSQ	2702R					
	FWDACM	4304	(1) CATM-9, (30) flares and TCTS pod (as required)		Appropriate air-to-air training area	One FW adversary and appropriate air-to-air training area	
	FWDACM	4305R	(1) CATM-9, (30) flares and TCTS pod (as required)		Appropriate air-to-air training area	Two FW adversary and appropriate air-to-air training area	
	ANSQ	2702R					
CBRN	SCBRN	S4400R					
CQ	CQ	4600R				Landing platform afloat	
	CQ	4601R				Landing platform afloat	
	CQ	4602R				Landing platform afloat	
	ANSQ	2701R					

AH-1Z RANGES AND ORDNANCE TABLE							
SKILL	STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
INSTRUCTOR TRAINING (5000 Phase)							
BIP	SBIP	S5100R				Device operator	
	SBIP	S5101				Device operator	FCLP pad~AC
	SBIP	S5102				Device operator	
	BIP	5103					
	BIP	5104R					
TERFI	STERFI	S5110			Authorized TERF maneuvering area		
	TERFI	5111R			Authorized TERF maneuvering area		
WTO	SWTO	S5200R				Device operator	
	SWTO	S5201				Device operator	
	WTO	5202	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (30) chaff/flares		Live fire and LASER safe range with thermally significant targets		
	WTO	5203R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (30) chaff/flares		Live fire and LASER safe range with thermally significant targets		
TSI	STSI	S5210R					
	STSI	S5211R					
CSI	SCSI	S5300					
	SCSI	S5301					
	SCSI	S5302					
	SCSI	S5303					
FAC(A) I	FAC(A) I	5400	(1) captive PGM, (7) 2.75 inch RP rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	FW and RW OAS support, IDF support, TACP if available	
	FAC(A) I	5401R	(1) captive PGM, (7) 2.75 inch RP rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	FW and RW OAS support, IDF support, TACP if available	
DACMI	DACMI	5800	(1) captive AIM-9, (60) flares and TCTS pod (optional)				
	DACMI	5801	(1) captive AIM-9, (60) flares and TCTS pod (optional)				
	DACMI	5802R	(1) captive AIM-9, (60) flares and TCTS pod (optional)				
	DACMI	5803R	(1) captive AIM-9, (60) flares and TCTS pod (optional)				
NSI	NSI	5900					
	NSI	5901					
	NSI	5902					
	NSI	5903	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets		
	NSI	5904R					
	NSI	5905R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60)		Live fire and LASER safe range with thermally significant		

AH-1Z RANGES AND ORDNANCE TABLE							
SKILL	STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
			chaff/flares		targets		
FLSE	FLSE	5920R					
	FLSE	5921					
REQUIREMENTS, CERTIFICATIONS, DESIGNATIONS, AND QUALIFICATIONS {R,C,D,Q} (6000 Phase)							
INST	INST	6000R					
	INST	6001R					
	INST	6100R					
NTPS	NTPS	6002R					
	NTPS	6003R					
	NTPS	6004R					
	NTPS	6101R					
CRM	CRM	6005R					
	CRM	6102R					
FCP	FCP	6006					
	FCP	6007					
	SFCP	S6200R					
	FCP	6201					
	FCP	6202					
	FCP	6203					
	FCP	6204					
DESG	DESG	6300					
	DESG	6398R					
SL	SL	6400	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft(if escort mission)	
	SL	6401	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft(if escort mission)	
	SL	6498R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft(if escort mission)	
DL	DL	6500	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft(if escort mission)	
	DL	6501	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft(if escort mission)	
	DL	6598R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft(if escort mission)	
FL	FL	6698R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares		Live fire and LASER safe range with thermally significant targets	One or more assault support aircraft(if escort mission)	

AH-1Z RANGES AND ORDNANCE TABLE							
SKILL	STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE NOTES	RANGE	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
AMC	AMC	6798R	(1) captive PGM, (7) 2.75 inch rockets, (300) rounds 20mm, (60) chaff/flares	Optional	Live fire and 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)	
SOTC	SOTC	6900R					
	SOTC	6901R					
	SOTC	6902R					
	SOTC	6903R					
	SOTC	6904R					
	SOTC	6905R					
	SOTC	6906R					
AUTOTRK	AUTOTRK	6998R					
	AUTOTRK	6999R					

2.24.6 AH-1Z FRS T&R Matrix

AH-1Z FRS T&R MATRIX (1000 and 5000 Phases)																								
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	POI				ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	PREREQUISITE	PREREQ NOTES	MIRROR	EVENT CONV		
				B	R	SC	MR	#	TIME	#	TIME	#	TIME											
<b>CORE SKILL INTRODUCTION (1000 Phase)</b>																								
ACAD	ACAD	Light Attack University	1000	X					1.0				(N)		G		*			1000				
	ACAD	CBT/Interactive Courseware	1001	X					1.0				(N)		G		*			1001	1009			
	ACAD	Weight & Power Lecture	1002	X					1.0				(N)		G		*			1002				
	ACAD	Optomized TOPOWL System/Setup	1003	X					1.0				(N)		G		*			1003	1010			
	ACAD	Crew Resource Management	1004R	X	X				1.0				(N)		G		365			1004R	1001			
	ACAD	Intro to Mission Planning Software	1005	X					1.0				(N)		G		*			1005	1000			
	ACAD	FAM stage Lecture	1006	X					1.0				(N)		G		*			1006				
	ACAD	INST stage Lecture	1007	X					1.0				(N)		G		*			1007				
	ACAD	FORM stage Lecture	1008	X					1.0				(N)		G		*			1008	1004			
	ACAD	TERF Stage Lecture	1009	X					1.0				(N)		G		*			1009	1005			
	ACAD	NAV Stage Lecture	1010	X					1.0				(N)		G		*			1010	1006			
	ACAD	NVD NITE Lab	1011	X					1.0				(N)		G		*			1011	1002			
	ACAD	TCT/ASE Lecture	1012	X					1.0				(N)		G		*			1012	1008			
ACAD	SWD Stage Lecture	1013	X					1.0				(N)		G		*			1013	1007				
<b>ACAD SKILL TOTAL</b>								14	14.0	0	0.0	0	0.0											
FAM	FAM	Demo Mission Plan	1100	X								0.0	D		A	1	*	1000,1001,1002,1003		1100	1100			
	FAM	Demo Pre/Post Flt	1101R	X	X	X	X					0.0	D		A	1	*	1100			1101			
	SFAM	FFS Checklist Intro/Ground Proc	1102R	X	X	X	X				1.5		D	RS	S	1	*	1004,1005,1006			1103			
	FAM	Intro Basic FAM	1103	X								1.5	D	FS	A	1	*	1001,1102		1103	1106			
	SFAM	Intro FAM Maneuvers	S1104R	X	X	X	X				1.5		D	FS	S	1	*	1500,1202			1104			
	FAM	Intro FAM Maneuvers	1105R	X	X	X	X					1.5	D	FS	A	1	*	1104						
	SFAM	FFS Intro Emergency Proc	S1106R	X	X	X	X				1.5		D	FS	S	1	*	1105			1105			
	SFAM	FFS Intro Emergency Proc	S1107R	X	X	X	X				1.5		D	FS	S	1	*	1106				1107		
	FAM	Intro Eps/Review FAM Maneuvers	1108R	X	X	X	X					2.0	D	FS	A	1	*	1106				1110		
	FAM	Review FAM Maneuvers	1109	X								2.0	D	RS	A	1	*	1107,1108		1109	1109			
	SFAM	Review EPs/CRM	S1110	X							1.5		D	RS	S	1	*	1109		1110	1108			
	SFAM	Review EPs/CRM	S1111	X							1.5		D	RS	S	1	*	1110		S1111				
	FAM	Rev Eps/FAM Maneuvers	1112	X								2.0	D	OS	A	1	*	1110		1112	1111			
	FAM	Review Eps/FAM Maneuvers	1113R	X	X	X						2.0	D	RS	A	1	*	1112				1117		
	SFAM	Emerg Proc/CRM Eval	S1114R	X	X	X	X				1.5		D	RS	S	1	*	1111				1112		
	FAM	FAM Eval	1115R	X	X	X	X					2.0	D	RS	A	1	*	1113,1114				1119		
	SFAM	Intro NVD FAM HLL	S1116R	X	X	X	X				1.5		NS	FS	A	1	*	1011,1115				1113		
SFAM	Intro NVD Maneuvers HLL	S1117	X							1.5		NS	RS	S	1	*	1116		1117	1114				
FAM	Review NVD FAM Maneuvers HLL	1118	X								2.0	NS	FS	A	1	*	1117		1121	1115				
FAM	Review NVD FAM Maneuvers HLL	1119	X								2.0	NS	RS	A	1	*	1118		1122	1116				
<b>FAM SKILL TOTAL</b>								0	0.0	8	13.5	12	17.0											

AH-1Z FRS T&R MATRIX (1000 and 5000 Phases)																									
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	POI				ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	PREREQUISITE	PREREQ NOTES	MIRROR	EVENT CONV			
				B	R	SC	MR	#	TIME	#	TIME	#	TIME												
INST	SINST	Intro Basic INST	S1200	X						1.5			(N*)	OS	S	1	*	1007,1103		S1200R	1200				
	SINST	Intro TACAN/GCA	S1201R	X	X	X	X			1.5			(N*)	OS	S	1	*	1200			1201				
	INST	Intro TACAN/GCA	1202	X							1.5		(N*)	FS	A	1	*	1201		1201	1202				
	INST	Intro INST Flt	1203	X							1.5		(N*)	FS	A	1	*	1007,1115		1202R	1203				
	INST	Review INST Flt Proc	1204R	X	X	X	X				2.0		(N*)	OS	A	1	*	1203			1204				
	SINST	INST Flt Proc Eval	S1205R	X	X	X	X				1.5		(N)	OS	S	1	*	1204				1205			
INST SKILL TOTAL								0	0.0	3	4.5	3	5.0												
FORM	SFORM	Intro FORM Flt	S1300	X						1.5			D	OS	S	1	*	1008,1205		S1300	1300				
	FORM	Intro FORM/TAC FORM	1301R	X	X		X				2.0		D	FS	A	1	*	1300		1301R	1301				
	SFORM	Intro Div FORM	S1302	X						1.5			D	OS	S	1	*	1301		S1302	1302				
	FORM	Intro NVD FORM	1303R	X	X		X				1.5		NS	OS	A	2	*	1118,1301		1303R	1303				
	FORM	FORM Eval	1304	X							1.5		D	FS	A	2	*	1302,1303		1304	1304				
FORM SKILL TOTAL								0	0.0	2	3.0	3	5.0												
TERF	TERF	Intro TERF	1400R	X	X	X	X					2.0	D	FS	A	1	*	1009,1205	1301~SCN		1401				
	TERF	Intro NVD TERF	1401	X							2.0		NS	FS	A	1	*	1118,1400	1303~SCN	1403R	1402				
TERF SKILL TOTAL								0	0.0	0	0.0	2	4.0												
NAV	NAV	Intro DMS NAV	1500R	X	X	X	X					0.0	(N)	OS	A	1	*	1103			1500				
	NAV	Intro TSS	1501	X		X					0.0		(N)	OS	A	1	*	1103							
	SNAV	Intro Flt NAV	S1502R	X	X	X	X			1.5			D	OS	S	1	*	1010,1500,1501							
	NAV	Intro Flt NAV	1503	X							2.0		D	OS	A	1	*	1502		1500	1501				
	NAV	Intro NVD NAV	1504	X							2.0		NS	OS	A	1	*	1118,1503		1501R	1502				
NAV SKILL TOTAL								0	0.0	1	1.5	4	4.0												
SWD	SSWD	Intro Weapons Delivery	S1600	X						1.5			D	RS	S	1	*	1013,1205,1500,1501		S1600R	1600				
	SSWD	Review weapons Delivery	S1601	X		X				1.5			D	OS	S	1	*	1600			1601				
	SSWD	Review weapons Delivery	S1602	X						1.5			D	OS	S	1	*	1600		S1602R	1602				
	SSWD	Intro BCWD	S1603R	X	X	X					1.5		D	OS	S	1	*	1602			1603				
	SWD	Intro BCWD	1604	X							1.5		D	OS	A	1	*	1301,1400,1502,1602		1603R	1604				
	SWD	Weapons Systems Refinement	1605R	X	X	X	X				1.5		D	OS	A	1	*	1603,1604,1700			1605				
SWD SKILL TOTAL								0	0.0	4	6.0	2	3.0												
TCT	STCT	Intro ASE Ops	S1700	X		X				1.5			D	RS	S	1	*	1012,1205			1700				
TCT SKILL TOTAL								0	0.0	1	1.5	0	0.0												
CSIX	SCSIX	EP/CRM Eval	S1900R	X						1.5			D	RS	S	1	*	prior stages comp		S1900R	1900				
	CSIX	Core Skill Intro Ck	1901R	X	X	X	X				2.0		D	RS	A	1	*	1900			1901				
CSIX SKILL TOTAL								0	0.0	1	1.5	1	2.0												

AH-1Z FRS T&R MATRIX (1000 and 5000 Phases)																						
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	POI				ACAD/GRND		SIM		FLIGHT		COND	SEAT	TYPE	# A/C or Sim	REFLY	PREREQUISITE	PREREQ NOTES	MIRROR	EVENT CONV
				B	R	SC	MR	#	TIME	#	TIME	#	TIME									
INSTRUCTOR TRAINING (5000 Phase)																						
FRSI	SFRSI	EP Stan	S5310	X							1.5			D	RS	S	1	*	5203	S5310	5310	
	FRSI	FAM Review & Stan	5311	X								2.0		D	RS	A	1	*	5310	5311	5311	
	FRSI	FAM Review & Stan	5312	X								2.0		D	FS	A	1	*	5311	5312	5312	
	FRSI	FAM Eval	5313	X								2.0		D	FS	A	1	*	5312	5313	5319	
	FRSI	INST Flt Proc Eval	5314R	X	X							2.0	(N)	RS	A	1	*	5310	5314R	5314	5314	
	FRSI	FORM Stan	5315R	X	X							2.0		D	FS	A	2	*	5310	5315R	5315	
	FRSI	TERF Review & Stan	5316R	X	X							2.0		D	RS	A	2	*	5310	5316R	5316	
	SFRSI	Weapons Review & Stan	S5317	X							1.5			D	OS	S	1	*	5310	S5317R	5317	
	FRSI	Weapons Eval & Stan	5318R	X	X							1.5		D	FS	A	1	*	5317		5318	
	FRSI	Review NVD FAM Maneuvers	5319R	X	X							2.0		NS	RS	A	1	*	5313,5315,5316	NSI/NSFI	5319R	5313
FRSI SKILL TOTAL								0	0.0	2	3.0	8	15.5									
FRS-SI	FRS-SI	Intro Form Stage Eval Setup	5320	X								1.5		D	FS	A	2	*	5337		5320	
	SFRS-SI	Intro CSIX 1900 & 1901 Eval Setup	5321	X								1.5		D		S	1	*	5337		5321	
FRS-SI SKILL TOTAL								0	0.0	1	1.5	1	1.5									
NSFI	NSFI	NAV & TERF IUT	5600	X								1.5		NS		A	1	*			5600	5600
	NSFI	FORM IUT	5601	X								1.5		NS		A	2	*			5601	5601
	NSFI	NSFI Check	5602R	X	X							1.5		NS		A	1	*			5602R	5602
NSFI SKILL TOTAL								0	0.0	0	0.0	3	4.5									

2.24.7 AH-1Z FRS Range And Ordnance Table

AH-1Z FRS ORDNANCE, RANGE, AND CHAINING TABLE (1000 and 5000 Phases)												
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	COND	SEAT	TYPE	# A/C or Sim	REFLY	CHAINING	ORDNANCE	RANGE	EVAL
<b>CORE SKILL INTRODUCTION (1000 Phase)</b>												
ACAD	ACAD	Light Attack University	1000	(N)		G		*				
	ACAD	CBT/Interactive Courseware	1001	(N)		G		*				
	ACAD	Weight & Power Lecture	1002	(N)		G		*				
	ACAD	Optomized TOPOWL System/Setup	1003	(N)		G		*				
	ACAD	Crew Resource Management	1004R	(N)		G		365				
	ACAD	Intro to Mission Planning	1005	(N)		G		*				
	ACAD	FAM stage Lecture	1006	(N)		G		*				
	ACAD	INST stage Lecture	1007	(N)		G		*				
	ACAD	FORM stage Lecture	1008	(N)		G		*				
	ACAD	TERF Stage Lecture	1009	(N)		G		*				
	ACAD	NAV Stage Lecture	1010	(N)		G		*				
	ACAD	NVD NITE Lab	1011	(N)		G		*				
	ACAD	TCT/ASE Lecture	1012	(N)		G		*				
ACAD	SWD Stage Lecture	1013	(N)		G		*					
FAM	FAM	Demo Mission Plan	1100	D		A	1	*				
	FAM	Demo Pre/Post Flt	1101R	D		A	1	*				
	SFAM	FFS Checklist Intro/Ground Proc	1102R	D	RS	S	1	*				
	FAM	Intro Basic FAM	1103	D	FS	A	1	*				
	SFAM	Intro FAM Maneuvers	S1104R	D	FS	S	1	*				
	FAM	Intro FAM Maneuvers	1105R	D	FS	A	1	*				
	SFAM	FFS Intro Emergency Proc	S1106R	D	FS	S	1	*				
	SFAM	FFS Intro Emergency Proc	S1107R	D	FS	S	1	*				
	FAM	Intro Eps/Review FAM Maneuvers	1108R	D	FS	A	1	*				
	FAM	Review FAM Maneuvers	1109	D	RS	A	1	*				
	SFAM	Review EPs/CRM	S1110	D	RS	S	1	*				
	SFAM	Review EPs/CRM	S1111	D	RS	S	1	*				
	FAM	Rev Eps/FAM Maneuvers	1112	D	OS	A	1	*				
	FAM	Review Eps/FAM Maneuvers	1113R	D	RS	A	1	*				
	SFAM	Emerg Proc/CRM Eval	S1114R	D	RS	S	1	*				X
	FAM	FAM Eval	1115R	D	RS	A	1	*				X
	SFAM	Intro NVD FAM HLL	S1116R	NS	FS	A	1	*				
SFAM	Intro NVD Maneuvers HLL	1117	NS	RS	S	1	*					
FAM	Review NVD FAM Maneuvers HLL	1118	NS	FS	A	1	*					
FAM	Review NVD FAM Maneuvers HLL	1119	NS	RS	A	1	*					

AH-1Z FRS ORDNANCE, RANGE, AND CHAINING TABLE (1000 and 5000 Phases)												
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	COND	SEAT	TYPE	# A/C Or Sim	REFLY	CHAINING	ORDNANCE	RANGE	EVAL
INST	SINST	Intro Basic INST	S1200	(N*)	OS	S	1	*				
	SINST	Intro TACAN/GCA	S1201R	(N*)	OS	S	1	*				
	INST	Intro TACAN/GCA	1202	(N*)	FS	A	1	*				
	INST	Intro INST Flt	1203	(N*)	FS	A	1	*				
	INST	Review INST Flt Proc	1204R	(N*)	OS	A	1	*				
	SINST	INST Flt Proc Eval	S1205R	(N)	OS	S	1	*				X
FORM	SFORM	Intro FORM Flt	S1300	D	OS	S	1	*				
	FORM	Intro FORM/TAC FORM	1301R	D	FS	A	1	*				
	SFORM	Intro Div FORM	S1302	D	OS	S	1	*				
	FORM	Intro NVD FORM	1303R	NS	OS	A	2	*				
	FORM	FORM Eval	1304	D	FS	A	2	*				X
TERF	TERF	Intro TERF	1400R	D	FS	A	1	*				
	TERF	Intro NVD TERF	1401	NS	FS	A	1	*				
NAV	NAV	Intro DMS NAV	1500R	(N)	OS	A	1	*				
	NAV	Intro TSS	1501	(N)	OS	A	1	*				
	SNAV	Intro Flt NAV	S1502R	D	OS	S	1	*				
	NAV	Intro Flt NAV	1503	D	OS	A	1	*				
	NAV	Intro NVD NAV	1504	NS	OS	A	1	*				
SWD	SSWD	Intro Weapons Delivery	S1600	D	RS	S	1	*				
	SSWD	Review weapons Delivery	S1601	D	OS	S	1	*				
	SSWD	Review weapons Delivery	S1602	D	OS	S	1	*				
	SSWD	Intro BCWD	S1603R	D	OS	S	1	*				
	SWD	Intro BCWD	1604	D	OS	A	1	*		(1) captive PGM, (7) 2.75" rockets, (300) rounds 20mm	Live fire LASER safe range (raked /scored range if available)	
	SWD	Weapons Systems Refinement	1605R	D	OS	A	1	*				
TCT	STCT	Intro ASE Ops	S1700	D	RS	S	1	*				
CSIX	SCSIX	EP/CRM Eval	S1900R	D	RS	S	1	*				X
	CSIX	Core Skill Intro Ck	1901R	D	RS	A	1	*				X

AH-1Z FRS ORDNANCE, RANGE, AND CHAINING TABLE (1000 and 5000 Phases)												
SKILL	STAGE	T&R DESCRIPTION	EVENT NUMBER	COND	SEAT	TYPE	# A/C Or Sim	REFLY	CHAINING	ORDNANCE	RANGE	EVAL
<b>FRS INSTRUCTOR TRAINING (5000 Phase)</b>												
FRSI	SFRSI	EP Stan	S5310	D	RS	S	1	*	2801			
	FRSI	FAM Review & Stan	5311	D	RS	A	1	*	2800			
	FRSI	FAM Review & Stan	5312	D	FS	A	1	*	2800			
	FRSI	FAM Eval	5313	D	FS	A	1	*	2800			X
	FRSI	INST Flt Proc Eval	5314R	(N)	RS	A	1	*	2800			X
	FRSI	FORM Stan	5315R	D	FS	A	2	*				
	FRSI	TERF Review & Stan	5316R	D	RS	A	2	*	2100			
	SFRSI	Weapons Review & Stan	S5317	D	OS	S	1	*	2601			
	FRSI	Weapons Eval & Stan	5318R	D	FS	A	1	*		(7) 2.75 inch rockets, (300) rounds 20mm	Live fire and LASER safe	X
FRSI	Review NVD FAM Maneuvers	5319R	NS	RS	A	1	*	2800				
FRS-SI	FRS-SI	Intro Form Stage Eval Setup	5320	D	FS	A	2	*				
	SFRS-SI	Intro CSIX 1900 & 1901 Eval Setup	5321	D		S	1	*				
NSFI	NSFI	NAV & TERF IUT	5600	NS		A	1	*	2101,2701,2702,2800			
	NSFI	FORM IUT	5601	NS		A	2	*	2701,2702,2800			
	NSFI	NSFI Check	5602R	NS		A	1	*	2800			X