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From: Commandant of the Marine Corps
To: Distribution List

Subj: HH-46E SAR TRAINING AND READINESS MANUAL

Ref: (a) NAVMC 3500.14C

Encl: (1) HH-46E SAR T&R Manual

1. Purpose. In accordance with reference (a), enclosure (1) contains revised standards and regulations regarding the training of HH-46E SAR aircrew.

2. Cancellation. NAVMC 3500.21

3. Scope. Highlights of major Training and Readiness (T&R) planning considerations included in this HH-46E SAR T&R Manual are as follows:

a. The number of chapters have increased from 4 to 5 with the introduction of a Unit T&R chapter.

b. Event coding has transitioned from 3 to 4 digits to align with reference (a).

c. The Search and Rescue and Night Search and Rescue Stages have been modified to align with the overarching publication on Search and Rescue techniques and standards, the Navy Search and Rescue Manual (NTTP 3-50).

d. A Functional Checkflight syllabus has been added.

e. The Combat Readiness Percentage metric has been replaced by Mission Essential Task based reporting for aircrew readiness.

4. Information. Recommended changes to this manual should be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General (CG), Training and Education Command (TECOM), Marine Air Ground Task Force Training and Education Standards Division (C 465), Aviation Standards Branch, Quantico, Virginia 22134 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

HH-46E SAR TRAINING AND READINESS UNIT REQUIREMENTS

CHAPTER 1

HH-46E SAR 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. To provide Search and Rescue support to MCAS Cherry Point based aircraft as well as short and medium range rapid response/high speed multipurpose light transport of key personnel and critical logistics support to DOD.

1.2 TABLE OF ORGANIZATION (T/O)

VMR-1 SAR	
HH-46E A/C	
Crew Composition	**Total(s)**
Pilots	8
Crew Chiefs	12
SAR Medical Technician (MT)	5
SAR Rescue Swimmer (RS)	6

1.3 SIX FUNCTIONS OF MARINE AVIATION

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

1.4 ABBREVIATIONS

HH-46E SAR	
CORE/MISSION/CORE PLUS SKILL ABBREVIATIONS	
CORE SKILLS (2000 Phase)	
ACAD	Academic
SIM	Simulator
FAM/INST	Familiarization / Instruments
CAL	Confined Area Landing
NAV	Navigation
NS	Night Systems
FF	Aerial Fire Fighting
AT	Aerial Transport
MISSION SKILLS (3000 Phase)	
SAR	Search and Rescue
NSAR	Night Search and Rescue
CORE PLUS (4000 Phase)	
CORE PLUS SKILLS	
CQ	Carrier Qualification
FCLP	Field Carrier Landing Practice
RAP	Rappel
NRAP	Night Rappel
ORH	Over the Ramp Hoisting
DIR	Direct Deployment

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	Fundamental, environmental, or conditional capabilities required to perform basic functions. These basic functions serve as tactical enablers that allow crews to progress to the more complex Mission Skills. Primarily 2000 Phase events but may be introduced in the 1000 Phase.
Mission Skill	Mission Skills enable a unit to execute a specific MET. They are comprised of advanced event(s) that are focused on MET performance and draw upon the knowledge, aeronautical abilities, and situational awareness developed during Core Skill training. 3000 Phase events.
Core Plus Skill	Training events that can be theater specific or that have a low likelihood of occurrence. They may be Fundamental, environmental, or conditional capabilities required to perform basic functions. 4000 Phase events.
Core Plus Mission	Training events that can be theater specific or that have a low likelihood of occurrence. They are comprised of advanced event(s) that are focused on Core Plus MET performance and draw upon the knowledge, aeronautical abilities, and situational awareness. 4000 Phase events.
Core Skill Proficiency (CSP)	CSP is a measure of training completion for 2000 Phase events. CSP is attained by executing all events listed in the Attain Table for each Core Skill. The individual must be simultaneously proficient in all events within that Core Skill to attain CSP.
Mission Skill Proficiency (MSP)	MSP is a measure of training completion for 3000 Phase events. MSP is attained by executing all events listed in the Attain Table for each Mission Skill. The individual must be simultaneously proficient in all events within that Mission Skill to attain MSP. MSP is directly related to Training Readiness.
Core Plus Skill Proficiency (CPSP)	CPSP is a measure of training completion for 4000 Phase "Skill" events. CPSP is attained by executing all events listed in the Attain Table for each Core Plus Skill. The individual must be simultaneously proficient in all events within that Core Plus Skill to attain CPSP
Core Plus Mission Proficiency (CPMP)	CPMP is a measure of training completion for 4000 Phase "Mission" events. CPMP is attained by executing all events listed in the Attain Table for each Core Plus Mission. The individual must be simultaneously proficient in all events within that Core Plus Mission to attain CPMP
Core Model Training Standard (CMTS)	CMTS is an objective optimum training standard used by squadrons that reflects the number of individuals trained to CSP/MSP, per crew position. The CMTS is for internal squadron planning only and is not utilized for readiness reporting. The numbers are determined by individual communities.
Core Model Minimum Requirement (CMMR RR)	CMMR represents the minimum crew definition qualifications and designations, the number of crews required per MET, and minimum Combat Leadership requirements for readiness reporting purposes.

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

HH-46E SAR		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	**ABBREVIATION**	**MCT DESCRIPTION**
MCT 1.3.4.1.3	**SAR**	Provide Day Aerial Search and Rescue Services
MCT 1.3.4.1.3.X	**NSAR**	Provide Night Aerial Search and Rescue Services
MCT 1.3.4.1.2	**AT**	Conduct Aerial Transport
MCT 1.3.4.4	**FF**	Provide Aerial Firefighting Support (AF)
CORE PLUS		
MCT 1.3.3.3.1	**CQ**	Conduct Aviation Operations From Expeditionary Sea-Based Sites

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

HH-46E SAR							
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 1.3.4.1.3	**SAR**		X				
MCT 1.3.4.1.3.X	**NSAR**		X				
MCT 1.3.4.1.2	**AT**		X				
MCT 1.3.4.4	**FF**		X				
CORE PLUS							
MCT 1.3.3.3.1	**CQ**		X				

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

HH-46E SAR																				
MET TO CORE/MISSION/CORE PLUS SKILL MATRIX																				
MET	CORE SKILLS (2000 Phase)							MISSION SKILLS (3000 Phase)					CORE PLUS SKILLS (4000 Phase)							
	ACAD	FAM	CAL	NAV	NS	FF	AT	ACAD	SAR	NSAR	AT	FF	ACAD	RAP	NRAP	ORH	DIR	FORM	FCLP	CQ
SAR	X	X	X	X	X			X	X				X	X	X	X	X			
NSAR	X	X	X	X	X			X		X			X	X	X	X	X			
AT	X	X	X	X	X		X	X			X		X					X	X	
FF	X	X	X	X	x	X		X				X								
CORE PLUS																				
CQ	X		X	X			X						X						X	X

1.9 MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS. The following MET output standards are the required level of performance a VMR-1 SAR Det must be capable of sustaining during contingency operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable VMR-1 SAR Det 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.

HH-46E SAR MET				
Output Standards				
CORE				
MCT	SKILL	MET	OUTPUT STANDARD	
			MAXIMUM MCT SORTIES	MAXIMUM DAILY SORTIES
MCT 1.3.4.1.3	SAR	Provide Day Aerial Search and Rescue Services	5	5
MCT 1.3.4.1.3.X	NSAR	Provide Night Aerial Search and Rescue Services	5	
MCT 1.3.4.1.2	AT	Conduct Operational Airlift Support	5	
MCT 1.3.4.4	FF	Provide Aerial Firefighting Support (AF)	5	
CORE PLUS				
MCT 1.3.3.3.1	CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites	2	

1.10 CORE MODEL MINIMUM REQUIREMENTS (CMMR) TRAINING STANDARDS FOR READINESS REPORTING (DRRS-MC). The paragraphs and tables below delineate the minimum aircrew qualifications and designations required to execute the MET training standards and MET observed standards of para 1.9. MCO 3000.13 Readiness Reporting and Chapter 7 of the Aviation T&R Program Manual provide 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 depicts the minimum crew composition (defined as a combination of qualifications and designations) reflecting 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.

HH-46E SAR CMMR for READINESS REPORTING						
CREW POSITION						FORMED CREWS
CORE						
MET	ABBREVIATION	PILOT	CC	MT	RS	
MCT 1.3.4.1.3	SAR	4	2	2	2	2
MCT 1.3.4.1.3.X	NSAR	4	2	2	2	2
MCT 1.3.4.1.2	AT	4	2	2	2	2
MCT 1.3.4.4	FF	4	2	2	2	2
CORE PLUS						
MET	ABBR	PILOT	CC	MT	RS	FORMED CREWS
MCT 1.3.3.3.1	CQ	2	1	1	1	1
COMBAT LEADERSHIP						
DESIGNATION					VMR-1 HH-46E	
SAR HELICOPTER AIRCRAFT COMMANDER					4	
SECTION LEADER					2	

1.11 CORE MODEL TRAINING STANDARD (CMTS). The CMTS is the optimum training standard reflecting the number of aircrews trained to CSP/MSP, per crew

position to execute each stage of flight as detailed below. The CMTS Matrix depicts the training goal and optimum depth of training desired for each squadron as they develop their squadron training plan. It is not utilized for readiness reporting (DRRS-MC) purposes. At a minimum, the CMTS shall enable a squadron to form Core Model Minimum Requirement (CMMR) crews for Mission Skills (and Mission Plus Skills when required).

HH-46E SAR				
CORE SKILLS (2000 Phase)				
CORE SKILL	**PILOTS**	**CREW CHIEFS**	**MT**	**RS**
ACAD	6	3	3	3
SIM	6	0	0	0
FAM	6	3	3	3
CAL	6	3	3	3
NAV	6	3	3	3
NS	6	3	3	3
FF	6	3	3	3
AT	6	3	3	3
MISSION SKILLS (3000 Phase)				
MISSION SKILL	**PILOTS**	**CREW CHIEFS**	**MT**	**RS**
ACAD	6	3	3	3
SAR	6	3	3	3
NSAR	6	3	3	3
FF	6	3	3	3
AT	6	3	3	3
CORE PLUS (4000 Phase)				
CORE+ SKILL	**PILOTS[1]**	**CREW CHIEFS[1]**	**MT[1]**	**RS[1]**
ACAD	4	2	2	2
RAP	4	2	2	2
NRAP	4	2	2	2
DIR	4	2	2	2
ORH	4	2	2	2
FORM	4	2	2	2
FCLP	4	2	2	2
MISSION PLUS				
MISSION	**PILOTS[1]**	**CREW CHIEFS[1]**	**MT[1]**	**RS[1]**
CQ	2	1	1	1

1.12 INSTRUCTOR DESIGNATIONS (5000 Phase). Squadron requests for instructor designations in excess of those authorized per NAVMC 3500.50B shall be requested in writing to VMR-1 Commanding Officer.

HH-46E SAR				
INSTRUCTOR DESIGNATIONS (5000 Phase) CMTS				
INSTRUCTOR DESIGNATIONS	Pilot	CC	MT	RS
Basic Instructor	4	4	–	–
SAR Instructor	3	3	2	2
Night System Instructor	1	1	–	–
Night System SAR Instructor	1	1	–	–
NATOPS Instructor	1	1	–	–
Assistant NATOPS Instructor	2	2	–	–
Instrument Evaluator	2	–	–	–
CRM Instructor	1	1	–	–
CRM Facilitator	2	2	–	–
HIRA Instructor	–	2	1	1
Rappel Instructor	–	2	–	–
Direct Deployment Instructor	–	2	–	2

1.13 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (R, C, Q & D) (6000 Phase)

HH-46E SAR				
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (R,C,Q,D) (6000 Phase)				
R,C,Q,D	Pilot	CC	MT	RS
Co-Pilot	7	–	–	–
SAR Co-Pilot	6	–	–	–
FCP	2		–	–
HAC	6	–	–	–
Day SAR HAC	5	–	–	–
SAR HAC	4	–	–	–
Rappel	–	2	2	2
Direct Deployment	–	2	–	2
ORH	–	2	–	2
FCLP	2	2	–	–
CQ	2	2	–	–
Section Lead	2	–	–	–
Day SAR Crew Chief	–	3	–	–
SAR Crew Chief	–	3	–	–
Day SAR Swimmer	–	–	–	3
SAR Swimmer	–	–	–	3
Day SAR Corpsman	–	–	3	–
SAR Corpsman	–	–	3	–
Aerial Observer	–	–	2	2

CHAPTER 2

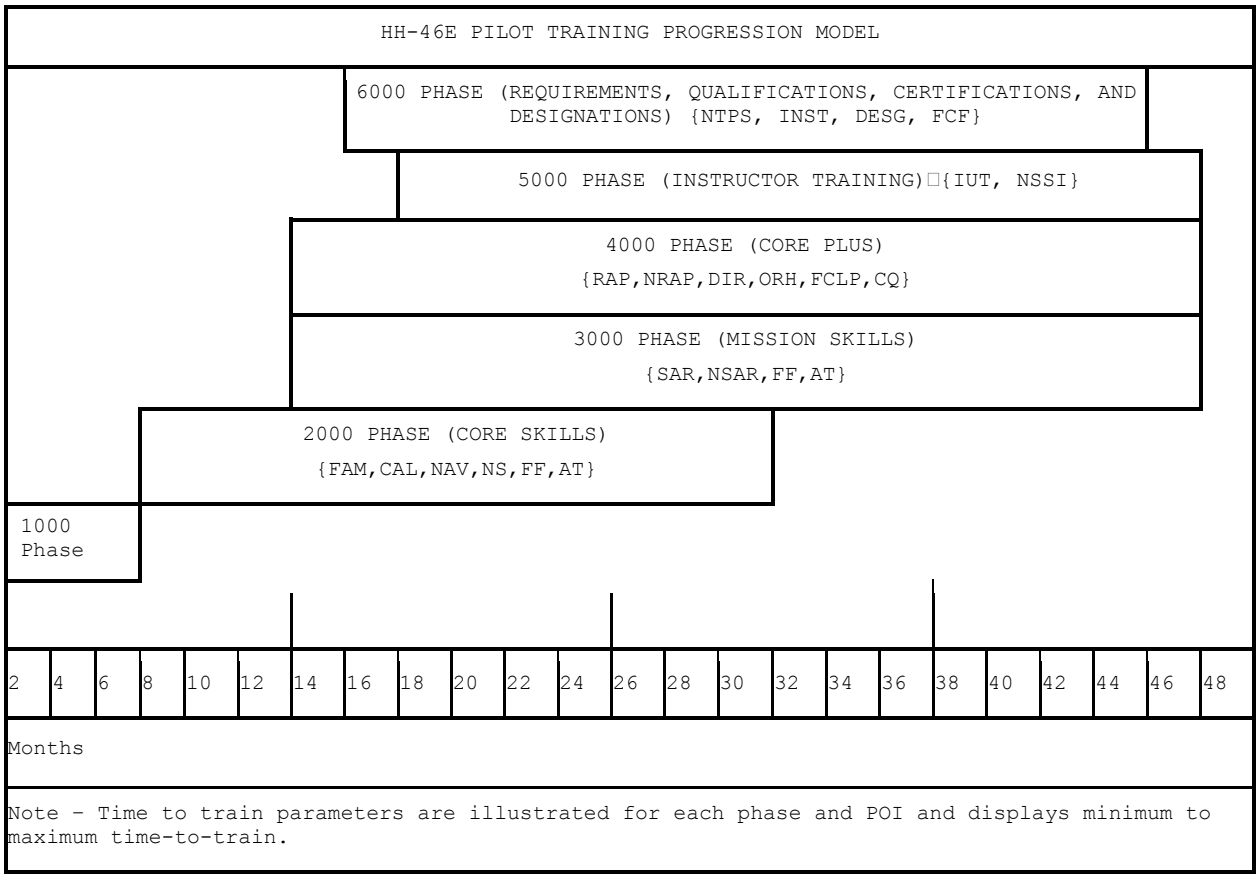
PILOT (7562)

CHAPTER 2

HH-46E PILOT

2.0 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core, Mission, and Core Plus Skills. The goal of this chapter is to develop individual and unit Search and Rescue capabilities.

2.1 TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average HH-46E Pilot.



2.2 ABBREVIATIONS. See Chapter 1.

2.3 DEFINITIONS. See Chapter 1.

2.4 INDIVIDUAL CORE/MISSION/CORE PLUS SKILL PROFICIENCY REQUIREMENTS

2.4.1 Management of individual CSP/MSP/CPSP/CPMP serves as the foundation for developing proficiency requirements in DRRS.

2.4.2 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.

2.4.3 Proficiency is attained by individual Core/Mission/Core Plus skill and the training events to be executed within that skill set are determined by POI assignment (Basic, Transition, Conversion, Series Conversion, or Refresher).

2.4.4 Once proficiency has been attained by Core/Mission/Core Plus Skill (by any POI assignment) then the individual maintains proficiency by executing those events within the maintain column. An individual maintains proficiency by individual Core/Mission/Core Plus Skill.

Note

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

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

HH-46E SAR PILOT					
CORE/MISSION/CORE PLUS ATTAIN & MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
STAGE	CODE	STAGE	CODE	STAGE	CODE
ACAD	2000	ACAD	2000	ACAD	
	2001		2001		
	2002		2002		
	2003		2003		2003
	2004		2004		
	2005		2005		
	2006		2006		
	2007		2007		
	2009		2009		2009
	2010		2010		2010
FAM	SIM 2100	FAM	SIM 2100	FAM	
	SIM 2101		SIM 2101		
	SIM 2102				
	2103		2103		
	2104		2104		2104
	2105		2105		2105
CAL	2200	CAL	2200	CAL	2200

NAV	2300	NAV	2300	NAV	2300
	2301		2301		
NS	2401	NS	2401	NS	
	2402				
	2403		2403		2403
FF	2500	FF	2500	FF	2500
AT	2600	AT	2600	AT	2600
MISSION SKILLS (3000 PHASE)					
ATTAIN PROFICIENCY				**MAINTAIN PROFICIENCY**	
BASIC POI		**REFRESHER POI**		**MAINTAIN POI**	
STAGE	CODE	STAGE	CODE	STAGE	CODE
ACAD	3000	ACAD	3000	ACAD	3000
	3001		3001		3001
	3002		3002		3002
	3003		3003		3003
	3009		3009		3009
	3019		3019		3019
	3020		3020		3020
	3021		3021		3021
	3052		3052		3052
	3053		3053		3053
	3054		3054		3054
SAR	3100	SAR	3100	SAR	
	3102		3102		3102
	3103		3103		
	3104		3104		3104
	3105		3105		3105
	3108		3108		3108
	3109		3109		
NSAR	3200	NSAR	3200	NSAR	
	3202		3202		3202
	3203		3203		
	3204		3204		3204
	3205		3205		3205
	3208		3208		3208
	3209		3209		
FF	2500	FF	2500	FF	2500
AT	2600	AT	2600	AT	2600
CORE PLUS SKILLS (4000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
STAGE	CODE	STAGE	CODE	STAGE	CODE
ACAD	4000	ACAD	4000	ACAD	4000

	4001		4001		4001
	4002		4002		4002
	4003		4003		4003
	4004		4004		4004
	4005		4005		4005
	4006		4006		4006
	4007		4007		4007
RAP	4102	RAP	4102	RAP	4102
NRAP	4202	NRAP	4202	NRAP	4202
DIR	4300	DIR	4300	DIR	4300
	4301		4301		4301
	4310		4310		4310
	4311		4311		4311
ORH	4400	ORH	4400	ORH	4400
	4410		4410		4410
FCLP	4500	FCLP	4500	FCLP	4500
	4510		4510		4510
FORM	4700	FORM	4700	FORM	4700
	4701		4701		4701
	4710		4710		4710
	4711		4711		4711
CQ	4600	CQ	4600	CQ	4600
	4610		4610		4610

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

2.5.1 Instructor Training

HH-46E PILOT INSTRUCTOR DESIGNATIONS (5000 Phase)	
INSTRUCTOR DESIGNATION	EVENTS
SARI	5100,5101,5102,5103
NSSI	5110,5111,5112

2.5.2 Requirements, Certifications, Qualifications, and Designations

HH-46E PILOT REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (R,C,Q,& D) [6000 Phase]

QUALIFICATIONS	EVENTS
NATOPS	6000,6001,6002,6003,6101
INSTRUMENTS	6004,6005,6006,6102
SAR	6016,6200
NSAR	6016,6210
CRM	6007,6103
DESIGNATIONS	EVENTS
NSAR	NATOPS QUALIFIED AND 2000 PHASE COMPLETE
DAY RAPPEL	4102
NIGHT RAPPEL	4202

2.6 PILOT PROGRAMS OF INSTRUCTION (POI). These tables reflect average time-to-train versus the minimum to maximum time-to-train parameters in the Training Progression Model.

2.6.1 General. The Basic POI is for all Pilots assigned for their first time to a SAR unit utilizing the HH-46E. The Refresher POI is for all Pilots who have previously been assigned to a SAR unit utilizing the HH-46E aircraft. Personnel who have previously been assigned duties as a Pilot in another platform (SAR or otherwise) must complete the Basic POI.

2.6.2 Basic POI

HH-46E SAR PILOTS Basic POI		
Weeks	Phase of Instruction	Unit
2	SAR Ground Training	VMR-1
6	Core Skill (2000 Phase)	VMR-1
10	Mission Skill (3000 Phase)	VMR-1
8	Core Plus (4000 Phase)	VMR-1

2.6.3 Refresher POI

HH-46E SAR PILOTS Refresher POI		
Weeks	Phase of Instruction	Unit
1	SAR Ground Training	VMR-1
4	Core Skill (2000 Phase)	VMR-1
8	Mission Skill (3000 Phase)	VMR-1
6	Core Plus (4000 Phase)	VMR-1

2.7 SYLLABUS NOTES

2.7.1 Environmental Conditions Matrix

Environmental Conditions	
Code	**Meaning**
D	Shall be flown during hours of daylight: (by exception - there is no use of a symbol)
N	Shall be flown during hours of darkness, may be aided or unaided
N*	Shall be flown during hours of darkness must be flown unaided
(N*)	May be flown during hours of darkness – If flown during hours of darkness must be flown unaided
(N)	May be flown during darkness – If flown during hours of darkness; may be flown aided or unaided
NS	Shall be flown during hours of darkness – Mandatory use of Night Vision Devices
(NS)	May be flown during darkness – If flown during hours of darkness; must be flown with Night Vision Devices
Note – If the event is to be flown in the simulator the Simulator Instructor shall set the desired environmental conditions for the event.	

2.7.2 Device Matrix

DEVICE (Aviation Flying)	
Symbol	**Meaning**
A	Flown in Aircraft
A/S	Aircraft preferred may be flown in Simulator
S	Flown in Simulator
S/A	Simulator preferred may be flown in Aircraft

2.7.3 Program of Instruction Matrix

PROGRAM OF INSTRUCTION MATRIX			
Program of Instruction (POI)	**Symbol**	**Aviation Flying**	**Aviation Ground**
Basic	**B**	Initial MOS/Skill Training	Initial MOS Training
Refresher	**R**	DIFDEN to DIFOPS in same T/M/S	Return to community from non (MOS/Skill) associated tour
Maintain	**M**	All individuals who have attained CSP/MSP/CPP by initial POI assignment are re-assigned to the M POI to maintain proficiency.	

2.7.4 Event Terms

EVENT TERMS	
TERM	**DESCRIPTION**
Discuss	An explanation of systems, procedures, or maneuvers during the brief, in flight, or post flight. Student is responsible for knowledge of procedures.
Demonstrate	The description and performance of a particular maneuver/event by the instructor, observed by the PUI/student. The PUI/student is responsible for knowledge of the procedures prior to the demonstration of a required maneuver/student.
Introduce	The instructor may demonstrate a procedure or maneuver to a student, or may coach the PUI through the maneuver without demonstration. The PUI performs the procedures or maneuver with coaching as necessary. The PUI is responsible for knowledge of the procedures.
Practice	The performance of a maneuver or procedure by the PUI/student that may have been previously introduced in order to attain a specified level of performance.
Review	Demonstrated proficiency of a maneuver by the PUI/student.
Evaluate	Any flight designed to evaluate aircrew standardization that does not fit another category such as SARCK, HACCK, H2PCK, etc.
E-Coded	This term means that documentation (ATF) is required each time the event is logged. Requires evaluation by a certified standardization instructor (NATOPS I, WTI, INST Evaluator etc.)

2.7.5 REQUIREMENTS FOR SAR H2P DESIGNATION

2.7.5.1 Complete all SAR academic lectures.

2.7.5.2 Complete SAR Open Book Examination.

2.7.5.3 Current Instrument rating, current NATOPS and CRM evaluation in model.

2.7.5.4 SAR T&R codes complete through the 3100 (Day SAR) level syllabus (with exception of SAR-3108), and complete with night codes NS-2401 and NSAR-3204. If the pilot is both NSQ and current in the CH-46E, the night syllabus can be waived. HH-46E H2Ps that have not completed the above required night codes may be designated Day SAR H2P.

2.7.6 REQUIREMENTS FOR SAR HAC DESIGNATION

2.7.6.1 Meet the requirements for SAR H2P per paragraph 2.7.5.

2.7.6.2 3000 Stage complete (through 3209). SAR T&R codes complete through DESG-6201. A pilot may be designated Day SAR HAC at the discretion of the Commanding Officer once SAR T&R codes are complete through SAR-3105 and requirements of 2.7.5 are met.

2.8 CORE SKILL INTRODUCTION ACADEMIC PHASE (0000 Phase). There are no 0000 Phase events in the HH-46E T&R manual. The FRS Academic Phase is included in the CH-46E T&R manual

2.9 CORE SKILL INTRODUCTION PHASE (1000). There is no 1000 Phase events in the HH-46E T&R manual. Refer to the CH-46E T&R manual for the 1000 phase.

2.10 CORE SKILL INTRODUCTION STAGES (1000). There are no 1000 Stage events in the HH-46E T&R manual. Refer to the CH-46E T&R manual for the 1000 phase.

2.11 CORE SKILL PHASE (2000)

2.11.1 General. All 2000 series events shall be instructed by a SAR Instructor. All initial NS flights will be flown with an NSI or NSSI. Core Skill Phase in the HH-46E provides the pilot with an opportunity to become familiar with the differences between the HH-46E and the CH-46E. At the completion of the 2000 phase events, the pilot should be comfortable with the aircraft and local course rules and prepared to learn the mission requirements.

2.12 CORE SKILL STAGES (2000)

STAGE	EVENTS
2.12.1	Academics (ACAD)
2.12.2	Familiarization (FAM)
2.12.3	Confined Area Landings (CAL)
2.12.4	Navigation (NAV)
2.12.5	Night Systems (NS)
2.12.6	Aerial Fire Fighting (FF)
2.12.7	Aerial Transport (AT)

2.12.1 Academics (ACAD)

2.12.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each Pilot. A summary of academic classes that is required for the Core Skill Phase (2000) are listed below with their corresponding T&R code.

2.12.1.2 General. The Academic syllabus is designed to ensure Pilots are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training (2000-6000) there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	CORE SKILLS PHASE (2000)
ACAD-2000	COMMAND MISSION
ACAD-2001	CREW RESPONSIBILITIES CLASS
ACAD-2002	FLIGHT EQUIPMENT AND SAFETY PROCEDURES
ACAD-2003	EGRESS AND EMERGENCY PROCEDURES*
ACAD-2004	CONFINED AREA LANDINGS
ACAD-2005	SAR AND MEDICAL GEAR FAMILIARIZATION
ACAD-2008	NIGHT SYSTEMS REVIEW
ACAD-2009	PRINCIPLES OF FIRE FIGHTING*
ACAD-2010	PASSENGER AND MEDICAL TRANSPORTS*

*Denotes annual training requirement

2.12.2 Simulator (SIM)

2.12.2.1 Purpose. Familiarize all pilots with HH-46E normal cockpit procedures, Crew Resource Management (CRM), systems operations and limitations, emergency procedures, and to introduce instrument flight and emergency procedures in a SAR environment.

2.12.2.2 General. Initial simulator training should be completed by all pilots prior to starting the flight syllabus. Simulator training will be conducted at an appropriate H-46 simulator. If a flight simulator is not available, simulator periods designated as "S/A" may be waived by the commanding officer. Simulator designated as "S/A" may be flown in the aircraft. Refresher training shall be conducted annually thereafter. CRM shall always be stressed.

2.12.2.3 Crew Requirements. IP, PUI

SIM-2100 1.0 90 B,R,M S/A 1 H-46 APT

Goal. Review normal procedures, start engage, shut-down, and emergency procedures.

Requirement

Brief/Discuss/Introduce. System differences between HH-46E and CH-46E aircraft

Performance Standard. Perform start engage, shut-down, familiarization maneuvers, and in-flight emergencies.

SIM-2101 1.0 * B,R S/A 1 H-46 APT

Goal. Introduce overwater Doppler procedures.

Requirement

Brief/Discuss

Emergency water landing in a night environment

Single engine takeoff from water at night

Emergency egress

Introduce/Demonstrate

Introduce low level instrument flight over water

Doppler pattern and procedures

Engine failures in the Doppler pattern

Performance Standard. IAW NATOPS / Instrument Flight Manuals

Prerequisite. SIM-2100

SIM-2102 1.0 * B S/A 1 H-46 APT

Goal. Review day and/or night instrument procedures.

Requirement

Brief/Discuss

Basic instrument procedures

IFR planning and flying procedures

CRM

Local approaches / airways

ILS procedures

Introduce/Review

Basic instrument maneuvers to include turn patterns, vertical S-1 patterns, Oscar pattern, partial panel flight, and instrument autorotations

Instrument navigation and approaches

Instrument scan

IFR planning and flying procedures

ILS cockpit procedures and approach navigation

Performance Standard. Pilot shall perform all basic instrument maneuvers IAW the FRS Maneuver Description Guide as well as conduct an TACAN/ILS approach to an approved field within parameters set forth in the NATOPS Instrument Manual.

Prerequisite. SIM-2101

2.12.2 Familiarization (FAM)

2.12.2.1 Purpose. Become familiar with aircraft flight characteristics, limitations, emergency procedures and develop proficiency in all maneuvers contained in the familiarization stage.

2.12.2.2 General. Prior to FAM-2103, conduct a thorough preflight and post flight inspection with a qualified SAR pilot. In preparing for a sortie, pilots shall study emergencies per the NATOPS Flight Manual. The pilot's pocket checklist lacks important information presented in the NATOPS Flight Manual. In addition to the emergency procedures, study the aircraft systems related to each particular malfunction.

All initial syllabus flights shall be flown with a designated NATOPS Instructor or Assistant NATOPS Instructor.

2.12.2.3 Crew Requirements. IP, PUI, CC

FAM-2103 1.5 * B,R D A 1 HH-46E

Goal. Conduct an area familiarization.

Requirement

Brief/Discuss

CRM

Course Rules

Local LZ's

Introduce/Demonstrate

Startup, Radio, and Taxi Procedures

Local course rules

All familiarization procedures as per NATOPS

Local operating and landing areas

Performance Standard. Pilot shall be able to identify differences between HH-46E and CH-46E helicopters, and perform familiarization maneuvers per NATOPS.

Prerequisite. SIM-2100

FAM-2104 1.5 90 B,R,M D A 1 HH-46E

Goal. Conduct emergency procedure familiarization.

Requirement

Brief/Discuss

Emergencies pertaining to onboard SAR equipment

Emergencies while hovering out of ground effect

Emergencies with a patient onboard aircraft

Introduce/Review

All familiarization maneuvers with emphasis on hover and in-flight single engine emergencies

Perform practice autorotations and practice single engine flight

All emergency procedures/system failures

Performance Standard. Pilot shall demonstrate knowledge of aircraft systems, perform basic FAM maneuvers, and be able to satisfactorily perform emergency procedures per NATOPS.

Prerequisite. SIM-2100

FAM-2105 1.5 * B,R (N) E A 1 HH-46E

Goal. Review day and/or night instrument procedures.

Requirement

Brief/Discuss

Basic instrument procedures

IFR planning and flying procedures

CRM

Local approaches / airways

ILS procedures

Introduce/Review.

Basic instrument maneuvers to include turn patterns, vertical S-1 patterns, Oscar pattern, partial panel flight, and instrument autorotations

Instrument navigation and approaches

Instrument scan

IFR planning and flying procedures

ILS cockpit procedures and approach navigation

Performance Standard. In accordance with NATOPS and Instrument Flight Manual.

Prerequisite. SIM-2102

2.12.3 Confined Area Landing (CAL)

2.12.3.1 Purpose. To familiarize the PUI with local area CAL sites and practice CAL landings in the HH-46E aircraft.

2.12.3.2 Crew Requirements. IP, PUI, CC

CAL-2200	1.5	45	B,R,M	D	E	A	1 HH-46E

Goal. Conduct day confined area landings.

Requirement

Brief/Discuss

Normal and emergency procedures

Power line and wire hazard proximity

Emergency vehicle locations

Crew coordination as they relate to CAL approaches

Review

Normal Approach

Precision approach

Hover/No-hover landings

Performance Standard. Pilot shall fly pattern within 50 ft and 10 kts of briefed altitude and airspeed, fly established pattern checkpoints, recognize closure rate to landing point remain oriented in zone, demonstrate power management maintain safe obstacle clearance, and land within one rotor of intended point of landing.

Prerequisite. FAM-2103

2.12.4 Navigation (NAV)

2.12.4.1 Purpose. To familiarize the PUI with the local training area and landing procedures for hospital LZs.

2.12.4.2 Crew Requirements. IP, PUI, CC

NAV-2300	1.5	365	B,R,M	D	E	A	1 HH-46E

Goal. Conduct GPS/dead reckoning navigation training while familiarizing the pilot with commonly used local hospitals.

Requirement

Brief/Discuss

Hospital locations

LZ peculiarities

Hospital-specific communication procedures

Aircraft placement for ease of litter loading/unloading

VFR checkpoints along the route of flight

Aircraft GPS operation and programming

Hand-held GPS operation and programming

Dead reckoning principles

Crew responsibilities

Desired track, actual track, cross track, and CDI sensitivity.

CRM

Distance estimation and map information

Lost plane procedures

Introduce/Review

Dead reckoning procedures, emphasizing use of terrain, contour features, and triangulation to determine position

GPS navigation procedures emphasizing use of secondary systems and dead reckoning as backup navigation

Conduct a flight to one or more local hospitals consisting of a minimum of 5 checkpoints at SAR altitudes (300-1000 ft AGL) Remain within 500 meters of course line

Enroute checklist

Local Hospital locations and landing zones to include area hazards, noise sensitive areas, night cues, wave-off routes, and nearby airspace

Performance Standard. Pilot shall input navigation route into GPS and shall fly a route consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots.

Prerequisite. FAM-2103

NAV-2301 2.5 * B,R D A 1 HH-46E

Goal. Conduct GPS/dead reckoning navigation training while familiarizing the pilot with hospital(s) outside of the normal operating area.

Requirement

Brief/Discuss

Hospital locations

LZ peculiarities

Hospital-specific communication procedures

Aircraft placement for ease of litter loading/unloading

Crew responsibilities

CRM

Distance estimation and map information

VFR checkpoints along the route of flight

Introduce/Review

Dead reckoning procedures, emphasizing use of terrain, contour features, and triangulation to determine position

GPS navigation procedures emphasizing use of secondary systems and dead reckoning as backup navigation

Enroute checklist

Conduct a flight to a distant hospital location and familiarize the student with area hazards, noise sensitive areas, night cues, wave-off routes, and nearby airspace.

Performance Standard. Pilot shall input navigation route into GPS and shall fly a route consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots.

Prerequisite. FAM-2103, NAV-2300

2.12.5 Night Systems (NS)

2.12.5.1 Purpose. Ensure the PUI is proficient in night systems flying in the HH-46E during both HLL and LLL ambient lighting conditions.

2.12.5.2 General. The Night Operations Course contained in the MAWTS-1 Course Catalog as well as all FAM, CAL, and NAV flights will be completed before NS-2402.

2.12.5.3 Crew Requirements. IP, PUI, CC

NS-2401 1.5 * B NS A 1 HH-46E

Goal. NVD familiarization flight.

Requirement

Brief/Discuss

Crew coordination

Crew comfort levels

NVG operations and limitations

Emergency procedures

Differences between night SAR and night Assault Support

Introduce/Review

Use of NVGs at an unlit field

Use of NVGs while performing taxi, basic low work, and normal takeoffs/landings

Touch and go landings with emphasis on aircraft control and cockpit coordination

Performance Standard. Pilot shall maintain effective NVD/instrument scan, recognize closure rate with intended point of landing, maintain positive aircraft control, demonstrate effective cockpit management utilize proper terminology, fly pattern within 50 feet and 10 kts of briefed altitude and airspeed, fly established pattern checkpoints and land within 1 rotor of intended point of landing.

Prerequisite. FAM-2103, FAM-2104, CAL-2200.

NS-2402 1.5 * B NS A 1 HH-46E

Goal. Develop proficiency in confined area landings. This flight may be conducted in either HLL or LLL conditions.

Requirement

Brief/Discuss

Crew Coordination

Crew comfort levels

Aircraft lighting

Confined area landing approaches

Scanning techniques

Introduce/Review

Confined area takeoff and landings using NVGs

Plan/navigate a route to a confined area landing site

Enroute to a CAL site, demonstrate the differences in terrain reference at various altitude.

Performance Standard. Pilot shall maintain effective NVG/instrument scan, recognize closure rate with intended point of landing, retain positive aircraft control, demonstrate effective cockpit management utilize proper terminology, fly pattern within 50 feet and 10 kts of briefed altitude and airspeed, fly established pattern checkpoints, remain oriented in zone, and land within 1 rotor of intended point of landing.

Prerequisite. NS-2401.

NS-2403	1.5	45	B,R,M	NS	A	1 HH-46E

Goal. Develop proficiency in confined area landings and VFR navigation using NVGs. This flight may be conducted either in HLL or LLL conditions.

Requirement

Brief/Discuss

Crew Coordination

Crew comfort levels

Aircraft lighting

Navigation and search altitudes

Emergency procedures relating to low level NVG operations

Introduce/Review

Low level navigation

Navigation from a confined area landing site to a hospital landing pad

Obstacles along route of flight

Confined area landings

Performance Standard. Pilot shall maintain effective NVG/instrument scan, recognize closure rate with intended point of landing, retain positive aircraft control, demonstrate effective cockpit management utilize proper terminology, fly pattern within 50 feet and 10 kts of briefed altitude and airspeed, fly established pattern checkpoints, remain oriented in zone, and land within 1 rotor of intended point of landing.

Prerequisite. NS-2402.

2.12.6 Aerial Fire Fighting (FF)

2.12.6.1 Purpose. Develop the ability to conduct water bucket operations.

2.12.6.2 Crew Requirements. IP, PUI, CC, CC/RS/MT

FF-2500	1.5	365	B,R,M	D	A	1	HH-46E

Goal. Develop water bucket operations proficiency.

Requirement

Brief/Discuss

- Water bucket pickup and release procedures
- Crew coordination
- ICS voice procedures
- Lost communications hand signals
- Emergency procedures
- Maximum HOGE weight for pickup and delivery and flight envelopes with water buckets
- Water bucket delivery techniques

Introduce. Bambi Bucket operations

Review

- Hover check
- All modes of cargo hook operation

Performance Standard. PUI shall fly pattern within 50 ft and 10 kts of briefed altitude and airspeed, fly established pattern checkpoints, properly respond to crew positioning calls, and maintain situational awareness of obstacles. Pilot shall be able to safely hold extended hover operations to fill Bambi Bucket demonstrate understanding of HIGE/HOGE requirements, complete minimum of 5 pickups and water drops, and deliver water to fire within 5 meters of intended point of impact.

Prerequisite. CAL-2200, ACAD-2009

2.12.7 Aerial Transport (AT)

2.12.7.1 Purpose. Develop the ability to transfer patients and passengers on non-SAR related missions.

2.12.7.2 General. Initial syllabus training flights shall be flown with a SAR Instructor and require an ATF.

2.12.7.3 Crew Requirements. IP, PUI, CC, CC/RS/MT

AT-2600	1.5	365	B,R,M	(N)	A	1	HH-46E

Goal. Review procedures for patient loading, passenger briefing and safety procedures.

Requirement

Brief/Discuss

- Passenger manifesting and safety briefing
- Patient loading procedures
- Cargo loading and unloading procedures
- Locations and uses of onboard medical assets
- Proper hospital to hospital patient turn over procedures
- SAR Reports and necessary medical paperwork

Demonstrate/Introduce

Passenger manifesting and safety briefing
Patient loading procedures
Aircraft positioning for cargo loading and unloading procedures
Locations and uses of onboard medical assets
Proper hospital to hospital patient turn over procedures
SAR Reports and necessary medical paperwork
Standard terminology for patient updates

Performance Standard. With a simulated patient onboard, PUI will demonstrate the ability to efficiently navigate from one hospital to another, locate the LZ, relay the proper information on the patient's condition, and communicate with the appropriate controlling agencies. Upon completion of this flight, PUI will demonstrate the ability to properly fill out and file all necessary paperwork and reports.

Prerequisite. CAL-2200, ACAD-2009

2.13 MISSION SKILL PHASE (3000)

3.13.1 General. The Mission Skill Phase is designed to familiarize the PUI with the unique missions and challenges associated with Search and Rescue and flying the HH-46E.

2.14 MISSION SKILL STAGES (3000)

T&R CODE	EVENT
2.14.1	Academics (ACAD)
2.14.2	Search and Rescue (SAR)
2.14.3	Night Search and Rescue (NSAR)

2.14.1 Academics (ACAD)

2.14.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each Pilot. A summary of academic classes that is required for the Mission Skill Phase (3000) are listed below with their corresponding T&R code.

2.14.1.2 General. The Academic syllabus is designed to ensure Pilots receive the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	MISSION SKILLS PHASE (3000)
ACAD-3000	PILOT RESCUE PROCEDURES*
ACAD-3001	ON SCENE COMMANDERS DUTIES AND RESPONSIBILITIES*
ACAD-3002	OVERLAND SEARCH AND RESCUE*
ACAD-3003	SEARCH AND RESCUE EQUIPMENT*
ACAD-3009	SAR PUBLICATIONS INSTRUCTIONS AND REPORTS*
ACAD-3019	SAR ORGANIZATION*

ACAD-3020	SAR PLANNING*
ACAD-3021	SAR COMMUNICATIONS*
ACAD-3052	OVERLAND HOISTING PROCEDURES
ACAD-3053	MARITIME HOISTING PROCEDURES
ACAD-3054	VESSEL HOISTING PROCEDURES

*Denotes annual training requirement

2.14.2 Search and Rescue (SAR)

2.14.2.1 Purpose. Develop proficiency in Day Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

2.14.2.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor and SAR Branch Head will monitor the PUI's progress during the flight training syllabus.

Pilots who have not completed the appropriate SAR syllabus shall not be assigned to SAR duty (day) until completion of the appropriate T&R codes and designated in writing by the Commanding Officer. Local commands are granted the authority to designate personnel as Non-SAR HAC prior to the completion of the Day SAR syllabus and Day SAR HAC upon completion of the Day Search and Rescue syllabus.

PUIs may begin the night SAR syllabus training prior to completion of the entire day SAR syllabus. Prior to flying a night SAR syllabus flight, the corresponding day SAR syllabus flight shall be completed.

PUIs shall only receive training from designated SAR Instructors (SARI) during the Day SAR flights.

During initial boat hoisting operations (SAR-3108), if practical, the IP should demo from right seat then hot seat crew positions for introduction items. For safety, the Pilot-At-Controls (PAC) shall be the right seat pilot for the approach-to-boat and over-the-boat phases of flight.

2.14.2.3 Crew Requirement. IP, PUI, CC, RS, MT.

2.14.2.4 Ground/Academic Training. Prior to the beginning of this stage, the PUI will complete the required ACAD classes.

SAR-3100 1.5 * B,R D A 1 HH-46E

Goal. Conduct search pattern and overland search procedures.

Requirement

Brief/Discuss

Search patterns

Commence Search Point (CSP)

Parallel track offset

Survivor signaling capabilities

Utilization of GPS to conduct search patterns

Multiple survivor location and assessment

Overland crewman deployment and pickup procedures

Introduce

Search pattern execution using GPS

Parallel search pattern

Trackline search pattern

Pre-approach Doppler Checklist

Review

Point-to-point navigation

Dead reckoning navigation

Confined area landings (CAL)

Performance Standard. Pilot shall input search pattern into GPS and shall conduct a search pattern consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots. Pilot shall conduct a hover for crewmember deployment maintaining within 10 feet of altitude, and within 5 feet of hover point.

Prerequisite. 2000 PHASE COMPLETE, ACAD-3000, ACAD-3002, ACAD-3009, ACAD-3019, ACAD-3020, ACAD-3021

SAR-3102	1.5	30	B,R,M	D	A	1	HH-46E

Goal. Conduct day overland hoisting.

Requirement

Brief/Discuss

Crew responsibilities

Voice procedures and standard voice calls

Hand/arm signals

Emergency procedures and ICS failures during hover/hoist operations

Hoist limitations

Training requirements/limitations for overland hoisting

Introduce

Configure aircraft for hoisting operations

Approach to pickup

Hover positions/techniques

Standby position/altitude

Delivery/pickup position/altitude

Hand/arm signals

Gear delivery procedures

Confined area delivery/pickup techniques

Performance Standard. Pilot shall conduct a hover for crewmember deployment remaining within 10 feet of altitude and within 5 feet of hover point.

Prerequisite. 2000 PHASE COMPLETE, ACAD-3003, ACAD-3052

SAR-3103	2.0	*	B,R	D	A	1	HH-46E

Goal. Conduct day overland SAREX.

Requirement.

Brief/Discuss

SAR duty crew requirements, limitations, and Alert Conditions
Short-fused information collection
Mission Update Briefing techniques
Aircraft configuration
SAR equipment
Coordinating agencies
Use of SAR TACAID
Emergency procedures

Introduce

Emergency response/recall procedures
Scenario-based overland SAR Exercise
Wulfsberg versus VIPER radio calls

Review

SAR aircraft configurations
Search patterns
Hoisting operations
Hover position/techniques
Hand/arm signals
Gear delivery procedures
Confined area delivery/pickup techniques
Wulfsberg and VIPER radio call procedures

Performance Standard. Pilot shall navigate to a CSP, input search pattern into GPS and conduct a search pattern consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots. Pilot shall safely execute confined area landing, landing within 1 rotor of intended point of landing. Pilot shall conduct a hover for crewmember deployment remaining within 10 feet of altitude, and within 5 feet of hover point.

Prerequisite. ACAD-3002, ACAD-3003, SAR-3100, SAR-3102

SAR-3104 1.5 60 B,R,M D A 1 HH-46E

Goal. Conduct day over water search and Doppler approaches.

Requirement

Brief/Discuss

Procedures for sighting victims+-
Use of flare for wind direction/speed determination
Ditching procedures/considerations
Crew responsibilities
Remote flight control station operation and voice procedures
Saltwater encrustation

Introduce

Flare deployment
Sector search pattern
Square search pattern
Doppler approach pattern
Conduct minimum of 3 manual and 3 coupled approaches
Remote flight control station operation

Review

Hover positions/techniques
Standby position/altitude
Deliver/pickup position/altitude
Point-to-point navigation
Dead reckoning navigation

Performance Standard. Pilot shall input search pattern into GPS and shall conduct a search pattern consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots. Pilot shall conduct minimum of 3 manual and 3 coupled Doppler approaches, and shall maintain a hover for crewmember deployment remaining within 10 feet of altitude and within 5 feet of hover point.

Ordnance. 1 Mk-25 Flare, 1 Mk-58 Flare.

Prerequisite. SAR-3100, ACAD-3053

SAR-3105	1.5	180	B,R,M	D	A	1	HH-46E

Goal. Conduct day overwater Rescue Swimmer deployment and recovery.

Requirement

Brief/Discuss

Crew responsibilities
Rescue Air Crewman (RAC) deployment altitudes and procedures
RAC safety, environmental, debris, and predator considerations
Rescue equipment and trail line operation
Procedures for loss of visual contact with RAC
Short haul procedures

Introduce

RAC deployment
Rescue equipment deployment and recovery
Short haul procedures
RAC and survivor recovery

Review

Flare deployment
Doppler approach pattern
Manual and coupled approaches\Hover positions/techniques.

Performance Standard. Pilot shall conduct a hover for crewmember deployment maintaining within 10 feet of altitude and within 5 feet of hover point. Pilot shall conduct a short haul of at least 500 meters

remaining within 10 feet of safe short haul altitude and placing rescue air crewman within 10 feet of intended point of landing.

Ordnance. 1 Mk-25 Flare, 1 Mk-58 Flare.

External Syllabus Support

Safety Boat/aircraft with safety swimmer

Simulated survivors as required

Prerequisite. ACAD-3053, SAR-3104

SAR-3108 1.5 180 B,R,M D A 1 HH-46E

Goal. Conduct day boat hoisting operations.

Requirement

Brief/Discuss

Crew responsibilities

Approach-to-boat

Hover position, altitude, and scan

Voice procedures

RAC deployment considerations

ORM/safety considerations

Rescue equipment and trail line operation

Loss of visual contact with boat

Emergency procedures over the boat

Demonstrate

Approach-to-boat

Hover position/altitude

RAC and survivor recovery

Introduce

Approach-to-boat

Hover position/altitude

RAC and survivor deployment and recovery

Rescue equipment deployment and recovery

Short haul procedures

Performance Standard. Pilot shall conduct a minimum of 3 approaches to a boat configured for SAR rescue, and conduct a hover for crewmember deployment maintaining within 10 feet of altitude and within 5 feet of hover point. Pilot shall conduct "back and left" maneuvers in conjunction with approaches remaining within 50 meters of the boat. A minimum of 3 hoists from the deck of the boat shall be conducted.

Prerequisite. ACAD-3054, SAR-3105

SAR-3109 2.0 * B,R D A 1 HH-46E

Goal. Conduct day over water SAREX to integrate all skills learned in the day SAR syllabus to affect a search, recovery and delivery of a survivor or survivors to competent medical care.

Requirement

Brief/Discuss

Scenario based SAR evolution

IP should provide the PUI with a scenario and brief/discuss limitations and safety as it pertains to deployment and recovery of aircrew during training evolutions

Review

Launch on a simulated SAR mission either over water, or a combination of overland and overwater

PUI shall be given a scenario and be required to develop a plan and brief the crew prior to launching using SOP readiness and launch criteria

Short-fused information collection and planning

Emergency response/recall procedures

Any search pattern

Conduct manual and coupled approaches

Deploy/recover aircrew and survivors

Hoisting operations

Performance Standard. Pilot shall complete a successful search, conduct hoist recovery operations, and delivery of patient to competent medical care.

Ordnance. 1 Mk-25 Flare, 1 Mk-58 Flare.

External Syllabus Support. Hospital/LZ coordination as required for scenario. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (e.g. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, etc.) Simulated survivors as required.

Prerequisite. SAR-3103, SAR-3108

2.14.3 Night Search and Rescue (NSAR)

2.14.3.1 Purpose. Develop proficiency in Night Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

2.14.3.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor and the SAR Branch Head will monitor the trainee's progress during the flight training syllabus.

PUIs may begin the night SAR syllabus training prior to completion of the entire day SAR syllabus. Prior to commencement of the NSAR syllabus flight; the corresponding SAR syllabus flight shall be completed.

All Initial training flights for NSAR shall be flown with a Night System SAR Instructor (NSSI). The intent of this syllabus is to develop the skills critical to the Search and Rescue mission versus NVD proficiency. NVD proficiency/currency should be considered when conducting NVD SAR flights.

When complete with the night SAR training syllabus, pilots should have the ability to conduct night SAR missions under various atmospheric conditions.

During initial boat hoisting operations (NSAR-3208), if practical, IP should demo from right seat then hot seat crew positions for introduction items. For

safety, the Pilot-At-Controls (PAC) shall be the right seat pilot for the approach-to-boat and over-the-boat operations. All possible effort should be made to schedule the event to allow day-into-night boat hoist training.

2.14.3.3 Crew Requirement. IP, PUI, CC, RS, MT

2.14.3.4 Ground/Academic Training. Prior to the beginning of this stage, the PUI will be provided the required ACAD classes.

NSAR-3200 1.5 * B,R D A 1 HH-46E

Goal. Conduct night overland search patterns.

Requirement

Brief/Discuss

Search patterns

Commence Search Point (CSP)

Parallel track offset

Survivor signaling capabilities at night

Multiple survivor location and assessment

Overland crewman deployment and pickup procedures

Introduce

Search patterns

Night Sun use and techniques

Signaling devices

Review. Night CALs.

Performance Standard. Pilot shall input search pattern into GPS and shall conduct a search pattern consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots.

Prerequisite. 3000 STAGE ACAD COMPLETE, SAR-3100

NSAR-3202 1.5 30 B,R,M D A 1 HH-46E

Goal. Conduct night overland hoisting.

Requirement

Brief/Discuss

Crew responsibilities

Voice procedures and standard voice calls

Hand/arm signals at night

Emergency procedures during hover/hoist operations

Maneuvering aircraft over survivor at night

Introduce.

Configure aircraft for night hoisting operations

Approach to pickup

Hover positions/techniques

Standby position/altitude

Delivery/pickup position/altitude

Night hand/arm signals

Night gear delivery procedures

Confined area delivery/pickup techniques

Review

Gear delivery procedures

Confined area delivery/pickup techniques

Night CAL

Performance Standard. Pilot shall safely conduct confined area landing, landing within 1 rotor of intended point of landing. Pilot shall conduct a hover for crewmember deployment maintaining within 10 feet of altitude, and within 5 feet of hover point.

Prerequisite. SAR-3102

NSAR-3203 2.0 * B,R D A 1 HH-46E

Goal. Conduct night overland SAREX.

Requirement

Brief/Discuss

SAR duty crew requirements, limitations, and Alert Conditions

Short-fused information collection

Mission Update Briefing techniques

Aircraft configuration

SAR equipment

Coordinating agencies

Use of SAR TACAID

Emergency Procedures

Introduce

Night emergency response/recall procedures

Night scenario-based overland SAR Exercise

Review

SAR aircraft configurations

Search patterns

Hoisting operations

Hover position/techniques

Night hand/arm signals

Night gear delivery procedures

Night confined area delivery/pickup techniques

Performance Standard. Pilot shall input search pattern into GPS and shall conduct a search pattern consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots. Pilot shall safely conduct confined area landing, landing within 1 rotor of intended point of landing. Pilot shall conduct a hover for crewmember deployment maintaining within 10 feet of altitude, and within 5 feet of hover point.

Prerequisite. SAR-3103, NSAR-3200, NSAR-3202

External Syllabus Support. Hospital/LZ coordination as required for scenario. Simulated survivors as required.

NSAR-3204 1.5 60 B,R,M D A 1 HH-46E

Goal. Conduct night overwater search patterns and Doppler approaches.

Requirement

Brief/Discuss

- Procedures for sighting victims at night
- Use of flare at night
- Ditching procedures/considerations
- Crew responsibilities
- Night instrument scan/low visibility operations in close proximity to the water
- Coupled Doppler system
- Saltwater encrustation

Introduce

- Night flare deployment
- Sector search pattern
- Square search pattern
- Doppler approach pattern
- Conduct minimum of 3 manual and 3 coupled approaches
- Remote flight control station operation

Review

- Hover positions/techniques
- Standby position/altitude
- Deliver/pickup position/altitude
- Point-to-point navigation
- Dead Reckoning navigation

Performance Standard. Pilot shall input search pattern into GPS and shall conduct a search pattern consisting of a minimum of 5 checkpoints, maintain within 500 meters of course line, altitude within 50 feet and airspeed within 10 knots. Pilot shall conduct minimum of 3 manual and 3 coupled Doppler approaches, and shall maintain a hover for crewmember deployment remaining within 10 feet of altitude, and within 5 feet of hover point.

Prerequisite. SAR-3104, NSAR-3200

Ordnance. 1 Mk-25 Flare, 1 Mk-58 Flare.

NSAR-3205 1.5 180 B,R,M D A 1 HH-46E

Goal. Conduct night overwater Rescue Swimmer deployment and recovery.

Requirement

Brief/Discuss

- Crew responsibilities
- Rescue Air Crewman (RAC) deployment altitudes and procedures
- RAC safety, environmental, debris, and predator

considerations
Rescue equipment and trail line operation
Procedures for loss of visual contact with RAC at night
Short haul procedures

Introduce
RAC deployment
Rescue equipment deployment and recovery
RAC and survivor recovery

Review
Flare deployment
Doppler approach pattern
Manual and coupled approaches
Hover positions/techniques

Performance Standard. Pilot shall conduct a hover for crewmember deployment maintaining within 10 feet of altitude, and within 5 feet of hover point. Pilot shall conduct a short haul of at least 100 meters remaining within 10 feet of safe short haul altitude and placing rescue air crewman within 10 feet of intended point of landing.

Prerequisite. SAR-3105, NSAR-3204

Ordnance. 1 Mk-25 Flare, 1 Mk-58 Flare.

External Syllabus Support. Safety boat/aircraft with safety swimmer. Simulated survivors as required.

NSAR-3208 1.5 180 B,R,M D A 1 HH-46E

Goal. Conduct night SAR boat hoisting.

Requirement

Brief/Discuss
Crew responsibilities
Boat lighting/antennas
Approach to boat
Hover position, altitude, and scan
Voice procedures
RAC deployment considerations
ORM/safety considerations
Rescue equipment and trail line operation
Loss of visual contact with boat at night
Emergency procedures over the boat at night

Demonstrate
Approach to boat
Hover position/altitude
RAC and survivor recovery

Introduce
Approach to boat

Hover position/altitude

RAC and survivor deployment and recovery

Rescue equipment deployment and recovery

Short haul procedures

Performance Standard. Pilot shall conduct a minimum of 3 approaches to a boat configured for SAR rescue, and conduct a hover for crewmember deployment maintaining within 10 feet of altitude, and within 5 feet of hover point. Pilot shall conduct "back and left" maneuvers in conjunction with approaches remaining within 50 meters of the boat. A minimum of 3 hoists from the deck of the boat shall be conducted.

Prerequisite. SAR-3108, NSAR-3205

External Syllabus Support. Safety boat suitable for hoisting personnel to/from, with safety swimmer. Simulated survivors as required.

NSAR-3209 2.0 * B,R D A 1 HH-46E

Goal. Conduct night over water SAREX to integrate all skills learned in the day and night SAR syllabi to affect a search, recovery and delivery of a survivor or survivors to competent medical care.

Requirement

Brief/Discuss

Scenario based SAR evolution

IP should provide the PUI with a scenario and brief/discuss limitations and safety as it pertains to deployment and recovery of aircrew during training evolutions.

Review

Launch on a simulated SAR mission, either overland or over water, or a combination. PUI shall be given a scenario and be required to develop a plan and brief the crew prior to launching using SOP readiness and launch criteria

Short-fused information collection and planning

Emergency response/recall procedures

Any search pattern

Conduct manual and coupled approaches

Deploy/recover aircrew and survivors

Hoisting operations

Performance Standard. Pilot shall complete a successful search (overland or over water), conduct hoist recovery operations, and delivery of patient to competent medical care.

Prerequisite. SAR-3109, NSAR-3203, NSAR-3208

Ordnance. 1 Mk-25 Flare, 1 Mk-58 Flare.

External Syllabus Support. Hospital/LZ coordination as required for scenario. Safety boat/aircraft with safety swimmer as required. Simulated survivors as required.

2.15 CORE PLUS MISSION SKILL PHASE (4000)

2.15.1 General. The Core Plus Mission Skill Phase is designed to ensure a small cadre of RESCUE Swimmers are properly trained and qualified in skill sets not used in the normal day to day operations.

2.16 CORE PLUS MISSION SKILL STAGES (4000)

STAGE	EVENTS
2.16.1	Academics (ACAD)
2.16.2	Day Rappel Aircrew Procedures (RAP)
2.16.3	Night Rappel Aircrew Procedures (NRAP)
2.16.4	Direct Deployment (DIR)
2.16.5	Over the Ramp Hoisting (ORH)
2.16.6	Field Carrier Landing Practice (FCLP)
2.16.7	Carrier Qualification (CQ)
2.16.8	Formation (FORM)

2.16.1 Academics (ACAD)

2.16.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each Pilot. A summary of academic classes that is required for Core Plus Mission Skill Phase (4000) are listed below with their corresponding T&R code.

2.16.1.2 General. The Academic syllabus is designed to ensure Pilots are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	CORE SKILLS PHASE (4000)
ACAD-4000	DAY RAPPEL AIRCREW PROCEDURES*
ACAD-4001	NIGHT RAPPEL AIRCREW PROCEDURES*
ACAD-4002	OVERLAND DIRECT DEPLOYMENT*
ACAD-4003	MARITIME DIRECT DEPLOYMENT*
ACAD-4004	OVER THE RAMP HOISTING*
ACAD-4005	FIELD CARRIER LANDING PRACTICE
ACAD-4006	CARRIER QUALIFICATION
ACAD-4007	FORMATION TACTICS

*Denotes annual training requirement

2.16.2 Rappel Aircrew Procedures (RAP)

2.16.2.1 Purpose. Develop the PUI's knowledge and proficiency of day rappel procedures.

2.16.2.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor and SAR Branch Head will monitor the trainee's progress throughout the flight training syllabus.

Pilots who have not completed the appropriate RAP syllabus should not perform day rappelling. PUI may start the Day Rappel syllabus prior to completion of the 3000 phase.

2.16.2.3 Crew Requirement. IP, PUI, CC, RS, MT

2.16.2.4 Ground/Academic Training. Prior to the beginning of this stage, the PUI will complete the required ACAD classes

RAP-4102	1.0	365	B,R	D	A	1 HH-46E

Goal. Conduct SAR rappelling and short haul operations.

Requirement

Brief/Discuss

- Crew responsibilities
- Voice procedures and standard voice calls
- Hand/arm signals
- Emergency procedures during rappel operations
- Rappelling with equipment and litter short haul procedures
- Training requirements/limitations for overland hoisting
- Differences between rappelling and hoisting

Introduce/Demonstrate

- Configure aircraft for rappelling operations
- Conduct minimum of 3 rappel descents with equipment
- Minimum of 2 descents should end with short haul of a simulated survivor in rescue litter
- Hand/arm signals

Performance Standard. Pilot shall safely conduct confined area landing, landing within 10 feet of intended point of landing. Pilot shall conduct a hover for crewmember rappel deployment maintaining within 10 feet of altitude, and within 5 feet of hover point and conduct a short haul of at least 500 meters remaining within 10 feet of safe short haul altitude and placing rescue air crewman within 10 feet of intended point of landing.

Prerequisite. SAR-3102, ACAD-4000

2.16.3 Night Rappel Aircrew Procedures (NRAP)

2.16.3.1 Purpose. Develop the Pilots knowledge and proficiency of night rappel procedures.

2.16.3.2 General

The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required.

A NATOPS Instructor and SAR Branch Head will monitor the trainee's progress during the flight training syllabus.

PUI shall complete with the RAP stage prior to commencing the NRAP stage.

Pilots who have not completed the appropriate NRAP syllabus shall not perform night rappelling.

2.16.3.3 Crew Requirement. IP, PUI, CC, RS, MT

2.16.3.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

NRAP-4202 1.0 365 B,R N* A 1 HH-46E

Goal. Conduct night rappelling/short-haul operations.

Requirement

Brief/Discuss

Crew responsibilities

Voice procedures and standard voice calls

Hand/arm signals

Emergency procedures during rappel operations

Rappelling with equipment and litter short haul procedures

Training requirements/limitations for overland hoisting

Use of land/hover light to assist aircrew

Visual cues

Introduce/Demonstrate.

Configure aircraft for rappelling operations

Conduct minimum of 3 rappel descents with equipment

Minimum of 2 descents should end with short haul of a simulated survivor in rescue litter

Hand/arm signals

Performance Standard. Pilot shall safely conduct confined area landing, landing within 10 feet of intended point of landing. Pilot shall conduct a hover for crewmember rappel deployment maintaining within 10 feet of altitude, and within 5 feet of hover point and conduct a short haul of at least 500 meters remaining within 10 feet of safe short haul altitude and placing rescue air crewman within 10 feet of intended point of landing.

Prerequisite. SAR-3202, ACAD-4001, RAP-4102

2.16.4 Direct Deployment (DIR)

2.16.4.1 Purpose. Develop the Pilots knowledge and proficiency in overland and over water direct deployment during both the day and night environment.

2.16.4.2 General

The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required.

A NATOPS Instructor will monitor the trainee's progress throughout the flight training syllabus.

Pilots must be complete with the entire DIR stage prior to being qualified as a Direct Deployment Pilot. Though not recommended, the PUI may start the DIR syllabus prior to completion of the 3000 phase.

Upon completion of this stage of training, Pilots should be able to correctly perform all Direct Deployment procedures in overland and over water environments during both day and night time.

2.16.4.3 Crew Requirement. IP, PUI, CC, RS, MT

2.16.4.4 Ground/Academic Training. Prior to the beginning of this stage, the PUI will be provided the required ACAD classes.

DIR-4300 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day overland direct deployment.

Requirement

Brief/Discuss

Safety considerations
Belay rigging procedures and limitations
Standard Direct Deployment procedures to include standard ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single and Double lift recovery methods

Introduce/Practice/Review

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques

Performance Standard. The PUI shall complete a minimum of 1 overland direct deployment from the aircraft.

Prerequisite. SAR-3103, ACAD-4002

DIR-4301 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day over water direct deployment.

Requirement

Brief/Discuss

Safety considerations
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Impact of sea state and weather on Rescue Swimmer direct deployment
Site evaluation and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method
Ordnance hazards safety

Introduce/Practice/Review.

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation and emergency procedures
Approach planning techniques

Performance Standard. The PUI shall complete a minimum of 1 overwater direct deployment from the aircraft.

Prerequisite. SAR-3105, ACAD-4003

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Simulate survivor(s) as required.

DIR-4310 1.5 365 B,R,M (NS) A 1 HH-46E

Goal. Develop knowledge and proficiency in night overland direct deployment.

Requirement

Brief/Discuss

Safety considerations
Use of onboard lighting systems
Visual cues
Belay rigging procedures and limitations
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method

Introduce/Practice/Review

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation and emergency procedures
Approach planning techniques

Performance Standard. The PUI shall complete a minimum of 1 overland direct deployment from the aircraft.

Prerequisite. NSAR-3203, DIR-4300, ACAD-4002

DIR-4311 1.5 365 B,R,M (NS) A 1 HH-46E

Goal. Develop knowledge and proficiency in night over water direct deployment.

Requirement

Brief/Discuss.

Safety considerations
Use of onboard lighting systems
Visual cues
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Impact of sea state and weather on Rescue Swimmer direct deployment
Site evaluation and emergency procedures
Approach planning techniques

Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method
Ordnance hazards safety.

Introduce/Practice/Review
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation and emergency procedures
Approach planning techniques

Performance Standard. The PUI shall conduct a minimum of 1 overwater direct deployment while at the controls.

Prerequisite. SAR-3209, DIR-4301, ACAD-4003

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Simulated survivor(s) as required.

2.16.5 Over The Ramp Hoisting (ORH)

2.16.5.1 Purpose. To develop knowledge and proficiency in over the ramp hoisting during the day and night environment.

2.16.5.2 General. PUI must receive this training from a qualified SAR Instructor or Night System SAR Instructor. PUI do not have to be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. All initial syllabus training flights require an ATF.

2.16.5.3 Crew Requirement. IP, PUI, CC, RS, MT

2.16.5.4 Ground/Academic Training. Prior to the beginning of this stage, the pilot will be provided the required ACAD classes.

ORH-4400	1.5	365	B,R,M	D	A	1	HH-46E

Goal. Conduct day hoisting operations with rescue devices utilizing the internal winch through the cabin floor rescue hatch and/or aft cargo hatch.

Requirement

Brief/Discuss

Mechanics of Over-the-ramp hoisting

Wench limitations

Crew positioning in aircraft during ORH operations

Site selection and emergencies

Review

Over-land SAR procedures per NWP-3-50

Standard ICS voice communications and safety procedures

Hand, arm, and Aldis Lamp signals

Performance Standard. PUI shall utilize effective CRM to select an appropriate location and maintain a hover to facilitate crewmember deployment within 5 feet of a hover point and +/-5 feet of a briefed altitude.

Prerequisite. SAR-3102, ACAD-4004

ORH-4410 1.5 365 B,R,M N* A 1 HH-46E

Goal. Develop knowledge and proficiency in night hoisting operations utilizing the internal cargo winch through the aft cargo hatch.

Requirement

Brief/Discuss

Mechanics of Over-the-ramp hoisting

Wench limitations

Crew positioning in aircraft during ORH operations

Site selection and emergencies

Use of onboard lighting systems
Visual cues

Review

Over-land SAR procedures per NWP-3-50

Standard ICS voice communications and safety procedures

Hand, arm, and Aldis Lamp signals

Performance Standard. PUI shall utilize effective CRM to select an appropriate location and maintain a hover to facilitate crewmember deployment within 5 feet of a hover point and +/-5 feet of a briefed altitude.

Prerequisite. NSAR-3202, ORH-4400, ACAD-4004

2.16.6 Field Carrier Landing Practice (FCLP)

2.16.6.1 Purpose. To develop knowledge and proficiency in FCLPs during the day and night environment.

3.16.6.2 General

Training includes FCLP and NVD operations.

Extended searches may require shipboard operations for refueling, casualty recovery, and/or remote site launches.

The benefits of NVG operations cannot be over emphasized, and every effort should be made to ensure all crew members are SAR Night Systems Qualified (NSQ).

PUI must receive this training from a SAR Instructor (FCLP-4500) or Night System SAR Instructor(FCLP-4510)who is either HH-46E FCLP qualified or was previously FCLP Qualified in the CH-46E T&R Manual and is still proficient per that syllabus.

Pilots under instruction need not be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage.

All initial syllabus training flights require an ATF.

Refer to the NATOPS Manual, NWP 3-04.1 (Helicopter Operations for Air Capable Ships), and LHA/LPH/LHD NATOPS (as appropriate).

Pilots who are FCLP current in the model H-46 helicopter will be considered current in the HH-46E until that currency expires.

Five day and five NVD landings required for qualification/currency.

2.16.6.3 Crew Requirement. IP, PUI, CC, RS, MT

2.16.6.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

FCLP-4500 1.5 365 B,R,M D A 1 HH-46E

Goal. Conduct day FCLPs.

Requirement

Brief/Discuss

CRM during shipboard landings

Standard patterns for shipboard operations

Communications used during shipboard landings

LSE signals

Water landings/ditching

Aircraft lighting used during shipboard landings

Basic instrument scan

Waveoff procedures

Shipboard airspace

Shipboard C2 agencies

Introduce. Day FCLP patterns, approaches, landings, and emergency procedures peculiar to shipboard operations.

Performance Standards. Pilots shall demonstrate proper shipboard communications and aircraft lighting procedures, maintain effective instrument scan, execute proper cockpit switchology, fly established CQ pattern demonstrating understanding of proper upwind, crosswind and interval parameters, fly 300 feet/80 kt pattern within 50 feet and 10 kts, maintain proper closure and bearing with intended point of landing, respond promptly and safely to altitude and drift calls from aircrew, remain oriented on assigned landing spot, and land within 3 feet of intended point of landing.

Prerequisite. 2000 PHASE COMPLETE, ACAD-4005

External Syllabus Support. Approved FCLP pad.

FCLP-4510 1.5 365 B,R,M N* A 1 HH-46E

Goal. Conduct NS FCLPs.

Requirement

Brief/Discuss

CRM during NS shipboard landings

Crew comfort levels during NS shipboard landings

Situational awareness during NS shipboard landings

Emergency procedures (aircraft and NS)

Aircraft and deck lighting during NS shipboard operations

Basic instrument scan

Introduce. NS FCLPs.

Performance Standards. Pilots shall demonstrate proper shipboard communications and aircraft lighting procedures, maintain effective instrument/NS scan, execute proper cockpit “switchology”, fly established CQ pattern demonstrating understanding of proper upwind, crosswind and interval parameters, fly 300 feet/80 kt pattern within 50

feet and 10 kts, maintain proper closure and bearing with intended point of landing, respond promptly and safely to altitude and drift calls from aircrew, remain oriented on assigned landing spot, and land within 3 feet of intended point of landing.

Prerequisite. FCLP-4500

External Syllabus Support. NS capable FCLP pad.

2.16.7 Carrier Qualification (CQ)

2.16.7.1 Purpose. To develop knowledge and proficiency in CQs during the day and night environment.

2.16.7.2 General

Training includes CQ and NVD operations.

Extended searches may require shipboard operations for refueling, casualty recovery, and/or remote site launches.

The benefits of NVG operations cannot be over emphasized, and every effort should be made to ensure all crew members are SAR Night Systems Qualified (NSQ).

PUI must receive this training from a SAR Instructor (FCLP-4500) or Night System SAR Instructor(FCLP-4510)who is either HH-46E Carrier Qualified or was previously Carrier Qualified in the CH-46E T&R Manual and is still proficient per that syllabus.

Pilots under instruction need not be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage.

All initial syllabus training flights require an ATF.

Refer to the NATOPS Manual, NWP 3-04.1 (Helicopter Operations for Air Capable Ships), and LHA/LPH/LHD NATOPS (as appropriate).

Pilots who are CQ current in the model H-46 helicopter will be considered current in the HH-46E until that currency expires.

Five day and five NVD landings required for qualification/currency.

Pilot is CQ upon completion of CQ-4600 and CQ-4610.

2.16.7.3 Crew Requirement. IP, PUI, CC, CC (or qualified RS or MT)

2.16.7.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

CQ-4600	1.5	365	B,R,M	D	A	1 HH-46E

Goal. Conduct day carrier qualification.

Requirement

Brief/Discuss.

CRM during shipboard landings

Standard patterns for shipboard operations

Communications used during shipboard landings

LSE signals

Water landings/ditching

Aircraft lighting used during shipboard landings

Rotor engagement/disengagement

Launch/recovery wind envelopes

Basic instrument scan

Wave-off procedures

Introduce. Day CQ patterns, approaches, landings, and emergency procedures peculiar to shipboard operations.

Performance Standards. Pilots shall fly 300 feet/80 kt pattern within 25 feet and 10 kts, fly established CQ pattern demonstrating understanding of proper upwind, crosswind and interval parameters, maintain proper orientation to LSE, respond promptly and safely to altitude and drift calls from aircrew, remain oriented on assigned landing spot, land within 3 feet of intended point of landing, utilize solid instrument scan, recognize proper closure with intended point of landing, demonstrate understanding of shipboard communications and aircraft lighting.

Prerequisite. ACAD-4006, FCLP-4500

External Support. Air capable ship deck.

CQ-4610	1.5	365	B,R,M	N*	A	1	HH-46E

Goal. Conduct night carrier qualification.

Requirement

Discuss

CRM during shipboard landings

Communications used during shipboard landings

LSE signals

Water landings/ditching

Aircraft lighting used during shipboard landings

Rotor engagement/disengagement

Launch/recovery wind envelopes

Transition from instrument to NS scan

Basic instrument scan

NS scan/fixation

Introduce/Review. NS CQ patterns, approaches, landings, and emergency procedures peculiar to NS shipboard operations.

Performance Standards. Pilots shall fly 300 feet/80 kt pattern within 25 feet and 10 kts, fly established CQ pattern demonstrating understanding of proper upwind, crosswind and interval parameters, maintain proper orientation to LSE, respond promptly and safely to altitude and drift calls from aircrew, remain oriented on assigned landing spot, land within 3 feet of intended point of landing, maintain effective instrument and NS scan, recognize proper closure with intended point of landing, demonstrate proper shipboard communications and aircraft lighting.

Prerequisite. FCLP-4510, CQ-4600

2.16.8 Formation (FORM)

2.16.8.1 Purpose. To develop knowledge and proficiency in Formation (FORM) during the day and night environment.

2.16.8.2 General. Training includes day and NVD operations. Extended searches may require section navigation for long distance and/or off-shore flight. Mass casualties may require the additional lift capability of multiple aircraft, and flying as a section or division allows not only for mutual support but for the reduced congestion of already busy airspace, as can be the case in major disasters. Confined area landings as a section in such cases can be useful when time is at a premium for the extraction of casualties or the delivery of aid.

The benefits of NVG operations cannot be over emphasized, and every effort should be made to ensure all crew members are SAR Night Systems Qualified (NSQ).

PUI must receive this training from a SAR Instructor (FORM-4700 and 4701) or Night System SAR Instructor(FORM-4710 and 4711)who is either proficient in the HH-46E Formation event being flown or was previously proficient in the equivalent CH-46E T&R Manual event and is still proficient per that syllabus. Pilots under instruction need not be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. All initial syllabus training flights require an ATF.

Refer to the NATOPS Flight Manual, CH-46E Maneuver Description Guide, and NTTP 3-22.3-CH46.

Pilots who are FORM proficient in the mirror codes in the CH-46E helicopter T&R will be considered current in the HH-46E until that currency expires.

Initial night systems section navigation (FORM-4710) and section confined area landings (FORM-4711) should be conducted in HLL ambient lighting conditions.

Though flights may be scheduled to fly day into night or pinky-time into night, a minimum of 1.0 hours shall be flown as a formation after EENT in order to log FORM-4710.

Five day (4701) and five NVD (4711) landings are required for initial qualification. Two landings (one in lead, one as wing) suffice to re-punch proficiency. In order to log FORM-4711, the aforementioned requisite number of landings must be executed after EENT.

2.16.8.3 Crew Requirement. IP, PUI, CC, CC (or qualified RS or MT)

2.16.8.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

FORM-4700	1.5	180	B,R,M	D	A	2+ HH-46E

Goal. Review day formation flying and conduct day navigation as a section or division.

Requirement

Brief/Discuss

- CRM during formation flight
- Crew comfort level
- Closure rate
- Lead changes (to include NORDO)
- Standard terminology
- Section formation considerations
- Division formation considerations, emphasize dash-3 position

Intra and inter aircraft communications

Inadvertent IMC

Mass casualty response procedures and triage

Review

Combat spread and combat cruise

Parade

IIMC Breakup

Cruise principles

Turn patterns

Crossover

Break-up and rendezvous

Lead changes

Performance Standards. The PUI shall plan and navigate a minimum of 5 checkpoints while flying in formation with another aircraft. Pilots shall exercise appropriate CRM, maintain situational awareness, maintain section integrity and mutual support, maintain appropriate cruise formation and rotor separation throughout maneuvers, utilize radius of turn principles, recognize closure rate with lead aircraft, and employ appropriate commands to maneuver flight. Lead changes should be conducted as necessary to afford both aircrews the opportunity to see both the lead and wing positions.

Prerequisite. 2000 PHASE COMPLETE

FORM-4701	1.5	180	B,R,M	D	A	2+ HH-46E

Goal. Conduct section aircraft formation approaches, landings and departures to/from a confined area.

Requirement

Brief/Discuss.

Landings and departures to a confined area

Cruise turn principles

Welded wing patterns

Power management and settings

Cross cockpit landings

CRM during section CALs

Crew comfort level

Review. Landings and departures to a confined area.

Performance Standards. Pilots shall fly pattern within 50 feet and 10 kts of briefed altitude and airspeed, fly established pattern checkpoints, recognize closure rate to landing point, remain oriented in zone, demonstrate power management, maintain safe obstacle clearance, respond promptly and safely to altitude and drift calls from aircrew, land within 100 feet of intended point of landing (lead), provide a stable and predictable platform as lead, recognize proper closure rate with lead aircraft, and maintain section integrity during approach and landing (wingman). Successful completion of FORM-4701 requires a minimum of three landings in both the lead and dash two position.

Prerequisite. FORM-4700

FORM-4710	1.5	180	B,R,M	NS	A	2+ HH-46E

Goal. Conduct NS section navigation.

Requirement

Brief/Discuss.

CRM during NS formation operations

Crew comfort level during NS formation operations

NS formation techniques (combat cruise vs. combat spread vs parade, visual cues, closure rate)

Aircraft lighting during NS formation (light show)

Inadvertent IMC during as a section

NVG malfunctions/failures during formation flight

Review

Combat spread and combat cruise

Parade

IIMC Breakup

Cruise principles

Turn patterns

Crossover

Break-up and rendezvous

Lead changes

Performance Standards. The PUI shall plan and navigate a minimum of 5 checkpoints while flying in formation with another aircraft. Pilots shall maintain effective NS/instrument scan, ensure effective CRM for formation and obstacle clearance, recognize proper closure rate with intended point of landing, retain positive aircraft control, demonstrate effective cockpit management, utilize proper terminology, lead retains situational awareness of wingman position and drives section appropriately, wingman retains situational awareness during flight, recognizes proper closure rate with lead aircraft, and wingman maintains proper NS combat cruise position.

Prerequisite. FORM-4700

FORM-4711	1.5	180	B,R,M	NS	A	2+ HH-46E

Goal. Conduct NS section approaches, landings, and departures to a confined area.

Requirement

Brief/Discuss

CRM during NS section CALs

Crew comfort level during NS section CALs

NS section CAL techniques (lead considerations, dash 2 considerations, cruise turn principles, welded wing, cross cockpit landings)

LZ brief and evaluation

Power management (power settings, power settling vs. settling with power, power required vs. power available)

Review. Section CALs while using NS.

Performance Standards. Pilots shall maintain effective NS/instrument scan, ensure effective CRM for formation and obstacle clearance, recognize proper closure rate with intended point of landing, retain positive aircraft control, utilize proper terminology, lead retains situational awareness of wingman position and drives section appropriately, lead provides a stable and predictable platform, wingman retains situational awareness during flight, recognize proper closure rate with lead aircraft, fly pattern within 50 feet and 10 kts of briefed altitude and airspeed, fly established pattern checkpoints, remain oriented on zone, respond promptly and safely to altitude and drift calls from aircrew, and land within 100 feet of intended point of landing. Successful completion of FORM-4711 requires the PUI to conduct a minimum of three landings as lead and three as dash two.

Prerequisite. FORM-4700, FORM-4701, FORM-4710

2.17 INSTRUCTOR TRAINING PHASE (5000)

2.17.1 General. The instructor training phase is designed to provide the Squadron with a cadre of highly skilled instructors to ensure RACUIs receive consistent, comprehensive training designed to ensure their mission success.

2.18 INSTRUCTOR TRAINING STAGE (5000)

STAGE	EVENT
2.18.1	Instructor Under Training (IUT)
2.18.2	Night Systems SAR Instructor (NSSI)

2.18.1 Search and Rescue Instructor Under Training (SARIUT)

2.18.1.1 Purpose. Develop qualified Pilots with the ability to teach SAR operations using standardized flight training.

2.18.1.2 General. SARIUT must be a designated a HH-46E Non-SAR HAC. Upon the completion of the 2000 phase, IUT-5100 and IUT-5101 a pilot may be designated a Basic Pilot Instructor at the discretion of the Commanding Officer. Basic Instructors may evaluate any PIU in the 2000 phase with the exception of NS-2400, NS-2401, NS-2402, and NS-2403 unless the Basic Instructor was a previously designated and current Night Systems Instructor (NSI). Upon the completion of the entire Instructor Under Training syllabus, Pilots may be designated an HH-46E SAR Instructor.

2.18.1.3 Crew Requirement. IP, IPUI, CC, RS, MT

2.18.1.4 Ground/Academic Training. Prior to the beginning of this stage, the SARIUT will be provided the required ACAD classes.

IUT-5100 1.5 * B,R D E A 1 HH-46E

Goal. Demonstrate instructional techniques during day FAM/EP/CAL maneuvers and procedures.

Requirement

Brief/Discuss

Crew coordination

Confined area landings

Emergency procedures

Instrument checklists

Attitude instrument flight

Instrument approaches

Flight planning

Review

All FAM stage maneuvers

Confined area landings

Instrument procedures

Performance Standard. Pilot shall demonstrate the ability to instruct familiarization and instrument maneuvers, including demonstrating and introducing maneuvers to pilots under instruction.

Prerequisite. DESG-6200

IUT-5101 1.5 * B,R D A 1 HH-46E

Goal. Develop instructional techniques during Bambi Bucket operations.

Requirement

Brief/Discuss

Crew coordination

Load computation/planning

Emergency procedures

Review. Water bucket operations.

Performance Standard. Pilot shall demonstrate the ability to teach water bucket operations maneuvers and delivery techniques to pilots under instruction.

Prerequisite. IUT-5100

IUT-5102 1.5 * B,R D E A 1 HH-46E

Goal. Develop instructional techniques during Overland Search and Rescue operations.

Requirement

Brief/Discuss.

Aircraft configuration

SAR equipment

Coordinating agencies

Use of SAR TACAID

Crew coordination

Emergency procedures

Review

Search patterns

Manual and coupled approaches

Deployment of swimmer/corpsman

Inland survivor recovery

Use of en route checklists

Performance Standard. Pilot shall demonstrate the ability to instruct Search and Rescue maneuvers, including demonstrating and introducing search patterns and techniques, and hover and recovery maneuvers to pilots under instruction.

Prerequisite. IUT-5100

IUT-5103 1.5 * B,R D E A 1 HH-46E

Goal. Develop instructional techniques during Overwater Search and Rescue operations.

Requirement

Brief/Discuss.

Aircraft configuration

SAR equipment

Coordinating agencies

Use of SAR TACAID

Crew coordination

Flare Patterns

Exposure times and dry suit usage

Parachute considerations

Emergency procedures

Review

Search patterns

Manual and coupled approaches

Deployment of swimmer/corpsman

Maritime survivor recovery

Use of en route checklists

Performance Standard. Pilot shall demonstrate the ability to instruct Search and Rescue maneuvers, including demonstrating and introducing search patterns and techniques, and hover and recovery maneuvers to pilots under instruction.

Prerequisite. IUT-5100

Ordnance. 1 MK-25, 1 MK-58

External Support. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, etc.) Safety swimmer and simulated survivor(s) as required

2.18.2 Night System SAR Instructor Under Training (NSSI)

2.18.2.1 Purpose. To train pilots already designated as Search and Rescue Instructors in the skills required to instruct initial Core, Core Plus, and Search and Rescue Syllabus codes under all ambient light conditions.

2.18.2.2 General. An NSSI is a SAR Instructor who has completed the NVG syllabus, certified by a NSI or NSSI and designated by the squadron Commanding Officer. Designated NSSIs are qualified to instruct all SAR NVG flights. Pilots previously designated as an NSI who are current in the H-46E

may be designated as an NSSI upon successful completion of the SARIUT syllabus. All other recommended pilots must complete the following syllabus with a qualified NSI/NSSI.

2.18.2.3 Crew Requirement. IP, IPUI, CC, RS, MT

2.18.2.4 Ground/Academic Training. Prior to the beginning of this stage, the IPUI will be provided the required ACAD classes.

NSSI-5110 1.5 * B,R NS E A 1 HH-46E

Goal. Instruct low work, pattern work, FAM maneuvers and simulated emergencies while utilizing NVDs.

Requirement

Brief/Discuss

Use of NVD's, aircraft lighting (internal and external), emergency procedures, wave off procedures, inadvertent IMC and NVD failures

Depth perception, visual illusions and scan techniques

Crew coordination, comfort level, and situational awareness

NVG training restrictions/requirements. The IUT shall conduct with an emphasis on instructional technique, low work, FAM maneuvers, FCLPs and simulated emergencies.

Performance Standard. Pilot shall demonstrate the ability to instruct pilots in the use of NVDs while conducting all FAM maneuvers and simulated emergencies.

Prerequisite. DESG-6210, ACAD-6014, ACAD-6015

NSSI-5111 1.5 * B,R NS E A 1 HH-46E

Goal. Conduct CALs and navigation while utilizing NVDs.

Requirement.

Brief/Discuss.

Crew coordination and comfort level.

NVG considerations, NVG CAL techniques, LZ lighting, brown/white out

NVG navigation techniques and NVG map preparation.

NVG enroute hazards and inadvertent IMC.

Introduce/Review.

The IUT shall demonstrate, with emphasis on instructional technique, confined area landings and navigation of a route (50NM or greater) at or above 200 feet AGL. The IUT shall remain orientated within 200 meters.

Performance Standard. Pilot shall demonstrate the ability to instruct pilots in the use of NVDs while conducting confined area landings.

Prerequisite. IUT-5110

NSSI-5112 1.5 * B,R NS E A 1 HH-46E

Goal. Evaluate the IUTs ability to instruct CALs and navigation in a SAR environment while utilizing NVDs.

Requirement.

Brief/Discuss.

Review brief and discussion items from IUT-5110 and IUT-5111.

Introduce/Review.

The IUT shall demonstrate, with emphasis on instructional technique, confined area landings and navigation of route (50NM minimum) at or above 200 feet AGL in a SAR scenario.

Performance Standard. Pilot shall demonstrate the ability to instruct pilots in the use of NVDs while conducting confined area landings.

Prerequisite. IUT-5111

2.19 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) PHASE (6000)

2.19.1 General. The 6000 phase encompasses the events required to maintain currency with all certifications, qualifications, and designations. Completion of these events ensures the pilot is qualified to execute the various missions assigned to the Squadron.

2.20 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) STAGE (6000)

T&R CODE	EVENT
2.20.1	Academics (ACAD)
2.20.2	NATOPS (NTPS)
2.20.3	Designation Flight (DESG)

2.20.1 Academics (ACAD)

2.20.1.1 Purpose. To complete the academic requirements for subsequent annual evaluation flights.

ACAD-6000 4.0 365 B,R,M E

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the Pilot's knowledge of the appropriate publications and the aircraft.

Performance Standard. Achieve a minimum score of 3.5 on the open book examination.

ACAD-6001 2.0 365 B,R,M E

Goal. The purpose of the closed book examination is to evaluate the Rescue Air Crewmen's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination. An incorrect answer on any question in the critical stage will result in a grade of Unqualified being assigned to that examination.

Prerequisite. ACAD-6000

ACAD-6002 2.0 365 B,R,M E

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the Rescue Swimmer's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral examination.

Prerequisite. NTPS-6000 and NTPS-6001 within 60 days preceding this event.

ACAD-6003 6.0 365 B,R,M E

Goal. Instrument Ground School

ACAD-6004 2.0 365 B,R,M E

Goal. Written instrument examination

Performance Standard. Grade of Pass or Qualified

Prerequisite. ACAD-6003ACAD-6005 2.0 365 B,R,M E

Goal. Oral instrument examination

Performance Standard. Achieve a minimum grade of Qualified on the oral examination.

Prerequisite. ACAD-6003, ACAD-6004

ACAD-6006 2.0 365 B,R,M E

Goal. CRM ground instruction in accordance with applicable directives and instructions.

Performance Standard. Demonstrate satisfactory knowledge of CRM principles and their application.

ACAD-6007 1.0 30 B,R,M E

Goal. Monthly Emergency Procedures Exam.

Requirement. Conduct a monthly EP Exam per NAVMC 3500.14.

ACAD-6014 1.0 30 B,R,M E

Goal. NSSI CLOSED BOOK EXAM

ACAD-6015 1.0 30 B,R,M E

Goal. NSSI ORAL EXAM

2.20.2 NATOPS Evaluations (NTPS)

2.20.2.1 Purpose. Provide annual NATOPS, Instrument, and CRM evaluation flights.

NTPS-6101 1.5 365 B,R,M (N) E A/S 1 C/HH-46E/WST

Goal. Conduct annual NATOPS evaluation.

General. The evaluating pilot shall be a designated Assistant NATOPS Instructor (ANI), NATOPS Instructor (NI), or NATOPS Evaluator (NE) and shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 Series and other applicable directives, instructions and orders.

Requirement. Proficiency in the utilization of all aspects of the HH-46 as a system. The proficiency expected by the evaluator in this flight shall be commensurate with the experience of the pilot under evaluation. Upon successful completion of this evaluation, a pilot may be designated a HH- 46E (non-SAR) HAC and/or SAR H2P at the discretion of the unit Commanding Officer.

Performance Standard. The performance expected by the evaluator in this flight shall be commensurate with the experience level of the pilot under evaluation.

Prerequisite. ACAD-6000, 6001, 6002.

INST-6102 1.5 365 B,R,M (N) E A/S 1 C/HH-46E/WST

Goal. Conduct annual Instrument evaluation.

General. The evaluating pilot shall be a member of the Instrument Flight Board and shall conduct the Instrument Evaluation IAW OPNAVINST 3710.7 Series, NAVAIR 00-80T-112 (NATOPS Instrument Flight Manual), FAR/AIM, and other applicable directives, instructions and orders.

Requirement. The evaluation shall be conducted per the criteria contained within the Instrument Flight Manual. Fly an instrument flight using all navigation equipment available. Evaluate all phases of instrument flight to include precision and non-precision approaches, partial panel, and instrument holding. Demonstrate proficiency in handling instrument related emergencies to include unusual attitude recoveries.

Performance Standard. Pilot shall demonstrate the ability to plan and execute an instrument flight conduct instrument approaches, and demonstrate safe performance in handling instrument related emergencies, including unusual attitudes.

Prerequisite. ACAD-6003, 6004, 6005.

CRM-6103 1.5 365 B,R,M (N) E A/S 1 HH-46E

Goal. Conduct annual CRM evaluation.

General. The CRM Flight Evaluator shall be a designated CRM Facilitator or CRM Instructor.

Requirement. The evaluation shall be conducted per the criteria contained within OPNAVINST 1542.7C. The flight evaluation may be conducted concurrent with any operational or training flight including NATOPS evaluation and/or instrument evaluation.

Performance Standard. Demonstrate effective use of the 7 CRM critical skill areas.

Prerequisite. ACAD-6006

2.20.3 Designation Flights (DESG)

2.20.3.1 Purpose. To provide SAR designations.

2.20.3.2 General. Upon successful completion of DESG-6200, a RS may be designated Day SAR RS at the discretion of the Commanding Officer. Upon successful completion of DESG-6210 a RS may be designated a fully qualified SAR RS at the discretion of the Commanding Officer.

DESG-6200	2.5	365	B,R,M	D	E	A	1 HH-46E

Goal. Conduct Day SAREX. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement. The check will be conducted per the criteria contained in the NATOPS Flight Manual, OPNAVINST 3710.7, applicable SAR publications, and will cover all practicable day SAR operations and procedures contained in this syllabus. Upon successful completion of this evaluation, a pilot may be designated Day SAR HAC at the discretion of the unit commanding officer.

Performance Standard. The performance expected by the evaluator in this flight shall be commensurate with the experience level of the pilot under evaluation.

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, etc.) Safety swimmer and survivor(s) as required.

DESG-6210	2.0	365	B,R,M	NS	E	A	1 HH-46E

Goal. Night SAR evaluation. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement. The check will be conducted per the criteria contained in the NATOPS Flight Manual, OPNAVINST 3710.7, applicable SAR publications, and will cover all practicable night SAR operations and procedures contained in this syllabus. Upon successful completion of this evaluation, a pilot may be designated Full SAR Qualified HAC.

Performance Standard. The performance expected by the evaluator in this flight shall be commensurate with the experience level of the pilot under evaluation.

Prerequisite. 3000 Phase complete, ACAD-6016

Ordnance. 1 Mk-25, 1 Mk-58 Flares.

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

2.20.4 Functional Check Flights (FCF)

2.20.4.1 Purpose. To introduce and develop proficiency in FCF procedures as well as obtain the squadron FCP designation.

2.20.4.1 General

PUI will demonstrate an understanding of, and proficiency in, the maintenance procedures involved in FCFs.

PUI will also demonstrate a detailed knowledge of aircraft systems and administrative maintenance procedures.

These constitute the minimum requirements for qualification.

The Quality Assurance Officer within each squadron should manage the FCP syllabus.

PUI must be designated as a Non-SAR HAC (if not already a SAR HAC) upon completion of the syllabus in order to be designated a Functional Check Pilot.

Events will be instructed by a designated FCP.

Successful completion of the FCF-6137 constitutes FCP.

A designation letter signed by the commanding officer stating the pilot is FCP qualified is required.

The original shall be placed in the Pilots NATOPS jacket and a copy shall be placed in the APR with a corresponding logbook entry. Additionally, the code FCF-6137 shall be logged on any subsequent functional check flights to track currency and proficiency regardless of whether or not a full card is conducted on that flight.

To the maximum extent possible all initial and refresher FCF T&R events (FCF-6131 through FCF-6137) should be conducted utilizing an aircraft in a test status.

At the discretion of the squadron Commanding Officer, initial and refresher FCF T&R events may be conducted in MC and FMC aircraft that are not in a test status.

2.20.4.2 Crew Requirements. P/CP/CC.

2.20.4.3 Ground/Academic Training. Selected reading material from OPNAVINST 4790, CH-46E NATOPS, SOPs, MIMs, etc. as designated by each squadron commanding officer. Prior to the first training flight, the PUI must complete an FCF Equipment Brief and a FCF Procedures Brief. The FCF Equipment Brief is a locally produced document intended to familiarize the PUI with setup and operation of all FCF equipment (8500, NP600, AIMS DU, etc). The FCF Procedures Brief is a locally produced document intended to familiarize the PUI with the basic conduct of Functional Check Flights. Prior to the 6136, the PUI must also complete the FCF open book exam.

SFCF-6400	2.0	*	B	D	E	S/A

Goal. IP Demonstrate and introduce right-seat full-card FCF procedures.

Requirement. IP will demonstrate all items in the FCF checklist to include ground, hover, and in-flight checks.

Discuss. CRM, FCF paperwork process, ADB contents, crew requirements/authorized crewmembers, weather requirements, testing areas, importance of preflight, QA briefs, check flight profiles (A, B, C, D, E and F), and NAVFLIRs.

Performance Standards. IAW NATOPS, PUI must demonstrate familiarity with FCF checklists, procedures, and maneuvers.

Prerequisites. FCF ground/academic training complete, and be familiar with AIMS function within the CNCS.

External Syllabus Support. AIMS Capable WST.

Crew Requirements. FCP/PUI.

FCF-6401 1.0 * B D E A 1 HH-46E

Goal. Conduct T58-GE-16A Engine and Engine Condition Control System (ECCS) setup.

Requirement. Introduce procedures and techniques for setup of the T58-GE-16A Engine and the associated ECCS. Introduce all items in the ground check portion of the FCF checklist. Aircraft must be configured with AIMS.

Discuss

T58-GE-16A principles of operation and system limitations

ECCS principles of operation and system limitations

T58-GE-16A and ECCS setup procedures

AIMS principles of operation and Display Unit setup

Troubleshooting techniques

Maintenance Instruction Manuals

NAVAIR A1-H46E-NFM-700 FCF checklist (B-card)

Work center debriefs and MAF submission.

Introduce

Procedures and techniques for conducting engine setup and ECCS setup on the T58-GE-16A engine and vibration checks

Topping verification/setup

Quality Assurance brief/de-brief

AIMS Display Unit setup and operation

ICS, radios, and internal/external lights checks

Engine start checks

Starting rotor checks

Rotor speed check

Torque Zeroization

Torque indicator comparison checks

Engine acceleration checks

ECCS FLY Adjustment

Fuel control unit topping adjustment

ECCS MID and MAX adjustment

Single-point and four-point engine performance check

Ground, hover and 120 KIAS vibration analysis

Troubleshooting techniques

T58 Engine Performance Check – Version 3.1.6 software

Vib Review 2.2 software

Work center debriefs and Maintenance Action Form (MAF)submission/sign off

Performance Standards. Pilots shall observe AIMS Display Unit setup and operation, conduct a full engine setup and performance check and a complete ECCS setup on the T58-GE-16A engine (FLY, MID, and MAX adjustments), as well as complete a vibration analysis in the ground, hover, and 120 KIAS regimes. The vibration analysis shall include introduction to the Vibe Review 2.2 vibration analysis software.

Prerequisites. FCP required reading, FCF Equipment Brief, and Maintenance Procedures and FCF Requirements Brief, SFCF-6400.

Crew Requirements. FCP/PUI/FCCC.

FCF-6402 1.5 * B D E 1 HH-46E

Goal. Conduct a full track and balance evolution starting with initial run and consisting of as many flights as required to achieve a balanced rotor system and observing at least one set of rotor blade adjustments.

Requirement. Introduce procedures and techniques for conducting ground and hover rotor flat track and ground, hover, and 120 KIAS rotor balance.

Discuss

Vibrations associated with rotary wing systems

Rotor system and flight control components, principles of operation and system limitations

AIMS Display Unit setup, operation and troubleshooting techniques

AIMS CDNU settings page

Maintenance Instruction Manuals

Rotor blade adjustments

NAVAIR A1-H46E-NFM-700 FCF checklist (D-card)

Work center debriefs and MAF submission

Introduce

Procedures and techniques for conducting rotor track and balance

Quality Assurance brief/de-brief

AIMS Display Unit setup, operation, and troubleshooting

AIMS CDNU settings page

Rotor flat track

Rotor balance

Stick plot

Autorotation check

Track and balance run sheet reading and trend analysis

Rotor blade adjustments

Stick plot and autorotation check analysis

Work center debriefs and MAF submission/sign off

Performance Standards. Pilots shall conduct a complete rotor track and balance evolution resulting in a rotor system balanced in limits to include a focus on test equipment troubleshooting methods, rotor balance trend analysis, and rotor blade adjustments.

Prerequisites. FCP required reading, FCF Equipment Brief, Maintenance Procedures and FCF Requirements Brief, FCF-6400.

Crew Requirements. FCP/PUI/FCCC.

FCF-6403 1.5 * B D E 1 HH-46E

Goal. Conduct hover and forward flight Automatic Flight Control System (AFCS) checks.

Requirement. Introduce procedures and techniques for conducting hover and forward flight AFCS checks.

Discuss

AFCS components, principles of operation and system limitations

AFCS troubleshooting techniques

Maintenance Instruction Manuals

NAVAIR A1-H46E-NFM-700 or -700A FCF checklist (E-card)

Work center debriefs and MAF submission

Introduce

Procedures and techniques for conducting hover and forward flight AFCS checks.

Flight control checks.

Stick position checks.

Hover AFCS stability check.

Heading hold check.

Radar altimeter check.

Forward flight AFCS stability checks.

Differential Airspeed Hold (DASH) low-rate driver check.

Barometric altitude hold check.

Troubleshooting and failed component isolation techniques.

Work center debriefs and MAF submission/sign off.

Performance Standards. Pilots shall conduct a full hover and forward flight AFCS check flight to include a focus on troubleshooting methods and techniques for isolating failed components based on aircraft behavior in various regimes.

Prerequisites. FCP required reading, FCF Equipment Brief,and Maintenance Procedures and FCF Requirements Brief, SFCF-6400.

Crew Requirements. FCP/PUI/FCCC.

FCF-6404 1.5 * B D E 1 HH-46E

Goal. Conduct Doppler and coupled hover approach checks.

Requirement. Introduce procedures and techniques for conducting checks of the Doppler system to include coupled hover approach function and aft-station controllability checks.

Discuss

Doppler components, principles of operation and system limitations

Doppler troubleshooting techniques

Maintenance Instruction Manuals

NAVAIR A1-H46E-NFM-700 or -700A FCF checklist (E-card)

Work center debriefs and MAF submission

Introduce

Procedures and techniques for conducting coupled Doppler hover, ascent and descent

Coupled Doppler approach and fly-out checks

Aft station controllability checks

Troubleshooting and failed component isolation techniques

Work center debriefs and MAF submission/sign off

Performance Standards. Pilots shall conduct a full Doppler and coupled approach check to include a focus on troubleshooting methods and techniques for isolating failed components based on aircraft behavior in various regimes.

Prerequisites. FCP required reading, FCF Equipment Brief, Maintenance Procedures and FCF Requirements Brief, SFCF-6400.

Crew Requirements. FCP/PUI/FCCC.

FCF-6405 1.5 * B,R D E A 1 HH-46E

Goal. Full card FCF introduction and review. Emphasize techniques for efficiently integrating individual test procedures.

Requirement. Conduct a full card FCF and introduce procedures and techniques for completion of an A-card Functional Check and a C-card Functional Check.

Discuss

FCF procedures

Troubleshooting techniques

Maintenance Instruction Manuals

NAVAIR A1-H46E-NFM-700 or -700A FCF checklist (A-card and C-card)

Introduce

Procedures and techniques for system checks specific to a full card (A-card) FCF as well as the procedures for a C-card FCF

Fire handle check

Master caution panel check

Auxiliary Power Unit check

Fuel quantity gauges/BITE indicators test

No. 2 boost pressure check

Internal Communication System and lighting checks

Generators check

Engine anti-ice checks

-8/-9 ground, hover and 120 KIAS vibration analysis

Pretaxi checks

Taxi checks

N_f/N_r droop and overspeed system checks

Longitudinal cyclic trim check

In air alignment of AHRS/MAD

Communications, navigation, and Aircraft Survivability Equipment (ASE) checks

Post-FCF paperwork and FCF card closeout

Review

FCF-6401, 6402, 6403, 6404

Quality Assurance brief/de-brief

NP-600 Engine Test Set and 8500C Balancer/Analyzer setup and operation

T58 Engine Performance Check – Version 3.1.6 software

Vib Review 2.2 software

Work center debriefs and MAF submission/sign off

Performance Standards. Pilots shall conduct a full card FCF with a focus on integrating individual test procedures into an efficient and accurate functional check. FCP Under Instruction(FCPUI) shall demonstrate knowledge of all B, D, and E-card functional checks. FCP instructor shall introduce all procedures associated with A and C-card functional checks.

Prerequisites. FCF-6401, 6402, 6403, 6404. All ground and academic requirements complete.

Crew Requirements. FCP/PUI/FCCC

FCF-6406	1.5	180	B,R	D	E	1 HH-46E

Goal. FCF designation.

Requirement. Effectively demonstrate the ability to perform a full card FCF.

Discuss.

FCF procedures

Troubleshooting techniques

Maintenance Instruction Manuals

NAVAIR A1-H46E-NFM-700 and -700A FCF checklist (A-card)

Review. NATOPS Chapter 10, FCF checklist, and FCP-4.

Performance Standards. Pilots shall demonstrate the ability to conduct a full card (A-card) FCF correctly and efficiently, and demonstrate the ability to troubleshoot aircraft problems.

Prerequisite. FCP open-book examination, FCF-6405.

Crew Required. AMO or QAO (FCP at discretion of C.O.)/PUI/CC.

VMR-1 PILOT T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# of SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
CORE SKILL TRAINING (2000 PHASE EVENTS)																	
CORE ACADEMICS (ACAD)																	
ACAD	2000	COMMAND MISSION	B,R					*		1.0							
ACAD	2001	CREW RESPONSIBILITIES CLASS	B,R					*		1.0							
ACAD	2002	FLIGHT EQUIPMENT AND SAFETY PROCEDURES	B,R					*		1.0							
ACAD	2003	EGRESS AND EMERGENCY PROCEDURES	B,R,M					365		1.0							
ACAD	2004	CONFINED AREA LANDINGS	B,R					*		1.0							
ACAD	2005	SAR AND MEDICAL GEAR FAMILIARIZATION	B,R					*		1.0							
ACAD	2006	NIGHT SYSTEMS CLASS	B,R					*		1.0							
ACAD	2007	NIGHT SYSTEMS LAB	B,R					*		1.0							
ACAD	2009	PRINCIPLES OF FIRE FIGHTING	B,R,M					365		1.0							
ACAD	2010	PASSENGER AND MEDICAL TRANSPORTS	B,R,M					365		1.0							
TOTAL ACAD STAGE									10	10.0	0	0.0	0	0.0			
SIMULATOR (SIM)																	
SIM	2100	HH-46E FAM/EP SIM	B,R		S	1		*				1.0					200
SIM	2101	DOPPLER INTRO	B,R		S	1		*				1.0			2100		201
SIM	2102	INSTRUMENTS	B		S	1		*				1.0			2100		202
TOTAL SIM STAGE									0	0.0	3	3.0	0	0.0			
FAMILIARIZATION (FAM)																	
FAM	2103	AREA FAM	B,R		A	1	D	*						1.5	2000,2100		203
FAM	2104	EP FAM	B,R,M	E	A/S	1	D	90						1.5	2100		204
FAM	2105	DAY OR NIGHT INSTRUMENTS	B,R,M		A/S	1	(N)	180						1.5	2102		210
TOTAL FAM STAGE									0	0.0	0	0.0	3	4.5			
CONFINED AREA LANDING (CAL)																	
CAL	2200	DAY CALS	B,R,M		A	1	D	45						1.5	2103		220
TOTAL CAL STAGE									0	0.0	0	0.0	1	1.5			

VMR-1 PILOT T&R MATRIX																	
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# of SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
NAVIGATION (NAV)																	
NAV	2300	LOCAL HOSPITAL FAM	B,R,M		A	1	D	365						1.5	2103		250
NAV	2301	DISTANT HOSPITAL FAM	B,R		A	1	D	*						2.5	2300		251
TOTAL NAV STAGE									0	0.0	0	0.0	2	4.0			
NIGHT SYSTEMS (NS)																	
NS	2401	NS FAM	B,R		A	1	NS	*						1.5	2103,2104,2200	2200	301
NS	2402	NS CAL	B		A	1	NS	*						1.5	2401		302
NS	2403	NS NAV & CAL	B,R,M		A	1	NS	45						1.5	2402		303
TOTAL NS STAGE									0	0.0	0	0.0	4	4.5			
AERIAL FIREFIGHTING (FF)																	
FF	2500	FIRE BUCKET	B,R,M		A	1	D	365						1.5	2009,2200	2200	240
TOTAL FF STAGE									0	0.0	0	0.0	1	1.5			
AERIAL TRANSPORT (AT)																	
AT	2600	AERIAL TRANSPORT	B,R,M		A	1	(N)	365						1.5	2009,2200	2300	
TOTAL AT STAGE									0	0.0	0	0.0	1	1.5			
TOTAL 2000 PHASE EVENTS									10	10.0	0	3.0	12	17.5			

VMR-1 PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# of SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
MISSION SKILL TRAINING (3000 PHASE EVENTS)																	
SAR ACADEMICS (ACAD)																	
ACAD	3000	PILOT RESCUE PROCEDURES	B,R,M					365		1.0							
ACAD	3001	ON SCENE COMMANDER DUTIES AND RESPONSIBILITIES	B,R,M					365		1.0							
ACAD	3002	OVERLAND SEARCH AND RESCUE	B,R,M					365		1.0							
ACAD	3003	SEARCH AND RESCUE EQUIPMENT	B,R,M					365		1.0							
ACAD	3009	SAR PUBLICATIONS/INSTRUCTIONS/REPORTS	B,R,M					365		1.0							
ACAD	3019	SAR ORGANIZATION	B,R,M					365		1.0							
ACAD	3020	SAR PLANNING	B,R,M					365		1.0							
ACAD	3021	SAR COMMUNICATIONS	B,R,M					365		1.0							
ACAD	3052	OVERLAND HOISTING PROCEDURES	B,R,M					365		1.0							
ACAD	3053	MARITIME HOISTING PROCEDURES	B,R,M					365		1.0							
ACAD	3054	VESSEL HOISTING PROCEDURES	B,R,M					365		1.0							
TOTAL DAY SAR STAGE									11	11.0	0	0.0	0	0.0			
SEARCH AND RESCUE (SAR)																	
SAR	3100	DAY LAND SEARCH PATTERNS	B,R		A	1	D	*						1.5	2000 COMPLETE,3000,3009,3019,3020,3021		252
SAR	3102	DAY LAND HOIST	B,R,M		A	1	D	30						1.5	2000 PHASE COMPLETE,3003,3052	2200	253
SAR	3103	DAY OVERLAND SAREX	B,R		A	1	D	*						2.0	3001,3002,3100,3102	3100,3102	255
SAR	3104	DAY WATER SEARCH/DOPPLER	B,R,M		A	1	D	60						1.5	3100, 3053		256
SAR	3105	DAY SWIMMER DEPLOYMENT	B,R,M		A	1	D	180						1.5	3053,3104	3104	258
SAR	3108	DAY BOAT HOIST	B,R,M		A	1	D	180						1.5	3054,3105		260
SAR	3109	DAY OVERWATER SAREX	B,R		A	1	D	*						2.0	3103,3108	3104	
TOTAL DAY SAR STAGE									0	0.0	0	0.0	7	11.5			

VMR-1 PILOT T&R MATRIX																	
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# of SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
NIGHT SEARCH AND RESCUE (NSAR)																	
NSAR	3200	NIGHT LAND SEARCH PATTERNS	B,R		A	1	NS	*						1.5	3000 STAGE ACAD COMPLETE, 3100	2402	320
NSAR	3202	NIGHT LAND HOIST	B,R,M		A	1	NS	30						1.5	3102	2403,3102	321
NSAR	3203	NIGHT OVERLAND SAREX	B,R		A	1	NS	*						2.0	3103,3200,3202	3103,3200	322
NSAR	3204	NIGHT WATER SEARCH/DOPPLER	B,R,M		A	1	NS	60						1.5	3104,3200	3104	323
NSAR	3205	NIGHT RESCUE SWIMMER DEPLOYMENT	B,R,M		A	1	NS	180						1.5	3105,3204	3105,3204	330
NSAR	3208	NIGHT BOAT HOIST (LITTER)	B,R,M		A	1	NS	180						1.5	3108,3205	3108	333
NSAR	3209	NIGHT OVERWATER SAREX	B,R		A	1	NS	*						2.0	3109,3203,3208	3204	340
TOTAL NIGHT SAR STAGE									0	0.0	0	0.0	7	11.5			
TOTAL MISSION SKILLS PHASE									11	11.0	0	0.0	14	23.0			
TOTAL 2000 & 3000 PHASE									21	21.0	0	3.0	26	40.5			
CORE PLUS MISSION SKILL TRAINING (4000 PHASE EVENTS)																	
CORE PLUS MISSION SKILLS ACADEMICS (ACAD)																	
ACAD	4000	DAY RAPPEL PROCEDURES	B,R,M					365		1.0							
ACAD	4001	NIGHT RAPPEL PROCEDURES	B,R,M					365		1.0							
ACAD	4002	OVERLAND DIRECT DEPLOYMENT	B,R,M					365		1.0							
ACAD	4003	MARITIME DIRECT DEPLOYMENT	B,R,M					365		1.0							
ACAD	4004	OVER THE RAMP HOISTING	B,R,M					365		1.0							
ACAD	4005	FIELD CARRIER LANDING PRACTICE	B,R,M					365		1.0							
ACAD	4006	CARRIER QUALIFICATION	B,R,M					365		1.0							
ACAD	4007	FORMATION TACTICS	B,R,M					365		1.0							
TOTAL ACAD STAGE									8	8.0	0	0.0	0	0.0			
DAY RAPPEL (RAP)																	
RAP	4102	DAY RAPPEL	B,R,M		A	1	D	365						1.5	3102,4000		402
TOTAL RAP STAGE									0	0.0	0	0.0	3	1.5			

VMR-1 PILOT T&R MATRIX																	
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# of SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
NIGHT RAPPEL (NRAP)																	
NRAP	4202	NIGHT RAPPEL	B,R,M		A	1	NS	365						1.5	3202,4102		
TOTAL NRAP STAGE									0	0.0	0	0.0	3	1.5			
DIRECT DEPLOYMENT (DIR)																	
DIR	4300	DAY OVERLAND DIR	B,R,M		A	1	D	365						1.5	3103,4002	3102	
DIR	4301	DAY OVERWATER DIR	B,R,M		A	1	D	365						1.5	3105,4003	3105	
DIR	4310	NIGHT OVERLAND DIR	B,R,M		A	1	NS	365						1.5	3203,4002,4300	3202	
DIR	4311	NIGHT OVERWATER DIR	B,R,M		A	1	NS	365						1.5	3209,4003,4301	3205	
TOTAL DIR STAGE									0	0.0	0	0.0	4	6.0			
OVER THE RAMP HOISTING (ORH)																	
ORH	4400	DAY OVER THE RAMP HOIST	B,R,M		A	1	D	365						1.5	3102,4004		254
ORH	4410	NIGHT OVER THE RAMP HOIST	B,R,M		A	1	N*	365						1.5	3202,4004,4400		
TOTAL ORH STAGE									0	0.0	0	0.0	2	3.0			
FIELD CARRIER LANDING PRACTICE (FCLP)																	
FCLP	4500	DAY FCLP	B,R,M		A	1	D	365						1.5	2000 PHASE COMPLETE,4005	2200	410
FCLP	4510	NIGHT FCLP	B,R,M		A	1	N	365						1.5	4500	2403,4500	411
TOTAL FCLP STAGE									0	0.0	0	0.0	2	3.0			
CARRIER QUALIFICATION (CQ)																	
CQ	4600	DAY CQ	B,R,M		A	1	D	365						1.5	4006,4500	4500	420
CQ	4610	NIGHT CQ	B,R,M		A	1	N	365						1.5	4510,4600	4600	421
TOTAL CQ STAGE									0	0.0	0	0.0	2	3.0			
FORMATION (FORM)																	
FORM	4700	FORMATION NAV	B,R,M		A	2+	D	365						1.5	2000 PHASE COMPLETE,4007		
FORM	4701	SECTION CALS	B,R,M		A	2	D	365						1.5	4700	2200,4700	
FORM	4710	NS SECTION NAV	B,R,M		A	2	NS	365						1.5	4700	4700	
FORM	4711	NS SECTION CALS	B,R,M		A	2	NS	365						1.5	4700,4701,4710	2403,4701,4710	
TOTAL FORMATION STAGE									0	0.0	0	0.0	4	6.0			
TOTAL CORE PLUS PHASE									8	8.0	0	0.0	16	22.5			

VMR-1 PILOT T&R MATRIX																	
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# of SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
INSTRUCTOR TRAINING (5000 PHASE EVENTS)																	
INSTRUCTOR UNDER TRAINING (IUT)																	
IUT	5100	DAY FAM/CAL/EP	B,R		A	1	D	*						1.5	3000 Phase COMPLETE, 6200	2103,2104,2200	500
IUT	5101	FIREFIGHTING	B,R		A	1	D	*						1.5	5100	2500	503
IUT	5102	OVERLAND SAR	B,R		A	1	D	*						1.5	5100	3102	501
IUT	5103	OVERWATER SAR	B,R		A	1	D	*						1.5	5100		502
TOTAL IUT STAGE									0	0.0	0	0.0	4	6.0			
NIGHT SYSTEMS SAR INSTRUCTOR (NSSI)																	
NSSI	5110	NSSI FAM	B,R		A	1	NS	*						1.5	6210		551
NSSI	5111	NSSI CALS/NAV	B,R		A	1	NS	*						1.5	5110	2403	552
NSSI	5112	NSSI SAR	B,R		A	1	NS	*						1.5	6014,6015, 5111		553
TOTAL NSSI STAGE									0	0.0	0	0.0	3	4.5			
REQUIREMENT, QUALIFICATIONS AND DESIGNATIONS (RQD) (6000 PHASE EVENTS)																	
RQD ACADEMICS (ACAD)																	
ACAD	6000	NATOPS OPEN BOOK	B,R,M	E				365		2.0							
ACAD	6001	NATOPS CLOSED BOOK	B,R,M	E				365		2.0					6000		
ACAD	6002	NATOPS ORAL EXAM	B,R,M	E				365		2.0					6001		
ACAD	6003	INSTRUMENT GROUND SCHOOL	B,R.M	E				365		8.0							
ACAD	6004	INSTRUMENT EXAM	B,R,M	E				365		2.0					6003		
ACAD	6005	INSTRUMENT ORAL EXAM	B,R,M	E				365		2.0					6004		
ACAD	6006	CRM GROUND CLASS	B,R,M	E				365		2.0							
ACAD	6007	MONTHLY EP QUIZ	B,R,M	E				30		1.0							
ACAD	6014	NSSI EXAM	B,R,M					*		2.0							
ACAD	6015	NSSI ORAL EXAM	B,R,M					*		2.0					6014		
ACAD	6016	PILOT SAR EXAM	B,R,M	E				365		2.0							
TOTAL ACAD STAGE									10	27.0	0	0.0	0	0.0			

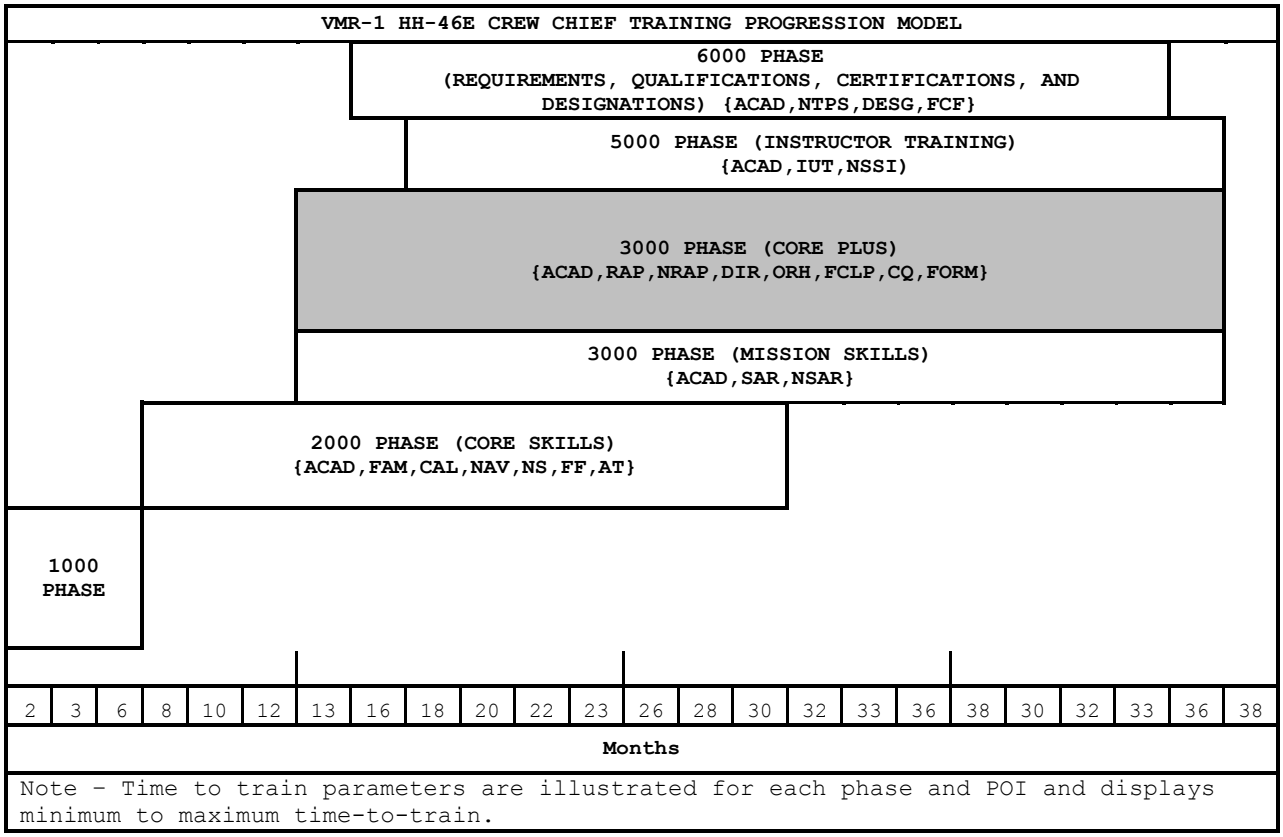
VMR-1 PILOT T&R MATRIX																	
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# of SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
NATOPS / CRM (NTPS)																	
NTPS	6101	NATOPS EVALUATIONS	B,R,M	E	A/S	1	(N)	365						1.5	6000,6001,6002	2104	600
CRM	6103	CRM FLIGHT EVALUATIONS	B,R,M	E	A/S	1	(N)	365						1.5	6006		640
TOTAL NTPS STAGE									0	0.0	0	0.0	2	3.0			
INSTRUMENTS																	
INST	6102	STAN INSTRUMENT EVAL	B,R,M		A/S	1	(N)	365						1.5	6003,6004	2105	601
TOTAL DESG STAGE									0	0.0	0	0.0	2	1.5			
SAR DESIGNATIONS (DESG)																	
DESG	6200	DAY SAR DESIGNATION	B,R,M	E	A	1	D	365						1.5	3109		602
DESG	6210	NIGHT SAR DESIGNATION	B,R,M	E	A	1	NS	365						1.5	3209,6016,3200,6200	6200	602
TOTAL DESG STAGE									0	0.0	0	0.0	2	3.0			
FUNTIONAL CHECK FLIGHT (FCF)																	
SFCF	6400	INTRO TO FCF PROCEDURES SIM	B		S/A	1	D	*				2.0			2100		604
FCF	6401	ECCS SETUP	B		A	1	D	*						1.0	6400		604
FCF	6402	TRACK AND BALANCE	B		A	1	D	*						1.0	6400		604
FCF	6403	FCF HOVER & AFCS CHECKS	B		A	1	D	*						1.0	6400		604
FCF	6404	DOPPLER CHECKS	B,R		A	1	D	*						1.0	6403		604
FCF	6405	FULL CARD INTRO / REVIEW	B		A	1	D	*						1.0	6401,6402,6403,6404		604
FCF	6406	FCF FULL CARD	B,R,M		A	1	D	365						1.5	6405		604
TOTAL FCF STAGE									0	0.0	3	2.0	4	6.5			

CHAPTER 3

CREW CHIEF (6172)

3.0 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core, Mission, and Core Plus Skills. The goal of this chapter is to develop individual and unit Search and Rescue capabilities.

3.1 TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average VMR-1 HH-46E Crew Chief. Units should use the model as a guide to generate individual training plans.



Note – Time to train parameters are illustrated for each phase and POI and displays minimum to maximum time-to-train.

3.2 ABBREVIATIONS

VMR-1 HH-46E CREW CHIEF	
CORE/MISSION/CORE PLUS SKILL ABBREVIATIONS	
CORE SKILLS (2000 Phase)	
ACAD	Academics
FAM	Familiarization
CAL	Confined Area Landings
NAV	Navigation
NS	Night Systems
FF	Aerial Fire Fighting
AT	Aerial Transport
MISSION SKILLS (3000 Phase)	
ACAD	Academics
SAR	Search and Rescue
NSAR	Night Search and Rescue
CORE PLUS MISSION (4000 Phase)	
ACAD	Academics
RAP	Day Rappel
NRAP	Night Rappel
DIR	Direct Deployment
ORH	Over the Ramp Hoisting
CQ	Carrier Qualification
FORM	Formation
INSTRUCTOR (5000 Phase)	
BCCI	Basic Crew Chief Instructor
SCCI	SAR Crew Chief Instructor
NSSI	Night System SAR Instructor
QUALIFICATIONS AND DESIGNATIONS (6000 Phase)	
ACAD	Academics
NTPS	NATOPS
DESG	Designation

3.3 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	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 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. 3000 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 Mission Proficiency (CPMP)	CPMP is a measure of training completion for 3000 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

3.4 INDIVIDUAL CORE/MISSION/CORE PLUS SKILL PROFICIENCY REQUIREMENTS

3.4.1 Management of individual CSP/MSP/CPSP/CPMP serves as the foundation for developing proficiency requirements in DRRS.

3.4.2 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.

3.4.3 Proficiency is attained by individual Core/Mission/Core Plus skill and the training events to be executed within that skill set are determined by POI assignment (Basic, Transition, Conversion, Series Conversion, or Refresher).

3.4.3 Once proficiency has been attained by Core/Mission/Core Plus Skill (by any POI assignment) then the individual maintains proficiency by executing those events within the maintain column. An individual maintains proficiency by individual Core/Mission/Core Plus Skill.

Note

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

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

VMR-1 HH-46E CREW CHIEF					
CORE/MISSION/CORE PLUS ATTAIN & MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
ACAD	2000		2000		
	2001		2001		
	2002		2002		
	2003		2003		2003
	2004		2004		
	2005		2005		
	2008		2008		
	2009		2009		2009
	2010		2010		2010
FAM	2103	FAM	2103	FAM	2103
	2103		2103		2103
CAL	2200		2200		2200
NAV	2300	NAV	2300	NAV	2300
	2301		2301		
NS	2400	NS	2400	NS	
	2401		2401		
	2402		2402		
	2403		2403		2403
FF	2500	FF	2500	FF	2500
AT	2600	AT	2600	AT	2600

MISSION SKILLS (3000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
ACAD	3004	ACAD	3004	ACAD	3004
	3005		3005		3005
	3006		3006		3006
	3007		3007		3007
	3008		3008		3008
	3009		3009		3009
	3010		3010		3010
	3011		3011		3011
	3012		3012		3012
	3013		3013		3013
	3014		3014		3014
	3015		3015		3015
	3016		3016		3016
	3017		3017		3017
	3018		3018		3018
	3019		3019		3019
	3020		3020		3020
	3021		3021		3021
	3022		3022		3022
	3023		3023		3023
	3028		3028		3028
	3029		3029		3029
	3030		3030		3030
	3033		3033		3033
	3045		3045		3045
	3050		3050		3050
	3051		3051		3051
	3052		3052		3052
	3053		3053		3053
	3054		3054		3054
SAR	3100	SAR	3100	SAR	
	3101				
	3102		3102		3102
	3103		3103		3103
	3104		3104		3104
	3105				
	3106		3106		3106
	3107				
	3108		3108		3108
	3109		3109		3109
NSAR	3200	NSAR	3200	NSAR	
	3201				
	3202		3202		3202
	3203		3203		3203
	3204		3204		3204
	3205				
	3206		3206		3206
	3207				
	3208		3208		3208
	3209		3209		3209
FF	2500	FF	2500	FF	2500
AT	2600	AT	2600	AT	2600

CORE PLUS (4000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
ACAD	4000	ACAD	4000	ACAD	4000
	4001		4001		4001
	4002		4002		4002
	4003		4003		4003
	4004		4004		4004
	4005		4005		4005
	4006		4006		4006
	4007		4007		4007
RAP	4100	RAP		RAP	
	4101		4101		4101
	4102		4102		
NRAP	4200	NRAP		NRAP	
	4201		4201		4201
	4202		4202		
DIR	4300	DIR	4300	DIR	4300
	4301		4301		4301
	4310		4310		4310
	4311		4311		4311
ORH	4400	ORH	4400	ORH	4400
	4410		4410		4410
FCLP	4500	FCLP	4500	FCLP	4500
	4510		4510		4510
CQ	4600	CQ	4600	CQ	4600
	4610		4610		4610
FORM	4700	FORM	4700	FORM	4700
	4701		4701		4701
	4710		4710		4710
	4711		4711		4711

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

3.5.1 Instructor Training

VMR-1 HH-46E CREW CHIEF INSTRUCTOR DESIGNATIONS (5000 Phase)	
INSTRUCTOR DESIGNATION	EVENTS
BCCI	2000 PHASE COMPLETE, 5100, 5101
SCCI	5100,5101,5102,5103
NSSI	5110,5111,5112

3.5.2 Requirements, Certifications, Qualifications, and Designations

VMR-1 HH-46E CREW CHIEF REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (R,C,Q,& D) [6000 Phase]	
QUALIFICATIONS	EVENTS
NATOPS	6001,6002,6003,6100
CRM	6007,6101
DAY SAR	6010,6200
NIGHT SAR	6010,6210

DESIGNATIONS	EVENTS
NON-SAR	NATOPS QUALIFIED AND 2000 PHASE COMPLETE
DAY SAR	6010,6200
NIGHT RAPPEL	6210,3202
FCF	6301

3.6 VMR-1 HH-46E CREW CHIEF PROGRAMS OF INSTRUCTION (POI). These tables reflect average time-to-train versus the minimum to maximum time-to-train parameters in the Training Progression Model.

3.6.1 General. The Basic POI is for all CCs assigned for their first time to a SAR unit utilizing the HH-46E. The Refresher POI is for all CCs who have previously been assigned to a SAR unit utilizing the HH-46E aircraft. Personnel who have previously been assigned duties as a CC in another platform must complete the Basic POI.

3.6.2 Basic POI

VMR-1 HH-46E CREW CHIEF Basic POI		
Weeks	**Phase of Instruction**	**Unit**
3	Naval Aircrew Candidate School	NAS Pensacola
12	CH-46E Crew Chief School	HMMT-164
2	SAR Ground Training	VMR-1
6	Core Skill (2000 Phase)	VMR-1
10	Mission Skill (3000 Phase)	VMR-1
8	Core Plus (3000 Phase)	VMR-1

3.6.3 Refresher POI

VMR-1 HH-46E CREW CHIEF Refresher POI		
Weeks	**Phase of Instruction**	**Unit**
1	SAR Ground Training	VMR-1
3	Core Skill (2000 Phase)	VMR-1
8	Mission Skill (3000 Phase)	VMR-1
6	Core Plus (3000 Phase)	VMR-1

3.7 SYLLABUS NOTES

3.7.1 Environmental Conditions Matrix

Environmental Conditions	
Code	**Meaning**
D	Shall be flown during hours of daylight: (by exception - there is no use of a symbol)
N	Shall be flown during hours of darkness, may be aided or unaided
N*	Shall be flown during hours of darkness must be flown unaided
(N*)	May be flown during hours of darkness – If flown during hours of darkness must be flown unaided
(N)	May be flown during darkness – If flown during hours of darkness; may be flown aided or unaided
NS	Shall be flown during hours of darkness – Mandatory use of Night Vision Devices
(NS)	May be flown during darkness – If flown during hours of darkness; must be flown with Night Vision Devices
Note – If the event is to be flown in the simulator the Simulator Instructor shall set the desired environmental conditions for the event.	

3.7.2 Device Matrix

DEVICE (Aviation Flying)	
Symbol	**Meaning**
A	Flown in Aircraft
A/S	Aircraft preferred may be flown in Simulator
S	Flown in Simulator
S/A	Simulator preferred may be flown in Aircraft

3.7.3 Program of Instruction Matrix

PROGRAM OF INSTRUCTION MATRIX			
Program of Instruction (POI)	**Symbol**	**Aviation Flying**	**Aviation Ground**
Basic	**B**	Initial MOS/Skill Training	Initial MOS Training
Refresher	**R**	DIFDEN to DIFOPS in same T/M/S	Return to community from non (MOS/Skill) associated tour
Maintain	**M**	All individuals who have attained CSP/MSP/CPP by initial POI assignment are re-assigned to the M POI to maintain proficiency.	

3.7.3 Event Terms

EVENT TERMS	
TERM	**DESCRIPTION**
Discuss	An explanation of systems, procedures, or maneuvers during the brief, in flight, or post flight. Student is responsible for knowledge of procedures.
Demonstrate	The description and performance of a particular maneuver/event by the instructor, observed by the PUI/student. The PUI/student is responsible for knowledge of the procedures prior to the demonstration of a required maneuver/student.
Introduce	The instructor may demonstrate a procedure or maneuver to a student, or may coach the PUI through the maneuver without demonstration. The PUI performs the procedures or maneuver with coaching as necessary. The PUI is responsible for knowledge of the procedures.
Practice	The performance of a maneuver or procedure by the PUI/student that may have been previously introduced in order to attain a specified level of performance.
Review	Demonstrated proficiency of a maneuver by the PUI/student.
Evaluate	Any flight designed to evaluate aircrew standardization that does not fit another category such as SARCK, HACCK, H2PCK, etc.
E-Coded	This term means that documentation (ATF) is required each time the event is logged. Requires evaluation by a certified standardization instructor (NATOPS I, WTI, INST Evaluator etc.)

3.7.5 Requirements For SAR Crew Chief Designation

3.7.5.1 Complete all required academic lecture for the 2000 and 3000 levels of the syllabus.

3.7.5.2 Complete SAR Closed Book Examination, NATOPS Open and Closed Book Exams, and SAR Fitness Test.

3.7.5.3 T&R codes complete through the 3000 level syllabus.

3.7.5.3 Personnel may be designated as Day SAR Crew Chief at the discretion of the Commanding Officer once SAR T&R codes complete through SAR-3109. Personnel may be designated as HH-46E non-SAR Crew Chief once T&R codes complete through AT-2600 and a current NATOPS and CRM Evaluation. An HH-46E non-SAR Crew Chief may participate in all non-SAR flights and missions.

3.8 CORE SKILL INTRODUCTION FRS ACADEMIC PHASE (0000 Phase). There are no 0000 Phase events in the HH-46E T&R manual. The FRS Academic Phase is included in the CH-46E T&R manual

3.8.1 The following courses are required prior to the start of this T&R syllabus.

COURSE/PHASE	ACTIVITY
Naval Aircrew Candidate School	NAS Pensacola, FL
CH-46E Crew Chief Course	HMMT-164
Rappel Indoctrination Course*	HSC-3

*Completion of the Rappel Indoctrination Course is only required to make Rappel Crew Chief Instructors.

3.8.2 The Squadron training listed below is required prior to the first flight.

NATOPS Flight Manual and NATOPS Pocket Checklist
Search and Rescue (SAR) Publications
Safety Publications
Squadron Standard Operating Procedures (SOPs)
Inspection, Utilization, and Limitations of Personal Aviation Survival Equipment
Inspection, Utilization, and Limitations of SAR Equipment
Inspection, Utilization, and Limitations of SAR Medical Equipment
Hand and Arm Signals
CPR Certification
Search and Rescue Techniques
Fire Bucket (Bambi Bucket) Operations Manual
Night Vision Device Ground Training
Ordnance Safety

3.9 CORE SKILL INTRODUCTION PHASE (1000). There are no 1000 Phase events in the HH-46E T&R manual. Refer to the CH-46E T&R Manual for the 1000 Phase.

3.10 CORE SKILL INTRODUCTION STAGES (1000). There are no 1000 Stage events in the HH-46E T&R manual. Refer to the CH-46E T&R manual for the 1000 Phase.

3.11 CORE SKILL PHASE (2000)

3.11.1 General. Core Skill Phase in the HH-46E provides the Crew Chiefs with an opportunity to become familiar with the HH-46E. At the completion of the 2000 phase events the Crew Chiefs should be comfortable with the aircraft and local course rules and prepared to learn the mission requirements. All initial flights shall be flown with a designated NATOPS/Assistant NATOPS Instructor unless currently NATOPS Qualified in a different model of the H-46. Personnel will complete the appropriate NAMTRAGRUDET and NATOPS ground school syllabus prior to commencing the flight training syllabus.

3.12 CORE SKILL STAGES (2000)

STAGE	EVENTS
3.12.1	Academics (ACAD)
3.12.2	Familiarization (FAM)
3.12.3	Confined Area Landings (CAL)
3.12.3	Navigation (NAV)
3.12.5	Night Systems (NS)
3.12.6	Aerial Fire Fighting (FF)
3.12.7	Aerial Transport (AT)

3.12.1 ACADEMICS (ACAD)

3.12.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each RS. A summary of academic classes that is required for the Core Skill Phase (2000) are listed below with their corresponding T&R code.

3.12.1.2 General. The Academic syllabus is designed to ensure RS are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training (2000-6000) there are corresponding stages, each stage has a required academic syllabus that must

be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	CORE SKILLS PHASE (2000)
ACAD-2000	COMMAND MISSION
ACAD-2001	CREW RESPONSIBILITIES CLASS
ACAD-2002	FLIGHT EQUIPMENT AND SAFETY PROCEDURES
ACAD-2003	EGRESS AND EMERGENCY PROCEDURES*
ACAD-2004	CONFINED AREA LANDINGS
ACAD-2005	SAR AND MEDICAL GEAR FAMILIARIZATION
ACAD-2008	NIGHT SYSTEMS REVIEW
ACAD-2009	PRINCIPLES OF FIRE FIGHTING*
ACAD-2010	PASSENGER AND MEDICAL TRANSPORTS*

*Denotes annual training requirement

3.12.2 Familiarization (FAM)

3.12.2.1 Purpose. Become familiar with aircraft flight characteristics, limitations, and emergency procedures; develop proficiency in all maneuvers contained in the familiarization stage.

3.12.2.2 General. These flights may be flown on any appropriate flight of the pilot syllabus. Initial syllabus training flights require an ATF.

3.12.2.3 Crew Requirements. HAC, H2P, BCCI/SCCI/ANI, CCUI

3.12.2.3 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes.

FAM-2103 1.5 365 B,R,M D A 1 HH-46E

Goal. Conduct an area and aircraft familiarization. Introduce HH-36 emergency procedures and characteristics. Discuss CRM.

Requirement

Brief/Discuss

- Familiarization maneuvers
- Look area map study
- Use of ICS
- Standard Terminology
- Interaction with pilots
- HH-46E nomenclature
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Look-out doctrine

Introduce/Demonstrate

- Preflight/Postflight procedures
- Equipment inventory and inspection
- Operation of communication equipment
- Crew comfort levels
- Depth Perception
- Taxiing/directing procedures
- Look-out doctrine
- Hot fuel procedures
- Daily and Turn-Around Inspections

Performance Standard

CCUI will act in the capacity of the Crew Chief and shall become familiar with the local operating areas, the HH-46E and exhibit a basic understanding of CC duties to include look-out doctrine. The CCUI shall accompany the CC during the Daily and Turn-Around Inspection.

Prerequisite. ACAD-2000,2001,2002

FAM-2104 1.5 90 B,R,M D E A 1 HH-46E

Goal. Conduct emergency procedure familiarization and review area familiarization.

Requirement

Brief/Discuss

- HH-46E nomenclature
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Ground and in-flight emergencies
- Ditching and Egress procedures
- Take-off and landing emergencies
- Precautionary landings
- Emergency landings
- Autorotation

Introduce/Demonstrate

- Preflight/Postflight procedures to include equipment inventory and inspection
- Ground and in-flight emergencies
- Ditching and Egress procedures
- Daily and Turn-Around Inspections

Performance Standard

CCUI, while acting in the capacity of the CC, shall demonstrate knowledge of aircraft systems, perform basic FAM maneuvers, and be able to satisfactorily perform emergency procedures per NATOPS manual.

Prerequisite. FAM-2103, ACAD-2003

3.12.3 Confined Area Landing (CAL)

3.12.3.1 Purpose. To familiarize the Crew Chiefs with local area CALs, practice CAL landings in the HH-46E aircraft and develop crew coordination during confined area operations.

3.12.3.2 General. These flights may be flown on any flight of the pilot CAL stage. Initial syllabus training flights require an ATF.

3.12.3.3 Crew Requirements. HAC, H2P, BCCI/SCCI/ANI, CCUI

3.12.3.3 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes.

CAL-2200 1.5 45 B,R,M D A 1 HH-46E

Goal. Conduct day CALs.

Requirement

Brief/Discuss

- HH-46E nomenclature to include specific blade clearance lengths and measurements
- CAL zone evaluation

Crew coordination and responsibilities to include obstacle avoidance lookout responsibilities

Demonstrate/Introduce

HH-46E nomenclature to include specific blade clearance lengths and measurements
CAL zone selection and evaluation
Crew coordination and responsibilities
Standard voice communications and lost ICS procedures
Emergency procedures and departure routes

Performance Standard

CCUI will act in the capacity of the Crew Chief and demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings.

Prerequisite. FAM-2103, 2104, ACAD-2004

3.12.3 Navigation (NAV)

3.12.3.1 Purpose. To familiarize the CCUI with the location and landing procedures for hospitals in the area.

3.12.3.2 General. These flights may be flown on any flight of the pilot NAV stage. Initial syllabus training flights require an ATF.

3.12.3.3 Crew Requirements. HAC, H2P, BCCI/SCCI/ANI, CCUI

3.12.3.3 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

NAV-2300	1.5	365	B,R,M	D	A	1	HH-46E

Goal. Familiarize the CCUI with navigation to and from local area hospitals with landing procedures involved.

Requirement

Brief/Discuss

Navigational procedures to include use of GPS and aeronautical charts
GPS and dead reckoning navigation
Local area hospitals and their medical capabilities/locations
Local medical protocols and Flight Surgeon recall procedures for hospital-to-hospital transfers
Cabin preparation and rigging of the litters
Use of radios in relaying patient information to the destination medical facility and use of the aircraft utility electrical power supply

Demonstrate/Introduce

Identify local area hospital landing zones
Use of aircraft electrical system and radio contact receiving medical facility

Performance Standard

CCUI will act in the capacity of the Crew Chief and shall successfully navigate the pilots to local area hospitals and should demonstrate the ability to utilize the radio and/or the ICS to relay patient information to the pilots or emergency facilities.

Prerequisite. CAL-2200, ACAD-2005

NAV-2301 2.5 * B,R D A 1 HH-46E

Goal. Familiarize the CCUI with navigation to and from hospitals located outside the local area with landing procedures involved.

Requirement

Brief/Discuss

- Navigational procedures to include use of GPS and aeronautical Charts
- GPS and dead reckoning navigation
- Distant area hospitals and their medical capabilities/locations
- Local medical protocols and Flight Surgeon recall procedures for hospital-to-hospital transfers
- Cabin preparation and rigging of the litters
- Use of radios in relaying patient information to the destination medical facility and use of the aircraft utility electrical power supply

Demonstrate/Introduce

- Identify distant area hospital landing zones
- Cabin preparation for transferring patients
- Use aircraft electrical system and radio to contact receiving facility

Performance Standard

CCUI will act in the capacity of the Crew Chief and shall successfully navigate the pilots to hospitals outside the local area. CCUI shall safely prepare the cabin for litter carriage using the stanchions and demonstrate knowledge in assisting the RS/SMT with en route treatment of patients.

Prerequisite. CAL-2200, ACAD-2005

3.12.5 Night Systems (NS)

3.12.5.1 Purpose. Ensure the CCUI is proficient in Night Systems use on the HH-46E during HHL and LLL.

3.12.5.2 General. FAM CAL and NAV flights are required before starting NS-2300. Initial syllabus training flights utilizing NVDs shall be flown with a Night System Instructor (NSI) or Night System SAR Instructor (NSSI) and require an ATF.

3.12.5.3 Crew Requirements. HAC, H2P, NSI/NSSI, ANI, NSQ, CCUI

3.12.5.3 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

NS-2400 1.5 * B,R NS A 1 HH-46E

Goal. Familiarize the CCUI with HH-46E and local area while using NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement

Brief/Discuss

- CRM
- Crew comfort levels
- Aircraft lighting
- Use and limitations of NVDs
- NVD tube and battery failure
- Scanning techniques

Obstacle clearance
Emergency procedures

Demonstrate/Introduce
Wear and use of NVDs during low work and touch and go landings

Performance Standard
CCUI shall be able to safely perform familiarization maneuvers while on NVGs per NFM, and MAWTS-1 NVG Manual.

Prerequisite. CAL-2200, NAV-2300, NAV-2301, ACAD-2008

NS-2401 1.5 * B,R NS A 1 HH-46E

Goal. Develop proficiency in conducting navigation and CALs while utilizing NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement

Brief/Discuss
Obstacle clearance
Terrain suitability
Rate of closure
Loss of depth perception
Lookout doctrine
NVD scan techniques
Vertigo
Emergency procedures

Demonstrate/Introduce
Low level navigation
Navigation from a CAL site to a hospital landing pad
Obstacles along route of flight
CAL landings

Performance Standard
CCUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings while wearing NVDs.

Prerequisite. NS-2400

NS-2402 1.5 * B,R NS A 1 HH-46E

Goal. Familiarize the CCUI in navigation in the local area while using NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement.

Brief/Discuss
Lookout Doctrine
CRM
Crew comfort levels
Aircraft lighting
Use and limitations of NVDs
NVD tube and battery failure
Location and lighting of approved landing zones
Scanning techniques
Emergency procedures

Demonstrate/Introduce
Wear and use of NVDs during low work and touch and go landings

Performance Standard

CCUI shall be able to safely assist the pilots in navigation routes, maintain good lookout doctrine and remain oriented on route within 500 meters.

Prerequisite. NS-2401

NS-2403	1.5	45	B,R,M	NS	A	1	HH-46E

Goal. Ensure CCUI is proficient in navigation and CAL landings while using NVDs. This flight may be flown during HLL or LLL conditions.

Requirement.

Brief/Discuss

- Obstacle clearance
- Terrain suitability
- Rate of closure
- Loss of depth perception
- Lookout doctrine
- NVD scan techniques
- Vertigo
- Emergency procedures

Demonstrate/Introduce

- Low level navigation
- Navigation from a CAL site to a hospital landing pad
- Obstacles along route of flight
- CAL landings

Performance Standard

CCUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings while wearing NVDs and be able to assist with navigation when asked by the pilots in HLL/LLL conditions.

Prerequisite. NS-2402

3.12.6 Aerial Fire Fighting (FF)

3.12.6.1 Purpose. Develop the ability to conduct water bucket operations.

3.12.6.2 General. These flights may be flown on any flight of the pilot FF stage. Initial syllabus training flights shall be flown with a SAR Crew Chief Instructor (CCI) and require an ATF.

3.12.6.3 Crew Requirements. HAC, H2P, BCCI/SCCI/ANI, CC/RS/MT, CCUI

3.12.6.3 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes.

FF-2500	1.5	365	B,R,M	D	A	1	HH-46E

Goal. Develop the ability to conduct Bambi bucket operations.

Requirement

Brief/Discuss

- Bambi Bucket and external cargo hook limitations.
- Preflight and post flight procedures.
- Connecting and disconnecting procedures.
- Water bucket pickup and release procedures
- Crew Coordination
- ICS voice procedures
- Lost communications hand signals
- Emergency procedures

Maximum HOGE weight for pickup and delivery and flight envelopes with water buckets
Water bucket delivery techniques

Demonstrate/Introduce

Water Bucket operations.

Cargo hook preflight inspections and operation

Performance Standard

CCUI, while acting in the capacity of the Crew Chief, shall be able to safely connect the Bambi Bucket and complete a minimum of 5 pickups and water drops. The CCUI shall deliver water to a simulated fire within 5 meters of intended point of impact.

Prerequisite. FAM-2103, CAL-2200, ACAD-2009

3.12.7 Aerial Transport (AT)

3.12.7.1 Purpose. Develop the ability to transfer patients and passengers on non-SAR related missions.

3.12.7.2 General. These flights may be flown on any flight of the pilot AT or NAV stage. Initial syllabus training flights require an ATF.

3.12.7.3 Crew Requirements. HAC, H2P, BCCI/SCCI/ANI, RS, MT, CCUI

3.12.7.3 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes.

AT-2600	1.5	365	B,R,M	(NS)	A	1	HH-46E

Goal. Review procedures for patient loading, passenger briefing and safety procedures.

Requirement

Brief/Discuss

Passenger manifesting and safety briefing
Patient loading procedures
Cargo loading and unloading procedures
Locations and uses of onboard medical assets
Proper hospital to hospital patient turn over procedures
SAR Reports and necessary medical paperwork

Demonstrate/Introduce.

Passenger manifesting and safety briefing
Patient loading procedures
Cargo loading and unloading procedures
Locations and uses of onboard medical assets
Proper patient care procedures en route to medical facilities
Proper hospital to hospital patient turn over procedures
SAR Reports and necessary medical paperwork
Standard terminology for patient updates

Performance Standard

CCUI will be able to properly assist the Rescue Swimmer/Medical Technician with embarking and disembarking patients, passengers and cargo in a simulated Hospital to Hospital transfer. CCUI will demonstrate knowledge on the location of all the medical equipment and assist with patient assessments. Upon completion of this flight, CCUI will demonstrate the ability to properly fill out and file all necessary paperwork and reports.

Prerequisite. FAM-2103, CAL-2200, NAV-2300, NAV-2301, NS-2403, ACAD-2010

3.13 MISSION SKILLS PHASE (3000)

3.13.1 General. The Mission Skill Phase is designed to familiarize the CCUI with the unique missions and challenges associated with VMR-1 and the HH-46E.

3.14 MISSION SKILL STAGES (3000)

T&R CODE	EVENT
3.13.1	Academics (ACAD)
3.13.2	Search and Rescue (SAR)
3.13.3	Night Search and Rescue (NSAR)

3.14.1 Academics (ACAD)

3.14.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each CC. A summary of academic classes that is required for the Mission Skill Phase (3000) are listed below with their corresponding T&R code.

3.14.1.2 General. The Academic syllabus is designed to ensure CC are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS MISSION SKILLS PHASE (3000)
ACAD-3004	LEVEL A MEDICAL KIT*
ACAD-3005	FIRST AID 1*
ACAD-3006	FIRST AID 2*
ACAD-3007	FIRST AID 3*
ACAD-3008	FIRST AID 3*
ACAD-3009	SAR PUBLICATIONS / INSTRUCTIONS / REPORTS*
ACAD-3010	SAR PROCEDURES*
ACAD-3011	RESCUE DEVICES*
ACAD-3012	RECUE HAND SIGNALS*
ACAD-3013	SURVIVOR MARKER / LOCATOR DEVICES*
ACAD-3014	AIRCREW SURVIVAL EQUIPMENT*
ACAD-3015	MARITIME OBJECT RECOVERY*
ACAD-3016	OVERLAND DIRECT DEPLOYMENT*
ACAD-3017	INANIMATE OBJECT RECOVERY*
ACAD-3018	RESCUE PERSONNEL OCCUPATIONAL HAZARDS*
ACAD-3019	SAR ORGANIZATION*
ACAD-3020	SAR PLANNING*
ACAD-3021	SAR COMMUNICATIONS*
ACAD-3022	PRC-139 SWIMMER RADIO*
ACAD-3023	ANNUAL CPR PROCIFICIENCY*
ACAD-3028	BELAY PROCEDURES*
ACAD-3029	RAPPEL PROCEDURES*
ACAD-3030	HIRA SHORT HAUL EMERGENCY PROCEDURES*
ACAD-3033	PATIENT MONITORING EQUIPMENT*
ACAD-3045	COMPRESSED AIR INJURIES*
ACAD-3050	HEAT AND COLD RELATED INJURIES*
ACAD-3051	PROTOCOL REVIEWS*
ACAD-3052	OVERLAND HOISTING PROCEDURES*
ACAD-3053	MARITIME HOISTING PROCEDURES*
ACAD-3054	VESSEL HOISTING PROCEDURES*

*Denotes annual training requirement

3.14.2 Search and Rescue (SAR)

3.14.2.1 Purpose. Develop proficiency in Day Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

3.14.2.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

Crew Chiefs who have not completed the appropriate SAR syllabus shall not be assigned to SAR duty (day or night) until completion of the appropriate syllabus. Local commands are granted the authority to designate personnel as Day SAR Crew Chief qualified upon completion of the Day Search and Rescue syllabus.

CCUIs may begin the night SAR syllabus training prior to completion of the entire day SAR syllabus. Prior to commencement of a night SAR syllabus flight; the corresponding day SAR syllabus flight shall be completed.

CCUIs shall only receive training from designated SAR Crew Chief Instructors (CCI) during the Day SAR flights and shall only receive training from designated Night System SAR Instructors (NSSI) during the Night SAR events.

3.14.2.3 Crew Requirement. HAC, H2P, SCCI, MT, RS, CCUI

3.14.2.3 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes.

SAR-3100 1.5 365 B,R D A 1 HH-46E

Goal. Conduct day search patterns and overland search procedures.

Requirement

Brief/Discuss

- Standard Voice Communications
- Day SAR procedures
- Search Patterns
- Overland search procedures
- Remote Hover Coupler Station
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Probability of detection
- Use of the SAR TACAID

Introduce/Demonstrate

- Search Patterns
- Remote Hoover Coupler Station
- Manual and Coupled approaches

Performance Standard

CCUI shall assist the pilots in conducting a search pattern consisting of a minimum of 5 checkpoints, and maintain within 500 meters of course line. CCUI shall provide calls, using standard terminology, to the pilot to conduct a hover over a simulated survivor while maintaining within 5 feet of the hover point.

Prerequisite. 2000 Phase complete, ACAD-3004-3014

SAR-3101 1.5 * B D A 1 HH-46E

Goal. Conduct day overland hoisting operations utilizing the Rescue Strop, Forest Penetrator, Rescue Basket, Stokes Litter, MEDEVAC Litter, and Hoisting Vest (if available).

Requirement

Brief/Discuss

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure
- Use of quick splice and Chicago grip
- Review hand and arm and Aldis lamp signals
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment and safety checks

Introduce/Demonstrate

- Overland hoisting procedures per the NTTP 3-50.1
- Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
- Utilization of SAR equipment
- Utilization of the Quick Splice and Chicago Grip
- Hoisting operations while acting in the capacity of the Crew Chief

Performance Standard

CCUI shall rig and perform 7 hoisting evolutions acting in the capacity of the Crew Chief while maintaining a hover within 5 feet of the hover point. CCUI shall satisfactorily demonstrate proficiency by successfully conducting a minimum of 1 hoisting evolution for each piece of rescue equipment.

Prerequisite. 2000 Phase complete, ACAD-3004 through ACAD-3014, ACAD-3052

SAR-3102 1.5 30 B,R,M D A 1 HH-46E

Goal. Conduct day overland live hoisting operations utilizing the belay line.

Requirement

Brief/Discuss

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure
- Use of quick splice and Chicago grip
- Review hand and arm and Aldis lamp signals
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment and safety checks
- Rigging and limitations of the belay line
- Short haul and in flight recovery procedures

Introduce/Demonstrate.

- Overland hoisting procedures per the NTTP 3-50.1
- Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
- Utilization of SAR equipment
- Utilization of the Quick Splice and Chicago Grip
- Live hoisting operations while acting in the capacity of the Crew Chief
- Short haul and in flight recovery procedures

Performance Standard

CCUI shall rig belay and perform a minimum of one deployment of a Rescue Swimmer/Medical Technician. CCUI shall perform a minimum of one live recovery of each piece of rescue equipment utilizing the Rescue Swimmer/Medical Technician. CCUI shall also perform a minimum of one short haul and in flight recovery utilizing the Rescue Swimmer/Medical Technician.

Prerequisite. SAR-3101, ACAD-3016, ACAD-3028 through ACAD-3030

SAR-3103	2.0	365	B,R,M	D	A	1 HH-46E

Goal. Conduct day overland SAREX.

Requirement

Brief/Discuss

- Overland SAR procedures, to include search patterns and CAL selections and navigation
- Crewmember responsibilities and cabin preparations
- Crew coordination
- Communication procedures to include hand, arm and Aldis Lamp signals

Introduce/Demonstrate

- Cabin preparation and actions while en route to scene
- Overland SAR Procedures per the NTTP 3-50.1
- Conduct/assist in patient(s) assessment, treatment and packaging
- Loading and securing patient(s) inside aircraft
- Provide/assist in patient care while en route to a Medical Treatment Facility
- Unloading and transferring patient(s)
- Familiarization with medical equipment on board

Performance Standard

CCUI shall act in the capacity of the Crew Chief during a simulated Search and Rescue Exercise. CCUI shall safely perform a minimum of one hoisting evolution of a simulated survivor and assist the Rescue Swimmer and Medical Technician with patient loading and securing. CCUI shall also provide assistance to the Rescue Swimmer and Medical Technician with patient care and assist the pilots with Navigation.

Prerequisite. SAR-3100, SAR-3102, ACAD-3018 through ACAD-3023, ACAD-3031 through ACAD-3033, ACAD-3045, ACAD-3050

SAR-3104	1.5	60	B,R,M	D	A	1 HH-46E

Goal. Conduct day over water search and Doppler approaches.

Requirement

Brief/Discuss

- Standard Voice Communications
- Over water SAR procedures
- Search Patterns
- Remote Hoover Coupler Station
- Doppler capabilities and procedures
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Flare capabilities, arming/disarming and deployment techniques
- Ordnance hazards and safety precautions

Introduce/Demonstrate

- Flare deployment

Standard Voice Communications
Remote Hoover Coupler Station
Manual and Coupled approaches
Over water search techniques

Performance Standard

CCUI shall conduct a minimum of 1 verbal control for manual approaches and 1 verbal control for coupled approaches while maintain within 5 feet of hover point. RSUI will safely conduct a minimum of 5 simulated hoisting evolutions utilizing any piece of SAR equipment.

Prerequisite. SAR-3100, ACAD-3015

Ordnance. 1 MK-25, 1 MK-58

SAR-3105 1.5 * B D A 1 HH-46E

Goal. Conduct day Rescue Swimmer deployment and recovery with rescue strop and basket.

Requirement

Brief/Discuss

Impact of sea state and weather concerning swimmer deployment
Rescue Swimmer deployment and recovery procedures
Short haul purpose and procedures
Normal and emergency hoisting procedures
ICS communications and standard hand and arm signals
Ordnance hazards and safety

Introduce/Demonstrate

Rescue swimmer deployments at 10/10 and 15/0
Day single recovery utilizing the rescue strop and rescue basket with simulated a survivor
Day dual recovery utilizing the rescue strop and rescue basket with simulated a survivor
Short haul to simulated survivor

Performance Standard

CCUI shall safely conduct two day deployments from 10/10 and 15/0 and recover via rescue strop. CCUI shall safely perform a minimum of 3 deployments and recoveries of the rescue strop and rescue basket with a short haul on 1 of the recoveries.

Prerequisite. SAR-3102, SAR-3104, ACAD-3015, ACAD-3024 through ACAD-3027, ACAD-3053

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

SAR-3106 1.5 365 B,R,M D A 1 HH-46E

Goal. Conduct day Rescue Swimmer deployment and recovery with the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

Impact of sea state and weather concerning swimmer deployment
Rescue Swimmer deployment and recovery procedures
The use of the trail line assembly
Normal and emergency hoisting procedures
ICS communications and standard hand and arm signals
Ordnance hazards and safety
Standard procedures regarding litters in the water

Introduce/Demonstrate

Rescue swimmer deployments at 10/10 and 15/0
Day deployment and recovery utilizing the Stokes litter with a simulated survivor
Day deployment and recovery utilizing the MEDEVAC litter with a simulated survivor

Performance Standard

CCUI shall safely conduct a minimum of 2 day deployments at either 10/10 or 15/0 and safely deploy and recover both the Stokes litter and the MEDEVAC litter.

Prerequisite. SAR-3105

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

SAR-3107 1.5 * B D A 1 HH-46E

Goal. Conduct day SAR boat hoisting utilizing the rescue strop, rescue basket and hoisting vest.

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat
Rescue personnel and equipment hook-up procedures

Introduce/Demonstrate

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the rescue strop and rescue basket

Performance Standard

CCUI shall conduct a minimum of 2 dry runs prior to hoisting the Rescue Swimmer/Medical Technician to the deck while acting in the capacity of the Crew Chief. CCUI shall safely conduct 6 hoisting evolutions utilizing the rescue strop, rescue basket and hoisting vest (if applicable); a minimum of 2 times each.

Prerequisite. SAR-3105, ACAD-3054

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

SAR-3108 1.5 365 B,R,M D A 1 HH-46E

Goal. Conduct day SAR boat hoisting utilizing the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat
Rescue personnel and equipment hook-up procedures
Use of the trail line assembly

Introduce/Demonstrate

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat

Hoisting procedures utilizing the Stokes and MEDEVAC litters with the trail line assembly

Performance Standard

The CCUI shall conduct a minimum of 3 deployments and recoveries utilizing the Stokes litter and the MEDEVAC litter; a minimum of 2 times each while acting in the capacity of the Crew Chief.

Prerequisite. SAR-3107

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required

SAR-3109 2.0 365 B,R,M D A 1 HH-46E

Goal. Conduct day over water SAREX.

Requirement

Brief/Discuss

Over water SAR procedures, to include search patterns, sea conditions and patient locations

Crewmember responsibilities and cabin preparations

Communication procedures

Introduce/Demonstrate

Cabin preparation and actions while enroute to scene

Conduct scene survey and survivor marking

Provide/assist in patient care while enroute to a Medical Treatment Facility

Review medical treatment procedures and protocols

Familiarization with medical equipment on board

Unloading and transferring patient(s)

Performance Standard

CCUI shall act in the capacity of the Crew Chief during a simulated over water Search and Rescue Exercise. CCUI shall safely deploy the Rescue Swimmer from the aircraft and demonstrate the ability to properly provide proper rescue devices. CCUI shall also properly recover the Rescue Swimmer and assist in providing care to the simulated survivors until arrival at a Medical Treatment Facility.

Prerequisite. SAR-3108, ACAD-3051

Ordnance. 1 MK-25, 1 MK-58

External Support. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required

3.14.3 Night Search and Rescue (NSAR)

3.14.3.1 Purpose. Develop proficiency in Night Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

3.14.3.2 General. A NATOPS Instructor will monitor the trainee’s progress during the flight training syllabus.

CCUIs may begin the night SAR syllabus training prior to completion of the entire day SAR syllabus. Prior to commencement of the NSAR syllabus flight; the corresponding SAR syllabus flight shall be completed.

All Initial training flights for NSAR shall be flown with a Night System SAR Instructor (NSSI). The intent of this syllabus is to develop the skills critical to the Search and Rescue mission versus NVD proficiency. NVD proficiency/currency should be considered when conducting NVD SAR flights. When complete with the night SAR training syllabus, aircrew should have the ability to conduct night SAR missions under various atmospheric conditions.

3.14.3.3 Crew Requirement. HAC, H2P, NSSI, CCUI, RS/MT

3.14.3.3 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes. The following prerequisites are required prior to commencing the Night SAR flights:

NSAR-3200 1.5 365 B,R NS A 1 HH-46E

Goal. Conduct night search patterns and overland search procedures.

Requirement

Brief/Discuss

- Standard Voice Communications
- Night SAR procedures
- Search Patterns
- Remote Hover Coupler Station
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Probability of detection
- Aircraft lighting to include the Night Sun and Aldis lamp

Introduce/Demonstrate

- Search Patterns
- Remote Hover Coupler Station
- Manual and Coupled approaches
- Night Sun/Aldis lamp limitations and procedures

Performance Standard

CCUI shall assist the pilots in conducting a search pattern consisting of a minimum of 5 checkpoints, and maintain within 500 meters of course line. RSUI shall provide calls, using standard terminology, to the pilot to conduct a hover over a simulated survivor while maintaining within 5 feet of the hover point.

Prerequisite. SAR-3100

NSAR-3201 1.5 * B NS A 1 HH-46E

Goal. Conduct night overland hoisting operations utilizing the Rescue Strop, Forest Penetrator, Rescue Basket, Stokes Litter, MEDEVAC Litter, and Hoisting Vest (if available).

Requirement

Brief/Discuss

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure
- Use of quick splice and Chicago grip
- Review hand and arm and Aldis lamp signals with an emphasis on the night environment
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment to include chemlite placement and safety checks

Introduce/Demonstrate

Night overland hoisting procedures per the NTTP 3-50.1
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter with chemlites
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Hoisting operations while acting in the capacity of the Crew Chief

Performance Standard

CCUI shall rig and perform 7 hoisting evolutions acting in the capacity of the Crew Chief while maintaining a hover within 5 feet of the hover point. CCUI shall satisfactorily demonstrate proficiency by successfully conducting a minimum of 1 hoisting evolution for each piece of rescue equipment.

Prerequisite. SAR-3101

NSAR-3202 1.5 30 B,R,M NS A 1 HH-46E

Goal. Conduct night overland live hoisting operations utilizing the belay line.

Requirement

Brief/Discuss

Hoist capabilities and limitations
Emergency procedures and troubleshooting for hoist failure
Use of quick splice and Chicago grip
Review hand and arm and Aldis lamp signals
Rescue equipment functions, capabilities and limitations
Rigging of rescue equipment and safety checks
Rigging and limitations of the belay line
Short haul and in flight recovery procedures

Introduce/Demonstrate

Night overland hoisting procedures per the NTTP 3-50.1
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter with chemlites
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Live hoisting operations while acting in the capacity of the Crew Chief
Short haul and in flight recovery procedures

Performance Standard

CCUI shall rig belay and perform a minimum of one deployment of a Rescue Swimmer/Medical Technician. CCUI shall perform a minimum of one live recovery of each piece of rescue equipment utilizing the Rescue Swimmer/Medical Technician. CCUI shall also perform a minimum of one short haul and in flight recovery utilizing the Rescue Swimmer/Medical Technician.

Prerequisite. SAR-3102, NSAR-3201

NSAR-3203 2.0 365 B,R,M NS A 1 HH-46E

Goal. Conduct night overland SAREX.

Requirement

Brief/Discuss

Night overland SAR procedures, to include search patterns and CAL selections
Crewmember responsibilities and cabin preparations

Cabin lighting configurations
Crew coordination and responsibilities
Communication procedures

Introduce/Demonstrate

Cabin preparation and actions while en route to scene
Conduct/assist in patient(s) assessment, treatment and packaging
Loading and securing patient(s) inside aircraft
Provide/assist in patient care while en route to a Medical Treatment Facility
Unloading and transferring patient(s)
Familiarization with medical equipment on board
Navigation and Medical Facilities capabilities

Performance Standard

CCUI shall act in the capacity of the Crew Chief during a simulated Search and Rescue Exercise. CCUI shall safely perform a minimum of one hoisting evolution of a simulated survivor and assist the Rescue Swimmer and Medical Technician with patient loading and securing. CCUI shall also provide assistance to the Rescue Swimmer and Medical Technician with patient care and assist the pilots with Navigation.

Prerequisite. SAR-3103, NSAR-3200, NSAR-3202

NSAR-3204 1.5 60 B,R,M NS A 1 HH-46E

Goal. Conduct night over water search and Doppler approaches.

Requirement

Brief/Discuss

Standard Voice Communications
Over water SAR procedures
Search Patterns
Remote Hover Coupler Station
Doppler capabilities and procedures
Vertigo
Manual and Coupled approaches
Survivor spotting and marking procedures in the night environment
Survival gear
Flare capabilities, arming/disarming and deployment techniques
Ordnance hazards and safety precautions

Introduce/Demonstrate

Flare deployment
Standard Voice Communications
Remote Hover Coupler Station
Manual and Coupled approaches
Over water search techniques

Performance Standard

CCUI shall conduct a minimum of 1 verbal control for manual approaches and 1 verbal control for coupled approaches while maintain within 5 feet of hover point. CCUI will safely conduct a minimum of 5 simulated hoisting evolutions utilizing any piece of SAR equipment.

Prerequisite. SAR-3104, NSAR-3200

Ordnance. 1 MK-25, 1 MK-58

NSAR-3205 1.5 * B NS A 1 HH-46E

Goal. Conduct night Rescue Swimmer deployment and recovery utilizing the rescue strop and basket.

Requirement

Brief/Discuss
- Impact of sea state and weather concerning swimmer deployment
- Rescue Swimmer deployment and recovery procedures
- Short haul purpose and procedures
- Normal and emergency hoisting procedures
- ICS communications and standard hand and arm signals
- Ordnance hazards and safety
- Cabin lighting configurations and Chemlite placement
- Equipment hazards in the night environment

Introduce/Demonstrate
- Rescue swimmer deployments via the rescue hoist
- Night deployment and recovery utilizing the rescue strop and rescue basket with simulated a survivor
- Night dual recovery utilizing the rescue strop and rescue basket with simulated a survivor
- Short haul to simulated survivor

Performance Standard

CCUI shall safely conduct two night deployments of the Rescue Swimmer and recover via rescue strop. CCUI shall safely perform a minimum of 3 deployments and recoveries of the rescue strop and rescue basket with a short haul on 1 of the recoveries.

Prerequisite. SAR-3105, NSAR-3204

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

NSAR-3206 1.5 365 B,R,M NS A 1 HH-46E

Goal. Conduct night Rescue Swimmer deployment and recovery utilizing the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss
- Impact of sea state and weather concerning swimmer deployment
- Rescue Swimmer deployment and recovery procedures
- The use of the trail line assembly
- Normal and emergency hoisting procedures
- ICS communications and standard hand and arm signals
- Ordnance hazards and safety
- Standard procedures regarding litters in the water
- Trail line and litter hazards in the night environment
- Cabin lighting configurations and Chemlite placement

Introduce/Demonstrate
- Rescue swimmer deployments via the rescue hoist
- Night deployment and recovery utilizing the Stokes litter with a simulated survivor
- Night deployment and recovery utilizing the MEDEVAC litter with a simulated survivor

Performance Standard

CCUI shall safely conduct a minimum of 2 night deployments of the Rescue Swimmer and safely deploy and recover both the Stokes litter and the MEDEVAC litter.

Prerequisite. SAR-3106, NSAR-3205

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

SAR-3207 1.5 * B NS A 1 HH-46E

Goal. Conduct night SAR boat hoisting utilizing the rescue strop, rescue basket and hoisting vest

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat in the night environment
Rescue personnel and equipment hook-up procedures
Chemlite placement and procedures

Introduce/Demonstrate

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the rescue strop and rescue basket

Performance Standard

CCUI shall conduct a minimum of 2 dry runs prior to hoisting the Rescue Swimmer/Medical Technician to the deck while acting in the capacity of the Crew Chief. CCUI shall safely conduct 6 hoisting evolutions utilizing the rescue strop, rescue basket and hoisting vest (if applicable); a minimum of 2 times each.

Prerequisite. SAR-3107, NSAR-3204

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

NSAR-3208 1.5 365 B,R,M NS A 1 HH-46E

Goal. Conduct NSAR boat hoisting utilizing the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat
Rescue personnel and equipment hook-up procedures
Use of the trail line assembly
Chemlite placement and procedures

Introduce/Demonstrate

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the Stokes and MEDEVAC litters with the trail line assembly

Performance Standard

The CCUI shall conduct a minimum of 3 deployments and recoveries utilizing the Stokes litter and the MEDEVAC litter; a minimum of 2 times each while acting in the capacity of the Crew Chief.

Prerequisite. SAR-3108, NSAR-3207

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal

rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

NSAR-3209 2.0 365 B,R,M NS A 1 HH-46E

Goal. Conduct night over water SAREX.

Requirement

Brief/Discuss

- Over water SAR procedures, to include search patterns, sea conditions and patient locations
- Crewmember responsibilities and cabin preparations
- Survivor marking procedures
- Communication procedures

Introduce/Demonstrate

- Cabin preparation and actions while en route to scene
- Conduct scene survey and survivor marking
- Conduct survivor(s) assessment, approaches/carries, escapes/releases, disentanglement and recovery
- Provide/assist in patient care while en route to a Medical Treatment Facility
- Cabin lighting configurations
- Review medical treatment procedures and protocols
- Familiarization with medical equipment on board
- Unloading and transferring patient(s)

Performance Standard

CCUI shall act in the capacity of the Crew Chief during a simulated over water Search and Rescue Exercise. CCUI shall safely deploy the Rescue Swimmer from the aircraft and demonstrate the ability to properly provide proper rescue devices. CCUI shall also properly recover the Rescue Swimmer and assist in providing care to the simulated survivors until arrival at a Medical Treatment Facility.

Prerequisite. SAR-3109, NSAR-3203, NSAR-3206, NSAR-3208

Ordnance. 1 MK-25, 1 MK-58

External Support. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

3.15 CORE PLUS PHASE (4000)

3.15.1 General. The Core Plus Mission Skill Phase is designed to ensure a small cadre of Crew Chiefs are properly trained and qualified in skill sets not used in the normal day to day operations.

3.16 CORE PLUS STAGES (4000)

STAGE	EVENTS
3.16.1	Academics (ACAD)
3.16.2	Day Rappel Aircrew Procedures (RAP)
3.16.3	Night Rappel Aircrew Procedures (NRAP)
3.16.4	Direct Deployment (DIR)
3.16.5	Over the Ramp Hoisting (ORH)
3.16.6	Carrier Qualification (CQ)

3.16.1 Academics (ACAD)

3.16.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each CC. A summary of academic classes that is required for Core Plus Mission Skill Phase (3000) are listed below with their corresponding T&R code.

3.16.1.2 General. The Academic syllabus is designed to ensure CCs are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	CORE PLUS PHASE (4000)
ACAD-4000	DAY RAPPEL AIRCREW PROCEDURES*
ACAD-4001	NIGHT RAPPEL AIRCREW PROCEDURES*
ACAD-4002	OVERLAND DIRECT DEPLOYMENT*
ACAD-4003	MARITIME DIRECT DEPLOYMENT*
ACAD-4004	OVER THE RAMP HOISTING*
ACAD-4005	FIELD CARRIER LANDING PRACTICE
ACAD-4006	CARRIER QUALIFICATION
ACAD-4007	FORMATION TACTICS

3.16.2 Rappel Aircrew Procedures (RAP)

3.16.2.1 Purpose. Develop the CC's knowledge and proficiency of day rappel procedures, equipment limitations, equipment set-up and usage, and safety checks.

3.16.2.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

CCs do not have to be a graduate of CNO approved Basic Rappel Indoctrination Course (D-050-2600) but it is highly recommended.

CCs who have not completed the appropriate RAP syllabus should not perform day rappelling. CCUI may start the Day Rappel syllabus prior to completion of the 3000 phase.

A rappel instructor constitutes as any Crew Chief Instructor who has completed the CNO approved Basic Rappel Indoctrination Course, the RAP and NRAP stages of the T&R and is designated a Rappel Crew Chief Instructor (Rappel-CCI) by the Commanding Officer.

Upon completion of this stage of training, CCs should be able to correctly perform all required equipment set-ups and safely deploy HIRA qualified crewmembers from the aircraft during the day environment.

3.16.2.3 Crew Requirement. HAC, H2P, Rappel-CCI, CCUI, HIRA

3.16.2.8 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes

RAP-4100 1.0 * B D A 1 HH-46E

Goal. Introduce day SAR rappelling and short haul operations

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Hoisting vest

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups

Proper rappelling techniques and procedures

Single, double and modified lock-offs

Standard and bagless rappelling

Short haul procedures and use of hoisting vest

Performance Standard

The CCUI shall observe/conduct a minimum of 1 bagless rappel descent and 3 standard rappel descents with 1 ending in a short haul of a simulated survivor in the hoisting vest while acting in the capacity of the Crew chief.

Prerequisite. SAR-3102, ACAD-4000

RAP-4101 1.0 90 B,R,M D A 1 HH-46E

Goal. Conduct day SAR rappelling and short haul operations.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Rappelling with equipment
Short haul procedures with a litter

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups
Proper rappelling techniques and procedures
Single, double and modified lock-offs
Rappelling with equipment
Short haul procedures with a litter

Performance Standard

The CCUI shall observe/conduct a minimum of 3 rappels descents with 2 ending in a short haul of a simulated survivor in a litter while acting in the capacity of the crew chief.

Prerequisite. RAP-4100

RAP-4102 1.0 * B,R D E A 1 HH-46E

Goal. Conduct a day HIRA evaluation.

Requirement

Brief/Discuss

Safety considerations
Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals
Equipment inventory, preflight inspection and set-up
Short haul procedures and lock off techniques
Postflight inspections of rappel equipment

Introduce/Practice/Review

Rappel rope and belay line rigging and set-up
Standard and bagless rappel descents with equipment
Short haul and lock-off procedures

Performance Standard

The CCUI should properly setup the rappel and belay line and conduct safety checks without assistance. The CCUI shall conduct 2 rappel descents with equipment that end in the short haul of a simulated survivor in a litter.

Prerequisite. RAP-4101

3.16.3 Night Rappel Aircrew Procedures (NRAP)

3.16.3.1 Purpose. Develop the CCs knowledge and proficiency of night rappel procedures, equipment limitations, equipment set-up and usage, and safety checks.

3.16.3.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

CCs must be complete with the RAP stage prior to commencing the NRAP stage. CCs who have not completed the appropriate NRAP syllabus should not perform night rappelling.

A rappel instructor constitutes as any Crew Chief Instructor who has completed the CNO approved Basic Rappel Indoctrination Course, the RAP and NRAP stages of the T&R and is designated a Rappel Crew Chief Instructor (Rappel-CCI) by the Commanding Officer.

Upon completion of this stage of training, CCs should be able to correctly perform all required equipment set-ups and safely deploy HIRA qualified crewmembers from the aircraft during the night environment

3.16.3.3 Crew Requirement. HAC, H2P, RAPPEL-CCI, CCUI, HIRA

3.16.3.3 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

NRAP-4200 1.0 * B NS A 1 HH-46E

Goal. Introduce night SAR rappelling and short haul operations.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Hoisting vest

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups

Proper rappelling techniques and procedures

Single, double and modified lock-offs

Standard and bagless rappelling

Short haul procedures and use of hoisting vest

Performance Standard

The CCUI shall observe/conduct a minimum of 1 bagless rappel descent and 3 standard rappel descents with 1 ending in a short haul of a simulated survivor in the hoisting vest while acting in the capacity of the Crew chief.

Prerequisite. NSAR-3202, RAP-4102, ACAD-4001

NRAP-4201	1.0	90	B,R,M	NS		A	1 HH-46E

Goal. Conduct night SAR rappelling and short haul operations.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Rappelling with equipment
Short haul procedures with a litter

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups

Proper rappelling techniques and procedures

Single, double and modified lock-offs

Rappelling with equipment

Short haul procedures with a litter

Performance Standard

The CCUI shall observe/conduct a minimum of 3 rappels descents with 2 ending in a short haul of a simulated survivor in a litter while acting in the capacity of the crew chief.

Prerequisite. NRAP-4200

NRAP-4202	1.0	*	B,R	NS	E	A	1 HH-46E

Goal. Conduct a night HIRA evaluation.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up

Short haul procedures and lock off techniques

Postflight inspections of rappel equipment

Introduce/Practice/Review

Rappel rope and belay line rigging and set-up
Standard and bagless rappel descents with equipment
Short haul and lock-off procedures

Performance Standard

The CCUI should properly setup the rappel and belay line and conduct safety checks without assistance. The CCUI shall conduct 2 rappel descents with equipment that end in the short haul of a simulated survivor in a litter.

Prerequisite. NRAP-4201

3.16.4 Direct Deployment (DIR)

3.16.4.1 Purpose. Develop the CCs knowledge and proficiency in overland and over water direct deployment during both the day and night environment

3.16.4.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

RSs must be complete with the entire DIR stage prior to being qualified as a Direct Deployment Crew Chief. CCUI may not start the DIR syllabus prior to completion of the 3000 phase.

A Direct Deployment instructor is any SAR Crew Chief Instructor who is a graduate of USCG Advanced Helicopter Rescue School (AHRS) or has been locally qualified by a graduate of USCG AHRS, complete with the DIR stage of the T&R syllabus and has been designated by the Commanding Officer.

Upon completion of this stage of training, CC should be able to correctly perform all Direct Deployment procedures in overland and over water environments during both day and night time.

3.16.4.3 Crew Requirement. HAC, H2P, SCCI, CCUI, RS/HIRA

3.16.4.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

DIR-4300	1.5	365	B,R,M	D	A	1	HH-46E

Goal. Develop knowledge and proficiency in day overland direct deployment.

Requirement

Brief/Discuss

Safety considerations
Belay rigging procedures and limitations
Direct Deployment rigging procedures
Standard Direct Deployment procedures to include standard ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method

Introduce/Practice/Review

Direct Deployment rigging procedures

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Single lift recovery method
Double lift recovery method

Performance Standard

The CCUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method.

Prerequisite. SAR-3109, ACAD-4002

DIR-4301 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day over water direct deployment.

Requirement

Brief/Discuss

Safety considerations
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Impact of sea state and weather concerning Rescue Swimmer direct deployment
Site evaluation and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method
Ordnance hazards safety

Introduce/Practice/Review

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Impact of sea state and weather concerning Rescue Swimmer direct deployment
Site evaluation and emergency procedures
Approach planning techniques
Single lift recovery method
Double lift recovery method

Performance Standard

The CCUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method overwater.

Prerequisite. SAR-3109, ACAD-4003

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

DIR-4310 1.5 365 B,R,M NS A 1 HH-46E

Goal. Develop knowledge and proficiency in night overland direct deployment.

Requirement

Brief/Discuss

Safety considerations in the environment
Belay rigging procedures and limitations
Direct Deployment rigging procedures
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method

Introduce/Practice/Review

Direct Deployment rigging procedures
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Single lift recovery method
Double lift recovery method

Performance Standard

The CCUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method overland.

Prerequisite. NSAR-3209, DIR-4300

DIR-4311 1.5 365 B,R,M NS A 1 HH-46E

Goal. Develop knowledge and proficiency in night over water direct deployment.

Requirement

Brief/Discuss

Safety considerations
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Impact of sea state and weather concerning Rescue Swimmer direct deployment
Site evaluation and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method
Ordnance hazards safety

Introduce/Practice/Review

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Impact of sea state and weather concerning Rescue Swimmer direct deployment
Site evaluation and emergency procedures

Approach planning techniques
Single lift recovery method
Double lift recovery method

Performance Standard

The CCUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method overwater.

Prerequisite. NSAR-3209, DIR-4301

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

3.16.5 Over The Ramp Hoisting (ORH)

3.16.5.1 Purpose. To develop knowledge and proficiency in over the ramp hoisting during the day and night environment.

3.16.5.2 General. CCUI must receive this training from a qualified SAR Crew Chief Instructor or Night System SAR Instructor who is qualified and current in this stage. CCUI do not have to be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. This flight must be flown on the corresponding flight of the pilot ORH stage. All initial syllabus training flights require an ATF.

3.16.5.3 Crew Requirement. HAC, H2P, SCCI/NSSI, CCUI, RS/MT

3.16.5.3 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

ORH-4400 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day hoisting operations utilizing the internal cargo winch through the aft cargo hatch.

Requirement

Brief/Discuss

Standard Internal Cargo winch hoisting procedures
Standard voice communication procedures
Internal cargo winch capabilities and limitations
Emergency procedures and troubleshooting for internal cargo winch failure
Rigging of internal cargo winch and remote handgrip
Review hand and arm signals
Rescue equipment functions, capabilities and limitations
Rigging of rescue equipment and safety checks

Introduce/Practice/Review

Over the ramp hoisting procedures per the NTTP 3-50.1
Cabin preparation and configuration
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Hoisting operations while acting in the capacity of the Crew Chief
Hoisting operations while acting in the capacity of the Rescue Swimmer on the ground

Performance Standard

The CCUI shall rig the internal cargo winch and remote hand grip. The CCUI, while acting in the capacity of the Crew Chief, shall conduct a minimum of 6 hoist evolutions utilizing the rescue seat, rescue basket and stokes litter; a minimum of two each.

Prerequisite. SAR-3102, ACAD-4004

ORH-4410	1.5	365	B,R,M	NS	A	1 HH-46E

Goal. Develop knowledge and proficiency in night hoisting operations utilizing the internal cargo winch through the aft cargo hatch.

Requirement

Brief/Discuss

- Over the ramp hoisting safety considerations in the night environment
- Standard Internal Cargo winch hoisting procedures
- Standard voice communication procedures
- Internal cargo winch capabilities and limitations
- Emergency procedures and troubleshooting for internal cargo winch failure
- Rigging of internal cargo winch and remote handgrip
- Review hand and arm signals
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment and safety checks

Introduce/Practice/Review

- Over the ramp hoisting procedures per the NTTP 3-50.1
- Cabin preparation and configuration
- Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
- Utilization of SAR equipment
- Utilization of the Quick Splice and Chicago Grip
- Hoisting operations while acting in the capacity of the Crew Chief
- Hoisting operations while acting in the capacity of the Rescue Swimmer on the ground

Performance Standard

The CCUI shall rig the internal cargo winch and remote hand grip. The CCUI, while acting in the capacity of the Crew Chief, shall conduct a minimum of 6 hoist evolutions utilizing the rescue seat, rescue basket and stokes litter; a minimum of two each.

Prerequisite. NSAR-3202, ORH-4400

3.16.6 Carrier Qualification (CQ)

3.16.6.1 Purpose

3.16.6.2 General. Training includes FCLP/CQ and NVG operations. Extended searches may require shipboard operations for refueling, casualty recovery, and/or remote site launches. The benefits of NVG operations cannot be over emphasized, and every effort should be made to ensure all crew members are SAR Night Systems Qualified (NSQ).

CCUI must receive this training from a qualified Crew Chief Instructor or Night System SAR Instructor that was previously Carrier Qualified in the CH-46E T&R Manual.

CCUI do not have to be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. This flight must be flown on the corresponding flight of the pilot FCLP stage.

All initial syllabus training flights require an ATF.

Refer to the NATOPS Manual, NWP 3-03.1 (Helicopter Operations for Air Capable Ships), and LHA/LPH/LHD NATOPS.

Pilots who are CQ current in the model H-36 helicopter will be considered current in the HH-36D/E until that currency expires.

Five day and five NVD landings required for qualification/currency.

3.16.6.3 Crew Requirement. HAC, H2P, CCI/NSSI, CCUI, RS/MT (NSQ)

3.16.6.3 Ground/Academic Training. Prior to the beginning of this stage, the CCUI will be provided the required ACAD classes.

FCLP-4500 1.5 365 B,R,M D A 1 HH-46E

Goal. Conduct day, carrier pattern familiarization.

Requirement

Brief/Discuss

Introduce day FCLP patterns and approaches
Discuss emergency procedures peculiar to shipboard operations
Discuss aircrew coordination
Discuss verbal/visual communications used during shipboard landings and launches
Discuss LSE signal
Brief water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce day FCLP patterns and approaches
Practice Field Carrier Landings and approaches
Review LSE signals
Introduce LHD and LHA carriers

Performance Standard

The CCUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform shipboard flight operations to include LSE hand and arm signals. The CCUI shall successfully observer/conduct 5 approaches, landings and launches of the aircraft on an authorized field carrier.

Prerequisite. 2000 PHASE COMPLETE, ACAD-4005

FCLP-4510 1.5 365 B,R,M NS A 1 HH-46E

Goal. Conduct NVG carrier pattern familiarization.

Requirement

Brief/Discuss

Introduce day FCLP patterns and approaches
Discuss emergency procedures peculiar to shipboard operations
Discuss aircrew coordination
Discuss verbal/visual communications used during shipboard landings and launches
Discuss LSE signal

Brief water landing/ditching, and aircraft lighting

Introduce/Practice/Review

Introduce day FCLP patterns and approaches
Practice Field Carrier Landings and approaches
Review Night LSE signals
Introduce LHD and LHA carriers

Performance Standard

The CCUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The CCUI shall successfully observe/conduct 5 approaches, landings and launches of the aircraft on an authorized field carrier in the night environment.

Prerequisite. FCLP-4500

CQ-4600	1.5	365	B,R,M	D	A	1 HH-46E

Goal. Conduct day, carrier qualifications.

Requirement

Brief/Discuss

CQ patterns, approaches and landings
Emergency procedures particular to shipboard operations
Discuss height over various decks
Aircrew coordination
Verbal and visual communications used during shipboard landings and launches
LSE signals
Water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce day carrier qualification per NATOPS.
Introduce day CQ patterns and approaches
Practice Carrier Landings and approaches
Review LSE signals
Introduce LHD and LHA carriers

Performance Standard

The CCUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The CCUI shall successfully observe/conduct 5 approaches, landings and launches of the aircraft on a carrier.

Prerequisite. FCLP-4500, ACAD-4006

CQ-4610	1.5	365	B,R,M	NS	A	1 HH-46E

Goal. Conduct night, carrier qualifications.

Requirement

Brief/Discuss

CQ patterns, approaches and landings
Emergency procedures particular to shipboard operations
Discuss height over various decks
Aircrew coordination
Verbal and visual communications used during shipboard landings and launches

LSE signals
Water landing/ditching, and aircraft lighting.

Introduce/Practice/Review
Introduce night carrier qualification per NATOPS.
Introduce night CQ patterns and approaches
Practice Carrier Landings and approaches
Review night LSE signals
Introduce LHD and LHA carriers

Performance Standard
The CCUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The CCUI shall successfully observe/conduct 5 approaches, landings and launches of the aircraft on a carrier in the night environment.
Prerequisite. CQ-4600

3.16.7 Formation (FORM)

3.16.7.1 Purpose

3.16.7.2 General. Training includes day and NVD operations. Extended searches may require section navigation for long distance off shore flight. Mass casualties may require the additional lift capability of multiple aircraft, and flying as a section or division allows not only for mutual support but for reduced congestion of already busy airspace, as can be the case in major disasters. Confined area landings as a section in such cases can be useful when time is at a premium for the extraction of casualties or the delivery of aid. The benefits of NVG operations cannot be over emphasized, and every effort should be made to ensure all crew members are SAR Night Systems Qualified (NSQ).

CCUI must receive this training from a CCI (FORM-4700 and 4701) or Night System SAR Instructor (FORM-4710 and 4711)who is either proficient in the HH-46E Formation event being flown or was previously proficient in the equivalent CH-46E T&R Manual event and is still proficient per that syllabus. Crew chiefs under instruction need not be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. All initial syllabus training flights require an ATF.

Refer to the NATOPS Flight Manual, CH-46E Maneuver Description Guide, and NTTP 3-22.3-CH46.

Crew chiefs who are FORM proficient in the mirror codes in the CH-46E helicopter T&R will be considered current in the HH-46E until that currency expires.

Initial night systems section navigation (FORM-4710) and section confined area landings (FORM-4711) should be conducted in HLL ambient lighting conditions.

Though flights may be scheduled to fly day into night or civil twilight into night, a minimum of 1.0 hours shall be flown as a formation after EENT in order to log FORM-4710.

Five day (4701) and five NVD (4711) landings are required for initial qualification. Two landings (one in lead, one as wing) suffice to regain proficiency. In order to log FORM-4711, the aforementioned requisite number of landings must be executed after EENT.

3.16.7.3 Crew Requirement. HAC, CP, CCI/NSSI, CCUI, CC (or qualified RS or MT)

3.16.7.3 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

FORM-4700 1.5 180 B,R,M D A 2 HH-46E

Goal. Review day formation flying and conduct day navigation as a section or division.

Requirement

Brief/Discuss

CRM.
Crew comfort levels.
Lead changes.
Lead considerations.
Standard terminology.
Formation maneuvering.
Aircraft clearance.
Intra and inter aircraft communications.
Distance estimation.
Mass casualty response procedures and triage.

Introduce/Review

Combat spread and combat cruise.
Parade.
IIMC Breakup.
Cruise principles,
Turn patterns,
Crossover,
Break-up and rendezvous,
Lead changes.
Lookout doctrine.
ICS procedures.

Performance Standards. Demonstrate the ability to perform and understand formation maneuvering, utilize standard terminology while maintaining a high level of situational awareness and maintain awareness of friendly aircraft while maintaining a proper scan and lookout doctrine.

Prerequisite. 2000 PHASE COMPLETE, ACAD-4007

FORM-4701 1.5 180 B,R,M D A 2 HH-46E

Goal. Conduct section aircraft formation approaches, landings and departures to/from a confined area.

Requirement

Brief/Discuss

CRM.
Lookout doctrine.
Obstacle clearance.
Distance estimation.
Wingman position.
Wave off/brownout procedures.
Section formation.

Introduce/Review

Crew responsibilities during section CAL operations.
Lookout doctrine emphasizing responsibilities during section operations.

Performance Standards. Demonstrate the ability to clear the aircraft for landing into confined areas while recognizing closure rate, drift error and effectively utilizing proper distance estimation and depth perception. Maintain SA of wingman throughout the evolution.

Prerequisite. FORM-4700

FORM-4710 1.5 180 B,R,M NS A 2 HH-46E

Goal. Conduct NS section navigation.

Requirement

Brief/Discuss

CRM.
Crew comfort levels.
Lead changes.
Aircraft lighting.
Closure rate.
Distance estimation.
NVG procedures and emergencies.
Relative motion and depth perception problems at night.
Lookout doctrine.

Introduce/Review

Combat spread and combat cruise.
Parade.
IIMC Breakup.
Cruise principles,
Turn patterns,
Crossover,
Break-up and rendezvous,
Lead changes.

Performance Standards. Demonstrate the ability to conduct formation flight while utilizing NVGs. Maintain SA of wingman and communicate his position throughout the evolution.

Prerequisite. FORM-4701, NS-2403

FORM-4711 1.5 180 B,R,M NS A 2 HH-46E

Goal. Conduct NS section approaches, landings, and departures to a confined area.

Requirement

Brief/Discuss

CRM.
Crew comfort levels.
NVG navigation techniques.
NVG failures.
Emergencies.
Inadvertent IMC.
Aircraft lighting.
Use of IR searchlight.
Depth perception.
Obstacle clearance.

Introduce/Review

Section takeoffs/landings at various unlit CAL sites.

Performance Standards. Utilizing NVGs, demonstrate the ability to clear the aircraft for landing into confined areas while recognizing closure rate, drift error and effectively utilizing proper distance estimation and depth perception. Maintain SA of wingman throughout the evolution.

Prerequisite. FORM-4710

3.17 INSTRUCTOR PHASE (5000)

3.17.1 General. The Instructor phase is designed to provide the squadron with a cadre of highly skilled instructors to ensure CCUIs receive consistent, comprehensive training designed to ensure their mission success.

3.17.2 Purpose. Develop qualified instructors with the ability to teach SAR operations using standardized flight training.

3.17.3 General. CCIUT must be a designated a HH-46E Crew Chief prior to starting the Instructor under Training syllabus. After the completion of the Instructor Under Training syllabus, Crew Chiefs may be designated an HH-46E SAR Crew Chief Instructor. At the Commanding Officers discretion, Crew Chiefs may be designated a Basic Instructor after completion of the 2000 Stage, CCI-5100 and CCI-5101. Basic Instructors may give any code in the 2000 stage with the exception of NS-2400, NS-2401, NS-2402 and NS-2403 unless the Basic Instructor was previously designated and current as an NSI.

3.17.3 Crew Requirement. HAC, H2P, SCCI, CCIUT, RS, MT

3.17.5 Ground/Academic Training. Prior to the beginning of this phase, the CCIUT will be provided the required ACAD classes.

3.17.6 Crew Chief Instructor Stage (CCI)

CCI-5100	1.5	*	B	D	E	A	1 HH-46E

Goal. Demonstrate instructional techniques during day FAM/EP/CAL/INT maneuvers and procedures.

Requirement

Brief/Discuss

Crew coordination
Local area and familiarization maneuvers
Confined area landings
Emergency Procedures
Internal cargo, patient and passenger loading
Instructional techniques

Review

Confined area landings
Emergency procedures
Familiarization maneuvers

Performance Standard

The CCIUT will demonstrate instructional techniques in crew responsibilities/coordination during preflight, start, taxi, take-off, landing, in-flight emergency procedures, ICS procedures and confined area landings.

Prerequisite. DESG-6200

CCI-5101 1.5 * B D E A 1 HH-46E

Goal. Develop instructional techniques during Bambi Bucket operations.

Requirement

Discuss

Crew coordination
Pre/Post/In-flight procedures for Bambi Bucket operations
Bambi Bucket and external cargo hook limitations
Principles of fire fighting
Emergency procedures
Water bucket delivery techniques
Maximum HOGE weight for pickup and delivery and flight envelops with water buckets

Review

Bambi Bucket operations

Performance Standard

The CCIUT will demonstrate instructional techniques in crew responsibilities/coordination during preflight, in-flight and post flight for Bambi Bucket operations.

Prerequisite. CCI-5100

CCI-5102 2.0 * B,R D E A 1 HH-46E

Goal. Develop instructional techniques during Overland Search and Rescue operations.

Requirement

Brief/Discuss

Instructional techniques
Overland SAR procedures
Techniques for planning and evaluating Overland SAR exercises
Evaluations guidelines and standards per the SOP
Crew responsibilities during Overland SAR exercises
Training site set-up and roles of simulated survivors to pertinent aircrew members

Review

Overland hoisting procedures
Overland Search and Rescue techniques
Overland SAR exercise planning, procedures and evaluation techniques

Performance Standard

The CCIUT shall demonstrate instructional techniques for overland search patterns and hoisting operations. RSIUT will also demonstrate proficient knowledge in all procedures related to planning and executing an Overland SAR exercise unassisted.

Prerequisite. CCI-5100

CCI-5103 2.0 * B,R D E A 1 HH-46E

Goal. Develop instructional techniques during Overwater Search and Rescue operations.

Requirement

Brief/Discuss

Instructional techniques
Overwater SAR procedures
Techniques for planning and evaluating Overwater SAR exercises

Evaluations guidelines and standards per the SOP
Crew responsibilities during Overwater SAR exercises
Training site set-up and roles of simulated survivors to pertinent aircrew members
In water procedures to include safety checks and rescue methods

Review

Rescue Swimmer deployment and recovery procedures
Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
Normal and emergency hoisting procedures
Ordnance hazards and safety
Rescue swimmer deployments at 10/10 and 15/0
Overwater SAR exercise planning, procedures and evaluation Techniques

Performance Standard

The CCIUT shall demonstrate instructional techniques for overwater search patterns, approaches and rescue operations. RSIUT will also demonstrate proficient knowledge in all procedures related to planning and executing an Overwater SAR exercise unassisted.

Prerequisite. CCI-5102

Ordnance. 1 MK-25, 1 MK-58

External Support. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

3.17.7 Night System SAR Instructor (NSSI) Stage

3.17.7.1 Purpose. Develop qualified instructors with the ability to teach NS SAR operations using standardized flight training.

3.17.7.2 General. CCIUT must be a designated a HH-46E Crew Chief Instructor. Upon completion of the Instructor Under Training syllabus, Crew Chiefs may be designated an HH-46E NS SAR Crew Chief Instructor.

3.17.7.3 Crew Requirement. HAC, H2P, NSSI, CCIUT, MT, RS

3.17.7.4 Ground/Academic Training. Prior to the beginning of this stage, the CCIUT will be provided the required ACAD classes.

NSSI-5110	1.5	*	B	NS	E	A	1 HH-46E

Goal. Develop instructional techniques of basic operations, CALs, and navigation while utilizing NVGs in HLL conditions as defined by NAVMC 3500.14B.

Requirement. Observe and discuss instructional techniques in the usage and application of NVGs.

Discuss/Review

NVG operations
NVG emergencies
Lookout doctrine
Aircraft lighting
Crew coordination

Crew comfort level
Depth perception
Visual illusions
Waveoffs
Inadvertent IMC
Single aircraft CALs (minimum of 3)
Navigation above 200' AGL (minimum of 5 checkpoints)

Performance Standards. Demonstrate the ability to perform basic operations and single aircraft CALs. Demonstrate the ability to assist the pilots in conducting a navigation route (25NM minimum) above 200' AGL remaining oriented on route within 500 meters while utilizing NVGs in HLL.

Prerequisite. CCI-5103, DESG-6210

External Support Requirements. NS compatible CAL zone, approved navigation route.

NSSI-5111 1.5 * B NS E A 1 HH-46E

Goal. Develop instructional techniques of basic operations, CALs, and navigation while utilizing NVGs in LLL conditions as defined by NAVMC 3500.14B.

Requirement. Observe and discuss instructional techniques in the usage and application of NVGs.

Discuss/Review
NVG operations
NVG emergencies
Lookout doctrine
Aircraft lighting
Crew coordination
Crew comfort level
Depth perception
Visual illusions
Waveoffs
Inadvertent IMC
Single aircraft CALs (minimum of 3)
Navigation above 200' AGL (minimum of 5 checkpoints)

Performance Standards. Demonstrate the ability to perform basic operations and single aircraft CALs. Demonstrate the ability to assist the pilots in conducting a navigation route (25NM Minimum) above 200' AGL remaining oriented on route within 500 meters while utilizing NVGs in LLL.

Prerequisites. NSSI-5510

External Support Requirements. NS compatible CAL zone, approved navigation route.

NSSI-5112 1.5 * B NS E A 1 HH-46E

Goal. Demonstrate the ability to instruct basic NS CALs and navigation under LLL conditions.

Requirement. Demonstrate instructional techniques in the usage and application of NVGs.

Discuss/Review
NVG operations
NVG emergencies

Lookout doctrine
Aircraft lighting
Crew coordination
Crew comfort level
Depth perception
Visual illusions
Waveoffs
Inadvertent IMC
Single aircraft CALs (minimum of 3)
Navigation above 200' AGL (minimum of 5 checkpoints)

Performance Standards. Demonstrate the ability to instruct basic operations and single aircraft CALs. Demonstrate the ability to assist the pilots in conducting a navigation route (25NM Minimum) above 200' AGL remaining oriented on route within 500 meters while utilizing NVGs in LLL.

Prerequisites. ACAD-6014,6015, NSSI-5111

External Support Requirements. NS compatible CAL zone, approved navigation route.

3.18 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) PHASE (6000)

3.18.1 General. The 6000 Phase encompasses the events required to maintain currency with all certifications, qualifications, and designations. Completion of these events ensures the RESCUE AIR CREWMEN is qualified to execute the various missions assigned to the Squadron.

3.19 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) STAGES (6000)

3.19.1 Purpose. To complete the academic requirements for subsequent annual evaluation flights.

T&R CODE	ACADEMIC SYLLABUS CORE SKILLS PHASE (3000)
ACAD-6001	NATOPS OPEN BOOK
ACAD-6002	NATOPS CLOSED BOOK
ACAD-6003	NATOPS ORAL EXAM
ACAD-6007	CRM GROUND CLASS
ACAD-6008	MONTHLY EP QUIZ
ACAD-6010	SAR CREW CHIEF EXAM
ACAD-6013	HIRA CREW CHIEF EXAM
ACAD-6014	NSSI EXAM
ACAD-6015	NSSI ORAL EXAM

ACAD-6001 3.0 365 B,R,M E

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the Crew Chief's knowledge of the appropriate publications and the aircraft.

Performance Standard

Achieve a minimum score of 3.5 on the open book examination.

ACAD-6002 2.0 365 B,R,M E

Goal. The purpose of the closed book examination is to evaluate the Crew Chief's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard
Achieve a minimum score of 3.3 on the closed book examination. An incorrect answer on any question in the critical stage will result in a grade of Unqualified being assigned to that examination.

Prerequisite. ACAD-6001

ACAD-6003 2.0 365 B,R,M E

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the Crew Chief's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard

Achieve a minimum grade of qualified on the oral examination.

Prerequisite. NTPS-6002 within 60 days preceding this event.

ACAD-6007 2.0 365 B,R,M E

Goal. CRM ground instruction in accordance with applicable directives and instructions.

Performance Standard
Demonstrate satisfactory knowledge of CRM principles and their application.

ACAD-6008 1.0 30 B,R,M E

Goal. Monthly Emergency Procedures Exam.

Requirement. Conduct a monthly EP Exam per NAVMC 3500.14.

ACAD-6010 1.0 30 B,R,M E

Goal. Annual Crew Chief Exam.

Requirement. Conduct an annual Crew Chief Exam.

ACAD-6013 1.0 30 B,R,M E

Goal. Annual HIRA Rescue Crewman Exam.

Requirement. Conduct an annual HIRA Rescue Air Crewman Exam per OPNAVIST 3130.6E.

ACAD-6014 2.0 * B,R E

Goal. NSSI Written Exam.

Requirement. Conduct a NSSI written exam in accordance with MAWTS-1 Course Catalog.

ACAD-6015 2.0 * B,R E

Goal. NSSI Oral Exam.

Requirement. Conduct an NSSI oral exam in accordance with MAWTS-1 Course Catalog.

3.19.2 NATOPS Evaluations (NTPS)

3.19.2.1 Purpose. Provide annual NATOPS and CRM evaluation flights.

NTPS-6100 1.5 365 B,R,M (N) E A 1 HH-46E

Goal. Conduct annual NATOPS evaluation.

Requirement. Proficiency in the utilization of all aspects of the HH-46E as a system. The proficiency expected by the evaluator in this flight shall be commensurate with the experience of the CC under evaluation. Upon successful completion of this evaluation, a CC may be designated a HH-46E (non-SAR) Rescue Swimmer at the discretion of the Commanding Officer.

Performance Standard. The performance expected by the evaluator in this flight shall be commensurate with the experience level of the CC under evaluation.

Prerequisite. 6000, 6001, 6002

NTPS-6101 1.5 365 B,R,M (N) E A 1 HH-46E

Goal. Conduct annual CRM evaluation.

Requirement. Perform initial/annual CRM flight evaluation per applicable directives. May be flown in conjunction with annual NATOPS evaluation flight.

Performance Standard. Performance standards will be according to the HH-46E NFM.

Prerequisite. ACAD-6007

3.19.3 Designation Flights (DESG)

3.20.3.1 Purpose. To provide SAR designations.

3.20.3.2 General. Upon successful completion of DESG-6200, a CCUI may be designated Day SAR CC at the discretion of the Commanding Officer. Upon successful completion of DESG-6210 a CC may be designated a fully qualified SAR CC at the discretion of the Commanding Officer.

DESG-6200 2.0 365 B,R,M D E A 1 HH-46E

Goal. Conduct Day SAREX. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement

Brief/Discuss

SAR duty crew requirements, limitations, and Alert conditions
Short fused information collection
Mission update briefing techniques
Aircraft configuration
SAR equipment
Coordinating agencies
Use of SAR TACAID
Emergency procedures

Introduce/Review

Emergency response/recall procedures
Scenario based overland SAR exercise
SAR aircraft configurations
Search patterns

Hoisting operations
Hover position/techniques
Hand/arm signals
Gear delivery procedures
Confined area delivery/pickup techniques

Performance Standard.

Crew Chief under evaluation shall act in the capacity of the Crew Chief during a simulated Search and Rescue Exercise. CCUI shall safely demonstrate an ability to safely care for patients throughout the entire evolution involving simulated survivors in the water or on land.

Prerequisite. SAR-3109, ACAD-6010

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

DESG-6210 2.0 365 B,R,M NS E A 1 HH-46E

Goal. Night SAR evaluation. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement

Brief/Discuss

SAR duty crew requirements, limitations, and Alert conditions
Short fused information collection
Mission update briefing techniques
Aircraft configuration
SAR equipment
Coordinating agencies
Use of SAR TACAID
Emergency procedures

Review

Emergency response/recall procedures
Scenario based overland SAR exercise
SAR aircraft configurations
Search patterns
Hoisting operations
Hover position/techniques
Hand/arm signals
Gear delivery procedures
Confined area delivery/pickup techniques

Performance Standard

Crew Chief under evaluation shall act in the capacity of the Crew Chief during a simulated Search and Rescue Exercise. CCUI shall safely demonstrate an ability to safely care for patients throughout the entire evolution involving simulated survivors in the water or on land.

Prerequisite. NSAR-3209, ACAD-6010

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, etc.) Safety swimmer and survivor(s) as required.

3.19.4 Functional Check Flight Crew Chief (FCFCC) Syllabus

3.19.4.1 Purpose. To develop proficiency in FCF procedures as well as to obtain the FCFCC qualification.

3.19.4.2 General

a. CCUI will demonstrate an understanding of, and proficiency in, the maintenance procedures involved in functional check flights (FCF).

b. CCUI will also demonstrate a detailed knowledge of aircraft systems and administrative maintenance procedures. These constitute the minimum requirements for qualification. Additional training may be required due to multiple aircraft configurations currently utilized.

c. The Quality Assurance Officer shall manage the FCF syllabus.

d. Successful completion of the FCF-6301 constitutes FCFQ. A qualification letter signed by the commanding officer stating the CC is FCF qualified is required. The original shall be placed in the CC's NATOPS jacket and a copy shall be placed in the APR with a corresponding logbook entry.

3.19.4.3 Crew Requirements. FCFCC/FCFCCUI.

3.19.4.4 Ground/Academic Training. Selected reading material from OPNAVINST 4790, CH-46E NATOPS, SOPs, MIMs, etc. as designated by each squadron commanding officer. FCFCCUI shall complete an open book exam.

FCF-6301 1.0 * B,R 1 CH-46E A D

Goal. FCF designation.

Requirement. Effectively demonstrate the ability to perform a full card FCF.

Discuss
FCF procedures.
Troubleshooting techniques.
Maintenance Instruction Manuals.
NAVAIR A1-H46E-NFM-700 and -700A FCF checklist (A-card).
SqdnO 4790.

Review. NATOPS Chapter 10, FCF checklist.

Performance Standards
Crew chiefs shall demonstrate the ability to conduct a full card (A-card) FCF correctly and efficiently, and demonstrate the ability to troubleshoot aircraft problems.

Prerequisite. Completion of FCF academic syllabus, 2000 Phase complete.

3.20 T&R SYLLABUS MATRICES

3.20 T&R SYLLABUS MATRIX

VMR-1 CREW CHIEF T&R MATRIX															
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
CORE SKILL TRAINING (2000 PHASE EVENTS)															
SAR ACADEMICS (ACAD)															
ACAD	2000	COMMAND MISSION	B,R					*		1.0					
ACAD	2001	CREW RESP CLASS	B,R					*		1.0					
ACAD	2002	FLIGHT EQUIP & SAFETY PROC	B,R					*		1.0					
ACAD	2003	EGRESS AND Eps	B,R,M					365		1.0					
ACAD	2004	CONFINED AREA LANDINGS	B,R					*		1.0					
ACAD	2005	SAR & MEDICAL GEAR FAM	B,R					*		1.0					
ACAD	2008	NIGHT SYSTEMS REVIEW	B,R					*		1.0					
ACAD	2009	PRINCIPLES OF FIRE FIGHTING	B,R,M					365		1.0					
ACAD	2010	PASSENGER AND MEDICAL TRANSPORTS	B,R,M					365		1.0					
TOTAL DAY SAR STAGE									9	9.0		0.0			
FAMILIARIZATION (FAM)															
FAM	2103	AREA FAM	B,R,M		A	1	D	365				1.5	2000,2001,2002		203
FAM	2104	EP FAM	B,R,M	E	A	1	D	90				1.5	2003,2103		204
TOTAL FAM STAGE									0	0.0	2	3.0			
CONFINED AREA LANDING (CAL)															
CAL	2200	DAY CALS	B,R,M		A	1	D	45				1.5	2004,2103,2104		220
TOTAL CAL STAGE									0	0.0	1	1.5			
NAVIGATION (NAV)															
NAV	2300	LOCAL HOSPITAL FAM	B,R,M		A	1	D	365				1.5	2005,2200	2103	250
NAV	2301	DISTANT HOSPITAL FAM	B,R		A	1	D	*				2.5	2005,2200	2103	251
TOTAL NAV STAGE									0	0.0	2	4.0			
NIGHT SYSTEMS (NS)															
NS	2400	INTRODUCTORY NS FAM	B,R		A	1	NS	*				1.5	2300,2301,2200,2008		300
NS	2401	NS FAM	B,R		A	1	NS	*				1.5	2400		301
NS	2402	NS NAV	B,R		A	1	NS	*				1.5	2401		302
NS	2403	NS NAV & CAL	B,R,M		A	1	NS	90				1.5	2402		303
TOTAL NS STAGE									0	0.0	4	6.0			

VMR-1 CREW CHIEF T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
AERIAL FIREFIGHTING (FF)															
FF	2500	FIRE BUCKET	B,R,M		A	1	D	365				1.5	2009,2103,2200	2200	240
TOTAL FF STAGE									0	0.0	1	1.5			
AERIAL TRANSPORT (AT)															
AT	2600	AERIAL TRANSPORT	B,R,M		A	1	(NS)	365				1.5	2010,2103,2200,2300,2301,2403	2103,2200,2300,2300	
TOTAL AT STAGE									0	0.0	1	1.5			
TOTAL 2000 PHASE EVENTS									9	9.0	11	17.5			
MISSION SKILL TRAINING (3000 PHASE EVENTS)															
SAR ACADEMICS (ACAD)															
ACAD	3004	LEVEL A MEDICAL KIT	B,R,M					365		1.0					
ACAD	3005	FIRST AID 1	B,R,M					365		1.0					
ACAD	3006	FIRST AID 2	B,R,M					365		1.0					
ACAD	3007	FIRST AID 3	B,R,M					365		1.0					
ACAD	3008	FIRST AID 4	B,R,M					365		1.0					
ACAD	3009	SAR PUBLICATIONS/INSTRUCTIONS/REPORTS	B,R,M					365		1.0					
ACAD	3010	SAR PROCEDURES	B,R,M					365		1.0					
ACAD	3011	RESCUE DEVICES	B,R,M					365		1.0					
ACAD	3012	RESCUE HAND SIGNALS	B,R,M					365		1.0					
ACAD	3013	SURVIVOR MARKER / LOCATOR DEVICES	B,R,M					365		1.0					
ACAD	3014	AIRCREW SURVIVAL EQUIPMENT	B,R,M					365		1.0					
ACAD	3015	MARITIME DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	3016	OVERLAND DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	3017	INANIMATE OBJECT RECOVERY	B,R,M					365		1.0					
ACAD	3018	RESCUE PERSONNEL OCCUPATIONAL HAZARDS	B,R,M					365		1.0					
ACAD	3019	SAR ORGANIZATION	B,R,M					365		1.0					
ACAD	3020	SAR PLANNING	B,R,M					365		1.0					
ACAD	3021	SAR COMMUNICATIONS	B,R,M					365		1.0					
ACAD	3022	PRC-149 SWIMMER RADIO	B,R,M					365		1.0					
ACAD	3023	ANNUAL CPR PROCIFICIENCY	B,R,M					365		1.0					
ACAD	3028	BELAY PROCEDURES	B,R,M					365		1.0					
ACAD	3029	RAPPEL PROCEDURES	B,R,M					365		1.0					
ACAD	3030	HIRA SHORT HAUL EMERGENCY PROCEDURES	B,R,M					365		1.0					
ACAD	3033	PATIENT MONITORING EQUIPMENT	B,R,M					365		1.0					
ACAD	3045	COMPRESSED AIR INJURIES	B,R,M					365		1.0					

VMR-1 CREW CHIEF T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
ACAD	3050	HEAT AND COLD RELATED INJURIES	B,R,M					365		1.0					
ACAD	3051	PROTOCOL REVIEWS	B,R,M					365		1.0					
ACAD	3052	OVERLAND HOISTING PROCEDURES	B,R,M					365		1.0					
ACAD	3053	MARITIME HOISTING PROCEDURES	B,R,M					365		1.0					
ACAD	3054	VESSEL HOISTING PROCEDURES	B,R,M					365		1.0					
TOTAL DAY SAR STAGE									30	30.0	0	0.0			
SEARCH AND RESCUE (SAR)															
SAR	3100	DAY LAND SEARCH PATTERNS	B,R		A	1	D	365				1.5	2000 PHASE COMPLETE,3004-3014		252
SAR	3101	DAY LAND HOIST	B		A	1	D	*				1.5	2000 PHASE COMPLETE, 3004-3014, 3052		253
SAR	3102	DAY LAND LIVE HOIST	B,R,M		A	1	D	30				1.5	3028-3030,3016,3101		253
SAR	3103	DAY OVERLAND SAREX	B,R,M		A	1	D	365				2.0	3018-3023,3031-3033,3045,3050,3102,3100	3100,3102	255
SAR	3104	DAY WATER SEARCH/DOPPLER	B,R,M		A	1	D	60				1.5	3015,3100		256
SAR	3105	DAY SWIMMER DEPLOYMENT (STROP)	B		A	1	D	*				1.5	3015,3053,3102,3104,3024-3027	3104	258
SAR	3106	DAY SWIMMER DEPLOYMENT (LITTERS)	B,R,M		A	1	D	365				1.5	3105	3104	259
SAR	3107	DAY BOAT HOIST	B		A	1	D	*				1.5	3054,3105		260
SAR	3108	DAY BOAT HOIST	B,R,M		A	1	D	365				1.5	3107		260
SAR	3109	DAY OVERWATER SAREX	B,R,M		A	1	D	365				2.0	3051,3108	3104	
TOTAL DAY SAR STAGE									0	0.0	10	16.0			
NIGHT SEARCH AND RESCUE (NSAR)															
NSAR	3200	NIGHT LAND SEARCH PATTERNS	B,R		A	1	NS	365				1.5	3100		320
NSAR	3201	NIGHT LAND HOIST	B		A	1	NS	*				1.5	3101		321
NSAR	3202	NIGHT LAND LIVE HOIST	B,R,M		A	1	NS	30				1.5	3102,3201		321
NSAR	3203	NIGHT OVERLAND SAREX	B,R,M		A	1	NS	365				2.0	3103,3200,3202	3200	322
NSAR	3204	NIGHT WATER SEARCH/DOPPLER	B,R,M		A	1	NS	60				1.5	3104,3200	3200	323
NSAR	3205	NIGHT SWIMMER DEPLOYMENT (STROP)	B		A	1	NS	*				1.5	3105,3204	3204	330
NSAR	3206	NIGHT SWIMMER DEPLOYMENT (LITTERS)	B,R,M		A	1	NS	365				1.5	3106,3205	3204	331
NSAR	3207	NIGHT BOAT HOIST (STROP)	B		A	1	NS	*				1.5	3107,3204	3204	332
NSAR	3208	NIGHT BOAT HOIST (LITTER)	B,R,M		A	1	NS	365				1.5	3108,3207	3204	333
NSAR	3209	NIGHT OVERWATER SAREX	B,R,M		A	1	NS	365				2.0	3109,3203,3206,3208	3204	340
TOTAL NIGHT SAR STAGE									0	0.0	10	16.0			
TOTAL MISSION SKILLS PHASE									30	30.0	20	32.0			

VMR-1 CREW CHIEF T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
CORE PLUS TRAINING (4000 PHASE EVENTS)															
CORE PLUS ACADEMICS (ACAD)															
ACAD	4000	DAY RAPPEL PROCEDURES	B,R,M					365		1.0					
ACAD	4001	NIGHT RAPPEL PROCEDURES	B,R,M					365		1.0					
ACAD	4002	OVERLAND DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	4003	MARITIME DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	4004	OVER THE RAMP HOISTING	B,R,M					365		1.0					
ACAD	4005	FIELD CARRIER LANDING PRACTICE	B,R,M					365		1.0					
ACAD	4006	CARRIER LANDINGS	B,R,M					365		1.0					
ACAD	4007	FORMATION TACTICS	B,R,M					365		1.0					
TOTAL ACAD STAGE									8	8.0	0	0.0			
DAY RAPPEL (RAP)															
RAP	4100	INTRO TO DAY RAPPEL	B		A	1	D	*				1.0	3102, 4000		400
RAP	4101	DAY RAPPEL	B,R,M		A	1	D	90				1.0	4100		401
RAP	4102	DAY RAPPEL EVAL	B,R	E	A	1	D	*				1.0	4101	4101	403
TOTAL RAP STAGE									0	0.0	3	3.0			
NIGHT RAPPEL (NRAP)															
NRAP	4200	INTO TO NIGHT RAPPEL	B		A	1	NS	*				1.0	3202, 4001, 4102		
NRAP	4201	NIGHT RAPPEL	B,R,M		A	1	NS	90				1.0	4200		
NRAP	4202	NIGHT RAPPEL EVAL	B,R	E	A	1	NS	*				1.0	4201	4201	
TOTAL NRAP STAGE									0	0.0	3	3.0			
DIRECT DEPLOYMENT (DIR)															
DIR	4300	DAY OVERLAND DIR	B,R,M		A	1	D	365				1.5	3109,4002	3102	
DIR	4301	DAY OVERWATER DIR	B,R,M		A	1	D	365				1.5	3109,4003	3105	
DIR	4310	NIGHT OVERLAND DIR	B,R,M		A	1	NS	365				1.5	3209,4300	3202,4300	
DIR	4311	NIGHT OVERLWATER DIR	B,R,M		A	1	NS	365				1.5	3209,4301	3205,4301	
TOTAL DIR STAGE									0	0.0	4	6.0			
OVER THE RAMP HOISTING (ORH)															
ORH	4400	DAY OVER THE RAMP HOIST	B,R,M		A	1	D	365				1.5	3102,4004		254
ORH	4410	NIGHT OVER THE RAMP HOIST	B,R,M		A	1	NS	365				1.5	3202,4400	4400	
TOTAL ORH STAGE									0	0.0	2	3.0			

VMR-1 CREW CHIEF T&R MATRIX															
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
FIELD CARRIER LANDING PRACTICE (FCLP)															
FCLP	4500	DAY FCLP	B,R,M		A	1	D	365				1.5	2000 PHASE COMPLETE, 4005		410
FCLP	4510	NIGHT FCLP	B,R,M		A	1	NS	365				1.5	4500	4500	411
TOTAL FCLP STAGE									0	0.0	2	3.0			
CARRIER QUALIFICATION (CQ)															
CQ	4600	DAY CQ	B,R,M		A	1	D	365				1.5	4006, 4500	4500	420
CQ	4610	NIGHT CQ	B,R,M		A	1	NS	365				1.5	4600	4600,4500,4510	421
TOTAL CQ STAGE									0	0.0	2	3.0			
FORMATION (FORM)															
FORM	4700	FORMATION NAV	B,R,M		A	2		180				1.5	2000 PHASE COMPLETE, 4007	2103	
FORM	4701	SECTION CALS	B,R,M		A	2		180				1.5	4700	2200,4700	
FORM	4710	NS SECTION NAV	B,R,M		A	2	NS	180				1.5	4701,2403	2401,4700,4701	
FORM	4711	NS SECTION CALS	B,R,M		A	2	NS	180				1.5	4710	2403,4700,4701,4710	
									0	0.0	4	6.0			
INSTRUCTOR TRAINING (5000 PHASE EVENTS)															
CREW CHIEF INSTRUCTOR (CCI)															
CCI	5100	DAY FAM/CAL/EP	B	E	A	1	D	*				1.5	6200		500
CCI	5101	FIREFIGHTING	B	E	A	1	D	*				1.5	5100		503
CCI	5102	OVERLAND SAR	B,R	E	A	1	D	*				2.0	5100		501
CCI	5103	OVERWATER SAR	B,R	E	A	1	D	*				2.0	5102		502
TOTAL IUT STAGE									0	0.0	4	7.0			
NIGHT SYSTEMS SAR INSTRUCTOR (NSSI)															
NSSI	5110	NSSI FAM	B	E	A	1	NS	*				1.5	6201,5103		551
NSSI	5111	NSSI CALS/NAV	B	E	A	1	NS	*				1.5	5110		552
NSSI	5112	NSSI SAR	B,R	E	A	1	NS	*				1.5	6014,6015,5111		553
TOTAL NSSI STAGE									0	0.0	3	4.5			

VMR-1 CREW CHIEF T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
REQUIREMENT, QUALIFICATIONS AND DESIGNATIONS (RQD) (6000 PHASE EVENTS)															
RQD ACADEMICS (ACAD)															
ACAD	6001	NATOPS OPEN BOOK	B,R,M	E				365		3.0					
ACAD	6002	NATOPS CLOSED BOOK	B,R,M	E				365		2.0			6001		
ACAD	6003	NATOPS ORAL EXAM	B,R,M	E				365		2.0			6002		
ACAD	6007	CRM GROUND CLASS	B,R,M	E				365		2.0					
ACAD	6008	MONTHLY EP QUIZ	B,R,M	E				30		1.0					
ACAD	6010	SAR CREW CHIEF EXAM	B,R,M	E				365		1.0					
ACAD	6013	HIRA CREW CHIEF EXAM	B,R,M	E				365		1.0					
ACAD	6014	NSSI EXAM	B,R	E				*		2.0					
ACAD	6015	NSSI ORAL EXAM	B,R	E				*		2.0			6014		
TOTAL ACAD STAGE									9	16.0	0	0.0			
NATOPS (NTPS)															
NTPS	6100	NATOPS EVALUATIONS	B,R,M	E	A	1	(N)	365				1.5	6000,6001,6002		600
NTPS	6101	CRM FLIGHT EVALUATIONS	B,R,M	E	A	1	(N)	365				1.5	6007		640
TOTAL NTPS STAGE									0	0.0	2	3.0			
SAR DESIGNATIONS (DESG)															
DESG	6200	DAY SAR DESIGNATION	B,R,M	E	A	1	D	365				2.0	6010, 3109		602
DESG	6210	NIGHT SAR DESIGNATION	B,R,M	E	A	1	NS	365				2.0	6010, 3209		602
TOTAL DESG STAGE									0	0.0	2	4.0			
FUNTIONAL CHECK FLIGHT (FCF)															
FCF	6301	ENGINE AND ECCS	B,R	E	A	1	D	*				1.0	2000 PHASE COMPLETE		604
TOTAL FCF STAGE									0	0.0	1	1.0			

CHAPTER 4

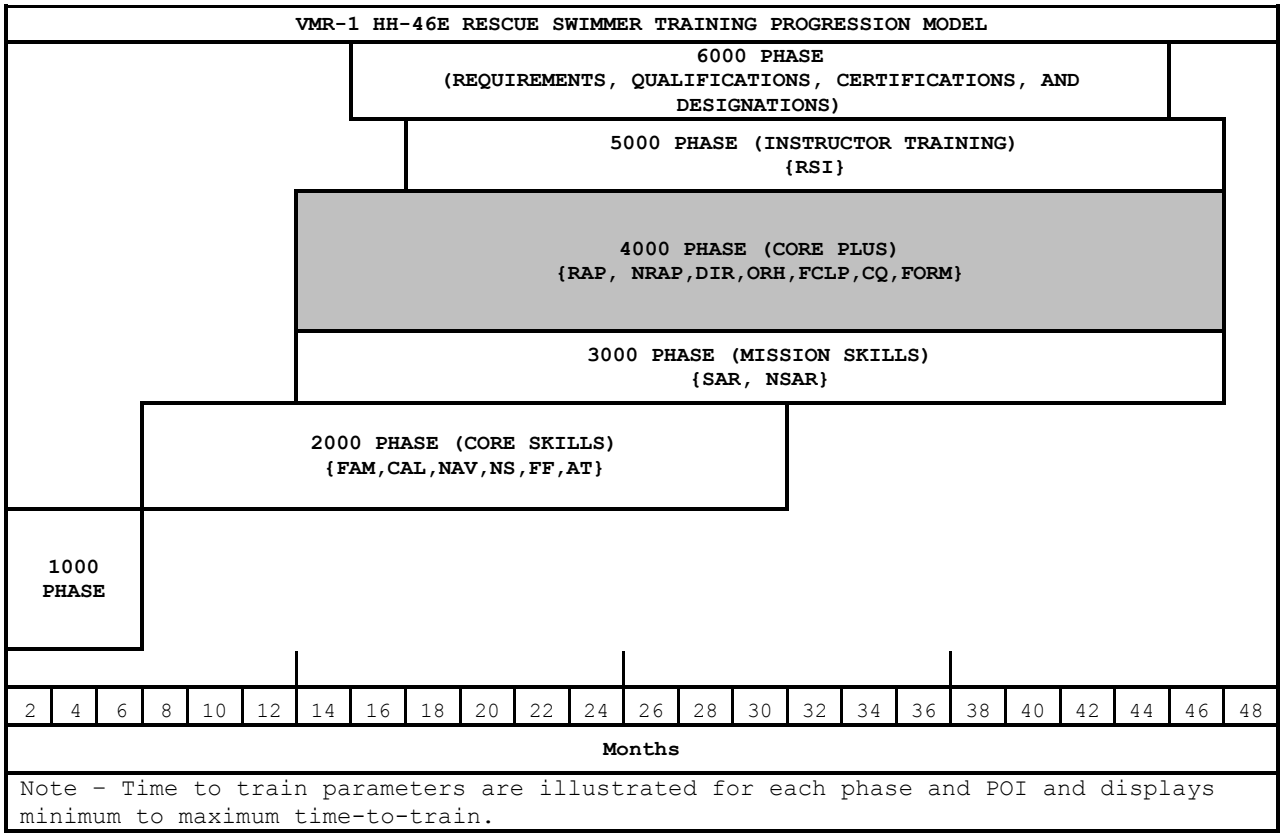
RESCUE SWIMMER

CHAPTER 4

RESCUE SWIMMER

4.0 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core, Mission, and Core Plus Skills. The goal of this chapter is to develop individual and unit Search and Rescue capabilities.

4.1 TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average VMR-1 HH-46E Rescue Swimmer. Units should use the model as a guide to generate individual training plans.



Note – Time to train parameters are illustrated for each phase and POI and displays minimum to maximum time-to-train.

4.2 ABBREVIATIONS

VMR-1 HH-46E RESCUE SWIMMER	
CORE/MISSION/CORE PLUS SKILL ABBREVIATIONS	
CORE SKILLS (2000 Phase)	
ACAD	Academics
FAM	Familiarization
CAL	Confined Area Landings
NAV	Navigation
NS	Night Systems
FF	Aerial Fire Fighting
AT	Aerial Transport
MISSION SKILLS (3000 Phase)	
ACAD	Academics
SAR	Search and Rescue
NSAR	Night Search and Rescue
CORE PLUS (4000 Phase)	
ACAD	Academics
RAP	Day Rappel
NRAP	Night Rappel
DIR	Direct Deployment
ORH	Over the Ramp Hoisting
CQ	Carrier Qualification
FORM	Formation Tactics
INSTRUCTOR (5000 Phase)	
RSI	Rescue Swimmer Instructor
QUALIFICATIONS AND DESIGNATIONS (6000 Phase)	
ACAD	Academics
NTPS	NATOPS
DESG	Designation

4.3 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	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 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 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

4.4 INDIVIDUAL CORE/MISSION/CORE PLUS SKILL PROFICIENCY REQUIREMENTS

4.4.1 Management of individual CSP/MSP/CPSP/CPMP serves as the foundation for developing proficiency requirements in DRRS.

4.4.2 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.

4.4.3 Proficiency is attained by individual Core/Mission/Core Plus skill and the training events to be executed within that skill set are determined by POI assignment (Basic, Transition, Conversion, Series Conversion, or Refresher).

4.4.4 Once proficiency has been attained by Core/Mission/Core Plus Skill (by any POI assignment) then the individual maintains proficiency by executing those events within the maintain column. An individual maintains proficiency by individual Core/Mission/Core Plus Skill.

Note

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

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

VMR-1 HH-46E RESCUE SWIMMER					
CORE/MISSION/CORE PLUS ATTAIN & MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
ACAD	2000	ACAD	2000	ACAD	
	2001		2001		
	2002		2002		
	2003		2003		2003
	2004		2004		
	2005		2005		
	2006		2006		
	2007		2007		
	2009		2009		2009
	2010		2010		2010
FAM	2103	FAM	2103	FAM	
	2104		2104		2104
CAL	2200	CAL	2200	CAL	2200
	2201				
NAV	2300	NAV	2300	NAV	2300
	2301		2301		
NS	2400	NS	2400	NS	
	2401		2401		
	2402		2402		
	2403		2403		2403
FF	2500	FF	2500	FF	2500
AT	2600	AT	2600	AT	2600

MISSION SKILLS (3000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
	3004		3004		3004
	3005		3005		3005
	3006		3006		3006
	3007		3007		3007
	3008		3008		3008
	3009		3009		3009
	3010		3010		3010
	3011		3011		3011
	3012		3012		3012
	3013		3013		3013
	3014		3014		3014
	3015		3015		3015
	3016		3016		3016
	3017		3017		3017
	3018		3018		3018
	3019		3019		3019
	3020		3020		3020
	3021		3021		3021
	3022		3022		3022
ACAD	3023	**ACAD**	3023	**ACAD**	3023
	3024		3024		3024
	3025		3025		3025
	3026		3026		3026
	3027		3027		3027
	3028		3028		3028
	3029		3029		3029
	3030		3030		3030
	3031		3031		3031
	3032		3032		3032
	3033		3033		3033
	3035		3035		3035
	3038		3038		3038
	3045		3045		3045
	3046		3046		3046
	3050		3050		3050
	3051		3051		3051
	3052		3052		3052
	3053		3053		3053
	3054		3054		3054
	3100		3100		
	3101				
	3102		3102		3102
	3103		3103		3103
SAR	3104	**SAR**	3104	**SAR**	3104
	3105				
	3106		3106		3106
	3107				
	3108		3108		3108
	3109		3109		
	3200		3200		
	3201				
	3202		3202		3202
	3203		3203		
	3204		3204		3204
NSAR	3205	NSAR	3205	**NSAR**	
	3206		3206		3206
	3207		3207		
	3208		3208		3208
	3209		3209		
FF	2500	FF	2500	FF	2500
AT	2600	AT	2600	AT	2600

CORE PLUS SKILLS (4000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
ACAD	4000	ACAD	4000	ACAD	4000
	4001		4001		4001
	4002		4002		4002
	4003		4003		4003
	4004		4004		4004
	4005		4005		4005
	4006		4006		4006
	4007		4007		4007
RAP	4100	RAP		RAP	
	4101		4101		4101
	4102		4102		
NRAP	4200	NRAP		NRAP	
	4201		4201		4201
	4202		4202		
DIR	4300	DIR	4300	DIR	4300
	4301		4301		4301
	4310		4310		4310
	4311		4311		4311
ORH	4400	ORH	4400	ORH	4400
	4410		4410		4410
FCLP	4500	FCLP	4500	FCLP	
	4510		4510		4510
CQ	4600	CQ	4600	CQ	
	4610		4610		4610
FORM	4700	FORM	4700	FORM	4700
	4701		4701		4701
	4710		4710		4710
	4711		4711		4711

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

4.5.1 Instructor Training

VMR-1 HH-46E RESCUE SWIMMER INSTRUCTOR DESIGNATIONS (5000 Phase)	
INSTRUCTOR DESIGNATION	EVENTS
RSI	5100,5101,5102,5103

4.5.2 Requirements, Certifications, Qualifications, and Designations

VMR-1 HH-46E RESCUE SWIMMER REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (R,C,Q,& D) [6000 Phase]	
QUALIFICATIONS	EVENTS
NATOPS	6001,6002, 6003, 6100
CRM	6007, 6101
NIGHT SAR	6010, 6210
DAY HIRA	6013, 4102
DESIGNATIONS	EVENTS
DAY HIRA	6013, 4102
NIGHT HIRA	6013, 4202

4.6 RESCUE SWIMMER PROGRAMS OF INSTRUCTION (POI). These tables reflect average time-to-train versus the minimum to maximum time-to-train parameters in the Training Progression Model.

4.6.1 General. The Basic POI is for all RSs assigned for their first time to a SAR unit utilizing the HH-46E. The Refresher POI is for all RSs who have previously been assigned to a SAR unit utilizing the HH-46 aircraft. Personnel who have previously been assigned duties as a RS in another platform must complete the Basic POI.

4.6.2 Basic POI

VMR-1 HH-46E RESCUE SWIMMER Basic POI		
Weeks	**Phase of Instruction**	**Unit**
4	Naval Aircrew Candidate School	NAS Pensacola
6	Rescue Swimmer School	NAS Pensacola
2	SAR Ground Training	VMR-1
6	Core Skill (2000 Phase)	VMR-1
10	Mission Skill (3000 Phase)	VMR-1
8	Core Plus (4000 Phase)	VMR-1

4.6.3 Refresher POI

VMR-1 HH-46E RESCUE SWIMMER Refresher POI		
Weeks	**Phase of Instruction**	**Unit**
2	Rescue Swimmer Refresher Course	NAS North Island
1	SAR Ground Training	VMR-1
4	Core Skill (2000 Phase)	VMR-1
8	Mission Skill (3000 Phase)	VMR-1
6	Core Plus (4000 Phase)	VMR-1

4.7 SYLLABUS NOTES

4.7.1 Environmental Conditions Matrix

Environmental Conditions	
Code	**Meaning**
D	Shall be flown during hours of daylight: (by exception - there is no use of a symbol)
N	Shall be flown during hours of darkness, may be aided or unaided
N*	Shall be flown during hours of darkness must be flown unaided
(N*)	May be flown during hours of darkness – If flown during hours of darkness must be flown unaided
(N)	May be flown during darkness – If flown during hours of darkness; may be flown aided or unaided
NS	Shall be flown during hours of darkness – Mandatory use of Night Vision Devices
(NS)	May be flown during darkness – If flown during hours of darkness; must be flown with Night Vision Devices

4.7.2 Device Matrix

DEVICE (Aviation Flying)	
Symbol	**Meaning**
A	Flown in Aircraft
A/S	Aircraft preferred may be flown in Simulator
S	Flown in Simulator
S/A	Simulator preferred may be flown in Aircraft

4.7.3 Program of Instruction Matrix

PROGRAM OF INSTRUCTION MATRIX			
Program of Instruction (POI)	**Symbol**	**Aviation Flying**	**Aviation Ground**
Basic	**B**	Initial MOS/Skill Training	Initial MOS Training
Refresher	**R**	DIFDEN to DIFOPS in same T/M/S	Return to community from non (MOS/Skill) associated tour
Maintain	**M**	All individuals who have attained CSP/MSP/CPP by initial POI assignment are re-assigned to the M POI to maintain proficiency.	

4.7.4 Event Terms

EVENT TERMS	
TERM	**DESCRIPTION**
Discuss	An explanation of systems, procedures, or maneuvers during the brief, in flight, or post flight. Student is responsible for knowledge of procedures.
Demonstrate	The description and performance of a particular maneuver/event by the instructor, observed by the PUI/student. The PUI/student is responsible for knowledge of the procedures prior to the demonstration of a required maneuver/student.
Introduce	The instructor may demonstrate a procedure or maneuver to a student, or may coach the PUI through the maneuver without demonstration. The PUI performs the procedures or maneuver with coaching as necessary. The PUI is responsible for knowledge of the procedures.
Practice	The performance of a maneuver or procedure by the PUI/student that may have been previously introduced in order to attain a specified level of performance.
Review	Demonstrated proficiency of a maneuver by the PUI/student.
Evaluate	Any flight designed to evaluate aircrew standardization that does not fit another category such as SARCK, HACCK, T2PCK, etc.
E-Coded	This term means that documentation (ATF) is required each time the event is logged. Requires evaluation by a certified standardization instructor (NATOPS I, WTI, INST Evaluator etc.)

4.7.5 Requirements For Rescue Swimmer Designation

4.7.5.1 Complete all required academic lecture for the 2000 and 3000 levels of the syllabus.

4.7.5.2 Complete SAR Closed Book Examination, NATOPS Open and Closed Book Exams, and SAR Fitness Test.

4.7.5.3 T&R codes complete through the 3000 level syllabus.

4.7.5.4 Personnel may be designated as Day SAR Swimmer at the discretion of the Commanding Officer once SAR T&R codes complete through SAR-3109. Personnel may be designated as HH-46E non-SAR Air Crewman once T&R codes complete through AT-2600 and a current NATOPS and CRM Evaluation. An HH-46E non-SAR Air Crewman may participate in all non-SAR flights and missions.

4.8 CORE SKILL INTRODUCTION ACADEMIC PHASE (0000 Phase). There are no 0000 Phase events in the HH-46E T&R manual.

4.8.1 The following courses are required prior to the start of this T&R syllabus.

COURSE/PHASE	ACTIVITY
Naval Aircrew Candidate School	NAS Pensacola, FL
Rescue Swimmer School	NAS Pensacola, FL
Rappel Indoctrination Course*	HC-3
Emergency Medical Technician Training*	Naval Hospital

*Completion of the Rappel Indoctrination Course and Emergency Medical Technician Training is highly recommended but not required.

4.8.2 The Squadron training listed below is required prior to the first flight.

NATOPS Flight Manual and NATOPS Pocket Checklist
Search and Rescue (SAR) Publications
Safety Publications
Squadron Standard Operating Procedures (SOPs)
Inspection, Utilization, and Limitations of Personal Aviation Survival Equipment
Inspection, Utilization, and Limitations of SAR Equipment
Inspection, Utilization, and Limitations of SAR Medical Equipment
Hand and Arm Signals
CPR Certification
Search and Rescue Techniques
Fire Bucket (Bambi Bucket) Operations Manual
Night Vision Device Ground Training
Ordnance Safety

4.9 CORE SKILL INTRODUCTION PHASE (1000). There is no 1000 Phase.

4.10 CORE SKILL INTRODUCTION STAGES (1000). There are no 1000 Stage events in the HH-46E T&R manual.

4.11 CORE SKILL PHASE (2000)

4.11.1 General. Core Skill Phase in the HH-46E provides the Rescue Swimmers with an opportunity to become familiar with the HH-46E. At the completion of the 2000 phase events the Rescue Swimmers should be comfortable with the aircraft and local course rules and prepared to learn the mission requirements. All initial flights shall be flown with a designated NATOPS/Assistant NATOPS Instructor unless currently NATOPS Qualified in a different crew position in the H-46. Personnel will complete the appropriate NAMTRAGRUDET and NATOPS ground school syllabus prior to commencing the flight training syllabus.

4.12 CORE SKILL INTRODUCTION STAGES (2000)

STAGE	EVENTS
4.12.1	Academics (ACAD)
4.12.2	Familiarization (FAM)
4.12.3	Confined Area Landings (CAL)
4.12.4	Navigation (NAV)
4.12.5	Night Systems (NS)
4.12.6	Aerial Fire Fighting (FF)
4.12.7	Aerial Transport (AT)

4.12.1 Academics (ACAD)

4.12.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each RS. A summary of academic classes that is required for the Core Skill Phase (2000) are listed below with their corresponding T&R code.

4.12.1.2 General. The Academic syllabus is designed to ensure RS are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training (2000-6000) there are corresponding stages, each stage has a required academic syllabus that must

be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	CORE SKILLS PHASE (2000)
ACAD-2000	COMMAND MISSION
ACAD-2001	CREW RESPONSIBILITIES CLASS
ACAD-2002	FLIGHT EQUIPMENT AND SAFETY PROCEDURES
ACAD-2003	EGRESS AND EMERGENCY PROCEDURES*
ACAD-2004	CONFINED AREA LANDINGS
ACAD-2005	SAR AND MEDICAL GEAR FAMILIARIZATION
ACAD-2006	NIGHT SYSTEMS CLASS
ACAD-2007	NIGHT SYSTEMS LAB
ACAD-2009	PRINCIPLES OF FIRE FIGHTING*
ACAD-2010	PASSENGER AND MEDICAL TRANSPORTS*

4.12.2 Familiarization (FAM)

4.12.2.1 Purpose. Become familiar with aircraft flight characteristics, limitations, and emergency procedures; develop proficiency in all maneuvers contained in the familiarization stage.

4.12.2.2 General. These flights may be flown on any appropriate flight of the pilot syllabus. Initial syllabus training flights require an ATF.

4.12.2.3 Crew Requirements. HAC, H2P, BCCI/SARI/ANI, RSUI

4.12.2.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

FAM-2103 1.5 365 B,R D A 1 HH-46E

Goal. Conduct an area and aircraft familiarization. Introduce HH-46 characteristics, Rescue Swimmer responsibilities, and discuss crew coordination.

Requirement

Brief/Discuss
- Use of ICS
- Standard Terminology
- Interaction with pilots
- HH-46E nomenclature
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Look-out doctrine

Introduce/Demonstrate
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Operation of communication equipment
- Crew comfort levels
- Depth Perception
- Taxiing/directing procedures
- Look-out doctrine
- Hot fuel procedures

Performance Standard

RSUI shall become familiar with the local operating areas, the HH-46E and exhibit a basic understanding of RS duties.

Prerequisite. ACAD-2000, ACAD-2001, ACAD-2002

FAM-2104 1.5 90 B,R,M D A 1 HH-46E

Goal. Conduct emergency procedure familiarization and review area familiarization.

Requirement

Brief/Discuss

- HH-46E nomenclature
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Ground and in-flight emergencies
- Ditching and Egress procedures
- Take-off and landing emergencies
- Precautionary landings
- Emergency landings
- Autorotation

Introduce/Demonstrate

- Preflight/Postflight procedures to include equipment inventory and inspection
- Ground and in-flight emergencies
- Ditching and Egress procedures

Performance Standard

RSUI shall demonstrate knowledge of aircraft systems, perform basic FAM maneuvers, and be able to satisfactorily perform emergency procedures per NATOPS manual.

Prerequisite. FAM-2103, ACAD-2003

4.12.3 Confined Area Landing (CAL)

4.12.3.1 Purpose. To familiarize the Rescue Swimmer with local area CALs, practice CAL landings in the HH-46E aircraft and develop crew coordination during confined area operations.

4.12.3.2 General. These flights may be flown on any flight of the pilot CAL stage. Initial syllabus training flights require an ATF.

4.12.3.3 Crew Requirements. HAC, H2P, BCCI/SARI/ANI, RSUI

4.12.3.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

CAL-2200 1.5 45 B,R,M D A 1 HH-46E

Goal. Conduct day CALs.

Requirement

Brief/Discuss

- HH-46E nomenclature to include specific blade clearance lengths and measurements
- CAL zone evaluation
- Crew coordination and responsibilities to include obstacle avoidance lookout responsibilities

Demonstrate/Introduce

- HH-46E nomenclature to include specific blade clearance lengths and measurements
- CAL zone selection and evaluation
- Crew coordination and responsibilities
- Standard voice communications and lost ICS procedures
- Emergency procedures and departure routes

Performance Standard

RSUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings, 3 being performed with the RSUI acting as the crew chief.

Prerequisite. FAM-2104, ACAD-2004

CAL-2201 1.5 * B D A 1 HH-46E

Goal. Review day CALs.

Requirement.

Brief/Discuss

HH-46E nomenclature to include specific blade clearance lengths and measurements
CAL zone evaluation
Crew coordination and responsibilities to include obstacle avoidance lookout responsibilities

Demonstrate/Review

HH-46E nomenclature to include specific blade clearance lengths and measurements
CAL zone selection and evaluation
Crew coordination and responsibilities
Standard voice communications and lost ICS procedures
Emergency procedures and departure routes

Performance Standard. RSUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings, 3 being performed with the RSUI acting as the crew chief.

Prerequisite. CAL-2200

4.12.4 Navigation (NAV)

4.12.4.1 Purpose. To familiarize the RSUI with the location and landing procedures for hospitals in the area.

4.12.4.2 General. These flights may be flown on any flight of the pilot NAV stage. Initial syllabus training flights require an ATF.

4.12.4.3 Crew Requirements. HAC, H2P, CC, BCCI/SARI/ANI/RSI, RSUI

4.12.4.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

NAV-2300 1.5 365 B,R,M D A 1 HH-46E

Goal. Familiarize the RSUI with navigation to and from local area hospitals with landing procedures involved.

Requirement

Brief/Discuss

Navigational procedures to include use of GPS and aeronautical charts
GPS and dead reckoning navigation
Local area hospitals and their medical capabilities/locations
Local medical protocols and Flight Surgeon recall procedures for hospital-to-hospital transfers
Cabin preparation and rigging of the litters
Use of radios in relaying patient information to the destination medical facility and use of the aircraft utility electrical power supply

Demonstrate/Introduce

Identify local area hospital landing zones

Use of aircraft electrical system and radio contact receiving medical facility

Performance Standard

RSUI shall safely prepare the cabin for litter carriage using the stanchions, and should demonstrate the ability to utilize the radio and/or the ICS to relay patient information to the pilots or emergency facilities.

Prerequisite. FAM-2103, CAL-2200, ACAD-2005

NAV-2301 2.5 * B,R D A 1 HH-46E

Goal. Familiarize the RSUI with navigation to and from hospitals located outside the local area with landing procedures involved.

Requirement

Brief/Discuss

Navigational procedures to include use of GPS and aeronautical Charts

GPS and dead reckoning navigation

Distant area hospitals and their medical capabilities/locations

Local medical protocols and Flight Surgeon recall procedures for hospital-to-hospital transfers

Cabin preparation and rigging of the litters

Use of radios in relaying patient information to the destination medical facility and use of the aircraft utility electrical power supply

Demonstrate/Introduce

Identify distant area hospital landing zones

Cabin preparation for transferring patients

Assisting Medical Technician with receiving the report from on-scene providers, performing assessments and packaging patient for transport

Use aircraft electrical system and radio to contact receiving facility

Performance Standard

RSUI shall safely prepare the cabin for litter carriage using the stanchions and demonstrate knowledge in assisting the SMT with en route treatment of patients.

Prerequisite. FAM-2103, CAL-2200, ACAD-2005

4.12.5 Night Systems (NS)

4.12.5.1 Purpose. Ensure the RSUI is proficient in Night Systems use on the HH-46E during HHL and LLL.

4.12.5.2 General. Completion of NVG Night LAB and FAM CAL and NAV flights are required before starting NS-2400. Initial syllabus training flights utilizing NVDs shall be flown with a Night System SAR Instructor (NSSI) and require an ATF.

4.12.5.3 Crew Requirements. HAC, H2P, NSI/NSSI, ANI, NSQ, RSUI

4.12.5.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

NS-2400 1.5 * B,R NS A 1 HH-46E

Goal. Familiarize the RSUI with HH-46E and local area while using NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement

Brief/Discuss

- CRM
- Crew comfort levels
- Aircraft lighting
- Use and limitations of NVDs
- NVD tube and battery failure
- Scanning techniques
- Obstacle clearance
- Emergency procedures

Demonstrate/Introduce

- Wear and use of NVDs during low work and touch and go landings

Performance Standard

RSUI shall be able to safely perform familiarization maneuvers while on NVGs per NFM, and MAWTS-1 NVG Manual.

Prerequisite. ACAD-2006,2007, FAM-2104, CAL-2201, NAV-2300,2301

NS-2401 1.5 * B,R NS A 1 HH-46E

Goal. Develop proficiency in conducting navigation and CALs while utilizing NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement

Brief/Discuss

- Obstacle clearance
- Terrain suitability
- Rate of closure
- Loss of depth perception
- Lookout doctrine
- NVD scan techniques
- Vertigo
- Emergency procedures

Demonstrate/Introduce

- Low level navigation
- Navigation from a CAL site to a hospital landing pad
- Obstacles along route of flight
- CAL landings

Performance Standard

RSUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings while wearing NVDs.

Prerequisite. NS-2400

NS-2402 1.5 * B,R NS A 1 HH-46E

Goal. Familiarize the RSUI in navigation in the local area while using NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement.

Brief/Discuss

- Lookout Doctrine
- CRM

Crew comfort levels
Aircraft lighting
Use and limitations of NVDs
NVD tube and battery failure
Location and lighting of approved landing zones
Scanning techniques
Emergency procedures

Demonstrate/Introduce

Wear and use of NVDs during low work and touch and go landings

Performance Standard

RSUI shall be able to safely assist the pilots in navigation routes, maintain good lookout doctrine and remain oriented on route within 500 meters.

Prerequisite. NS-2401

NS-2403 1.5 45 B,R,M NS A 1 HH-46E

Goal. Ensure RSUI is proficient in navigation and CAL landings while using NVDs. This flight may be flown during HLL or LLL conditions.

Requirement.

Brief/Discuss

Obstacle clearance
Terrain suitability
Rate of closure
Loss of depth perception
Lookout doctrine
NVD scan techniques
Vertigo
Emergency procedures

Demonstrate/Introduce

Low level navigation
Navigation from a CAL site to a hospital landing pad
Obstacles along route of flight
CAL landings

Performance Standard

RSUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings while wearing NVDs and be able to assist with navigation when asked by the pilots in HLL/LLL conditions.

Prerequisite. NS-2402

4.12.6 Aerial Fire Fighting (FF)

4.12.6.1 Purpose. Develop the ability to conduct water bucket operations.

4.12.6.2 General. These flights may be flown on any flight of the pilot FF stage. Initial syllabus training flights shall be flown with a SAR Crew Chief Instructor (CCI) and require an ATF.

4.12.6.3 Crew Requirements. HAC, H2P, ANI, CC/RS/MT, RSUI

FF-2500 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop the ability to conduct Bambi bucket operations.

Requirement

Brief/Discuss

Bambi Bucket and external cargo hook limitations.

Preflight and post flight procedures.
Connecting and disconnecting procedures.
Water bucket pickup and release procedures
Crew Coordination
ICS voice procedures
Lost communications hand signals
Emergency procedures
Maximum HOGE weight for pickup and delivery and flight envelopes with water buckets
Water bucket delivery techniques

Demonstrate/Introduce.

Water Bucket operations.

Performance Standard

RSUI shall be able to safely fill the Bambi Bucket, complete a minimum of 5 pickups and water drops, and deliver water to fire within 5 meters of intended point of impact.

Prerequisite. ACAD-2009, FAM-2104, CAL-2201

4.12.7 Aerial Transport (AT)

4.12.7.1 Purpose. Develop the ability to transfer patients and passengers on non-SAR related missions.

4.12.7.2 General. These flights may be flown on any flight of the AT stage. Initial syllabus training flights shall be flown with a SAR Rescue Swimmer Instructor (RSI) or SAR Medical Technician Instructor (MTI) and require an ATF.

4.12.7.3 Crew Requirements. HAC, H2P, ANI, RSI/MTI, RSUI

4.12.7.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

AT-2600	1.5	365	B,R,M	(NS)	A	1	HH-46E

Goal. Review procedures for patient loading, passenger briefing and safety procedures.

Requirement

Brief/Discuss.

Passenger manifesting and safety briefing
Patient loading procedures
Cargo loading and unloading procedures
Locations and uses of onboard medical assets
Proper hospital to hospital patient turn over procedures
SAR Reports and necessary medical paperwork

Demonstrate/Introduce.

Passenger manifesting and safety briefing
Patient loading procedures
Cargo loading and unloading procedures
Locations and uses of onboard medical assets
Proper patient care procedures en route to medical facilities
Proper hospital to hospital patient turn over procedures
SAR Reports and necessary medical paperwork

Standard terminology for patient updates

Performance Standard

RSUI will be able to properly embark and disembark patients, passengers and cargo in a simulated Hospital to Hospital transfer. RSUI will demonstrate knowledge on all the medical equipment and patient assessments. Upon completion of this flight, RSUI will demonstrate the ability to properly fill out and file all necessary paperwork and reports.

Prerequisite. ACAD-2010, FAM-2104, CAL-2201, NAV-2300,2301, NS-2403

4.13 MISSION SKILL PHASE (3000)

4.13.1 General. The Mission Skill Phase is designed to familiarize the RSUI with the unique missions and challenges associated with VMR-1 and the HH-46E.

4.14 MISSION SKILL STAGES (3000)

T&R CODE	EVENT
4.14.1	Academics (ACAD)
4.14.2	Search and Rescue (SAR)
4.14.3	Night Search and Rescue (NSAR)

4.14.1 Academics (ACAD)

4.14.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each RS. A summary of academic classes that is required for the Mission Skill Phase (3000) are listed below with their corresponding T&R code.

4.14.1.2 General. The Academic syllabus is designed to ensure RS are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	MISSION SKILLS PHASE (3000)
ACAD-3004	LEVEL A MEDICAL KIT*
ACAD-3005	FIRST AID 1*
ACAD-3006	FIRST AID 2*
ACAD-3007	FIRST AID 3*
ACAD-3008	FIRST AID 4*
ACAD-3009	SAR PUBLICATIONS / INSTRUCTIONS / REPORTS*
ACAD-3010	SAR PROCEDURES*
ACAD-3011	RESCUE DEVICES*
ACAD-3012	RECUE HAND SIGNALS*
ACAD-3013	SURVIVOR MARKER / LOCATOR DEVICES*
ACAD-3014	AIRCREW SURVIVAL EQUIPMENT*
ACAD-3015	MARITIME OBJECT RECOVERY*
ACAD-3016	OVERLAND DIRECT DEPLOYMENT*
ACAD-3017	INANIMATE OBJECT RECOVERY*
ACAD-3018	RESCUE PERSONNEL OCCUPATIONAL HAZARDS*
ACAD-3019	SAR ORGANIZATION*
ACAD-3020	SAR PLANNING*
ACAD-3021	SAR COMMUNICATIONS*
ACAD-3022	PRC-149 SWIMMER RADIO*
ACAD-3023	ANNUAL CPR PROCIFICIENCY*
ACAD-3024	RESCUE SWIMMER EQUIPMENT*
ACAD-3025	RESCUE SWIMMER PROCEDURES*
ACAD-3026	PARACHUTE DISENTANGLEMENT PROCEDURES*
ACAD-3027	RESCUE SWIMMER LIFE SAVING PROCEDURES*
ACAD-3028	BELAY PROCEDURES*
ACAD-3029	RAPPEL PROCEDURES*
ACAD-3030	HIRA SHORT HAUL EMERGENCY PROCEDURES*
ACAD-3031	TRAUMA ASSESSMENT*
ACAD-3032	MEDICAL ASSESSMENT*
ACAD-3033	PATIENT MONITORING EQUIPMENT*
ACAD-3035	ADVANCED AIRWAY MANAGEMENT*
ACAD-3038	IV THERAPY*
ACAD-3045	COMPRESSED AIR INJURIES*
ACAD-3046	CARDIOVASCULAR ILLNESSES*
ACAD-3050	HEAT AND COLD RELATED INJURIES*
ACAD-3051	PROTOCOL REVIEWS*
ACAD-3052	OVERLAND HOISTING PROCEDURES*
ACAD-3053	MARITIME HOISTING PROCEDURES*
ACAD-3054	VESSEL HOISTING PROCEDURES*

*Denotes annual training requirement

4.14.2 Search and Rescue (SAR)

4.14.2.1 Purpose. Develop proficiency in Day Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

4.14.2.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

Rescue Swimmers who have not completed the appropriate SAR syllabus shall not be assigned to SAR duty (day or night) until completion of the appropriate syllabus. Local commands are granted the authority to designate personnel as Day Rescue Swimmer qualified upon completion of the Day Search and Rescue syllabus.

RSUIs may begin the night SAR syllabus training prior to completion of the entire day SAR syllabus. Prior to commencement of a night SAR syllabus flight; the corresponding day SAR syllabus flight shall be completed.

RSUIs may receive training from both Rescue Swimmer Instructors (RSI) and Medical Technician Instructors (MTI) for all flights other than SAR-3103, SAR-3105, SAR-3106, and SAR-3109. RSUI may also receive training from SAR Crew Chief Instructor (CCI) but only for flights SAR-3100 and SAR-3104 in the mission skill stage.

4.14.2.3 Crew Requirement. HAC, H2P, CC, CCI/RSI/MTI, RSUI

4.14.2.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

SAR-3100	1.5	365	B,R	D	A	1	HH-46E

Goal. Conduct day search patterns and overland search procedures.

Requirement

Brief/Discuss

- Standard Voice Communications
- Day SAR procedures
- Search Patterns
- Overland search procedures
- Remote Hover Coupler Station
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Probability of detection

Introduce/Demonstrate

- Search Patterns
- Remote Hover Coupler Station
- Manual and Coupled approaches

Performance Standard

RSUI shall assist the pilots in conducting a search pattern consisting of a minimum of 5 checkpoints, and maintain within 500 meters of course line. RSUI shall provide calls, using standard terminology, to the pilot to conduct a hover over a simulated survivor while maintaining within 5 feet of the hover point.

Prerequisite. 2000 Phase complete, ACAD-3004-3014

SAR-3101	1.5	*	B	D	A	1	HH-46E

Goal. Conduct day overland hoisting operations utilizing the Rescue Strop, Forest Penetrator, Rescue Basket, Stokes Litter, MEDEVAC Litter, and Hoisting Vest (if available).

Requirement

Brief/Discuss

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure
- Use of quick splice and Chicago grip

Review hand and arm and Aldis lamp signals

Rescue equipment functions, capabilities and limitations

Rigging of rescue equipment and safety checks

Introduce/Demonstrate

Overland hoisting procedures per the NTTP 3-50.1
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Hoisting operations while acting in the capacity of the Crew Chief
Hoisting operations while acting in the capacity of the Rescue Swimmer on the deck

Performance Standard

RSUI shall rig and perform 2 hoisting evolutions acting in the capacity of the Crew Chief while maintaining a hover within 5 feet of the hover point. One shall be done using the forest penetrator/rescue seat and one using rescue basket. RSUI shall also perform 1 hoisting evolution for each piece of rescue equipment while acting in the capacity of the Rescue Swimmer.

Prerequisite. 2000 Phase complete, ACAD-3004 through ACAD-3014, ACAD-3052

SAR-3102 1.5 30 B,R, M D A 1 HH-46E

Goal. Conduct day overland live hoisting operations utilizing the belay line.

Requirement

Brief/Discuss

Hoist capabilities and limitations

Emergency procedures and troubleshooting for hoist failure

Use of quick splice and Chicago grip

Review hand and arm and Aldis lamp signals

Rescue equipment functions, capabilities and limitations

Rigging of rescue equipment and safety checks

Rigging and limitations of the belay line

Introduce/Demonstrate.

Overland hoisting procedures per the NTTP 3-50.1
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Live hoisting operations while acting in the capacity of the Crew Chief
Live hoisting operations while acting in the capacity of the Rescue Swimmer
Live hoisting operations for dual recoveries while acting in the capacity of the Rescue Swimmer both connected and on the deck

Performance Standard

RSUI shall rig and perform one deployment of a Medical Technician and one recovery of a simulated survivor in the rescue seat while acting in the capacity of the crew chief. RSUI shall perform 1 hoisting

evolution for each piece of rescue equipment while acting in the capacity of the Rescue Swimmer on the deck. RSUI shall also one dual recovery of the MEDEVAC litter with the RSI tending the trail line.

Prerequisite. SAR-3101, ACAD-3016, ACAD-3028 through ACAD-3030

SAR-3103 2.0 365 B,R,M D A 1 HH-46E

Goal. Conduct day overland SAREX.

Requirement

Brief/Discuss

- Overland SAR procedures, to include search patterns and CAL selections
- Crewmember responsibilities and cabin preparations
- Communication procedures

Introduce/Demonstrate

- Cabin preparation and actions while en route to scene
- Conduct/assist in patient(s) assessment, treatment and packaging
- Loading and securing patient(s) inside aircraft
- Provide/assist in patient care while en route to a Medical Treatment Facility
- Unloading and transferring patient(s)
- Familiarization with medical equipment on board

Performance Standard

RSUI shall act in the capacity of the Rescue Swimmer during a simulated Search and Rescue Exercise. RSUI shall safely perform one hoisting evolution from the deck and demonstrate an ability to safely care for patients throughout the entire evolution.

Prerequisite. SAR-3100, SAR-3102, ACAD-3018 through ACAD-3023, ACAD-3031 through ACAD-3033, ACAD-3035, ACAD-3038, ACAD-3045, ACAD-3046, ACAD-3050

SAR-3104 1.5 60 B,R,M D A 1 HH-46E

Goal. Conduct day over water search and Doppler approaches.

Requirement

Brief/Discuss

- Standard Voice Communications
- Over water SAR procedures
- Search Patterns
- Remote Hover Coupler Station
- Doppler capabilities and procedures
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Flare capabilities, arming/disarming and deployment techniques
- Ordnance hazards and safety precautions

Introduce/Demonstrate

- Flare deployment
- Standard Voice Communications
- Remote Hover Coupler Station
- Manual and Coupled approaches
- Over water search techniques

Performance Standard

RSUI shall conduct a minimum of 1 verbal control for manual approaches and 1 verbal control for coupled approaches while maintain within 5

feet of hover point. RSUI will safely conduct a minimum of 5 simulated hoisting evolutions utilizing any piece of SAR equipment.

Prerequisite. SAR-3100, ACAD-3015

Ordnance. 1 MK-25, 1 MK-58

SAR-3105 1.5 * B,R D A 1 HH-46E

Goal. Conduct day Rescue Swimmer deployment and recovery with rescue strop and basket.

Requirement

Brief/Discuss

- Impact of sea state and weather concerning swimmer deployment
- Rescue Swimmer deployment and recovery procedures
- Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
- Short haul purpose and procedures
- Normal and emergency hoisting procedures
- ICS communications and standard hand and arm signals
- Ordnance hazards and safety

Introduce/Demonstrate

- Rescue swimmer deployments at 10/10 and 15/0
- Day single recovery utilizing the rescue strop and rescue basket with simulated a survivor
- Day dual recovery utilizing the rescue strop and rescue basket with simulated a survivor
- Short haul to simulated survivor

Performance Standard

RSUI shall safely conduct 3 day deployments from 10/10 or 15/0 and recover via rescue strop and rescue basket. RSUI shall safely perform single and dual recoveries utilizing the rescue strop and rescue basket with a short haul on 1 of the recoveries.

Prerequisite. SAR-3102, SAR-3104, ACAD-3024 through ACAD-3027, ACAD-3053

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

SAR-3106 1.5 180 B,R,M D A 1 HH-46E

Goal. Conduct day Rescue Swimmer deployment and recovery with the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

- Impact of sea state and weather concerning swimmer deployment
- Rescue Swimmer deployment and recovery procedures
- Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
- The use of the trail line assembly
- Normal and emergency hoisting procedures
- ICS communications and standard hand and arm signals
- Ordnance hazards and safety
- Standard procedures regarding litters in the water

Introduce/Demonstrate

- Rescue swimmer deployments at 10/10 and 15/0
- Day deployment and recovery utilizing the Stokes litter with a simulated survivor

Day deployment and recovery utilizing the MEDEVAC litter with a simulated survivor

Performance Standard

RSUI shall safely conduct a minimum of 2 day deployments at either 10/10 or 15/0 and safely recover 2 simulated patients utilizing both the Stokes litter and the MEDEVAC litter.

Prerequisite. SAR-3105

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

SAR-3107 1.5 * B,R D A 1 HH-46E

Goal. Conduct day SAR boat hoisting utilizing the rescue strop, rescue basket and hoisting vest.

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals

Aircraft approach procedures and positioning

Special considerations when acting on or around a boat

Rescue personnel and equipment hook-up procedures

Introduce/Demonstrate

Practice runs and simulated hoisting calls

Deployment and recovery of rescue personnel to the boat

Hoisting procedures utilizing the rescue strop and rescue basket

Performance Standard

RSUI shall conduct a minimum of 2 dry runs prior to hoisting one rescue personnel to the deck while acting in the capacity of the Crew Chief. RSUI shall safely conduct 6 hoisting evolutions utilizing the rescue strop, rescue basket and hoisting vest (if applicable); a minimum of 2 times each while acting in the capacity of the Rescue Swimmer on the deck.

Prerequisite. SAR-3105, ACAD-3054

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

SAR-3108 1.5 180 B,R,M D A 1 HH-46E

Goal. Conduct day SAR boat hoisting utilizing the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals

Aircraft approach procedures and positioning

Special considerations when acting on or around a boat

Rescue personnel and equipment hook-up procedures

Use of the trail line assembly

Introduce/Demonstrate

Practice runs and simulated hoisting calls

Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the Stokes and MEDEVAC litters with the trail line assembly

Performance Standard

The RSUI shall conduct a minimum of 4 hoisting evolutions utilizing the Stokes litter and the MEDEVAC litter a minimum of 2 times each while acting in the capacity of the Rescue Swimmer on the deck

Prerequisite. SAR-3107

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required

SAR-3109	2.0	*	B,R	D	A	1 HH-46E

Goal. Conduct day over water SAREX.

Requirement

Brief/Discuss

Over water SAR procedures, to include search patterns, sea conditions and patient locations
Crewmember responsibilities and cabin preparations
Communication procedures

Introduce/Demonstrate

Cabin preparation and actions while enroute to scene
Conduct scene survey and survivor marking
Conduct survivor(s) assessment, approaches/carries, escapes/releases, disentanglement and recovery
Provide/assist in patient care while enroute to a Medical Treatment Facility
Review medical treatment procedures and protocols
Familiarization with medical equipment on board
Unloading and transferring patient(s)

Performance Standard

RSUI shall act in the capacity of the Rescue Swimmer during a simulated over water Search and Rescue Exercise. RSUI shall safely deploy from the aircraft and demonstrate the ability to properly rescue and provide care to the simulated survivors until the arrival at a Medical Treatment Facility.

Prerequisite. SAR-3103, SAR-3106, SAR-3108, ACAD-3017, ACAD-3051

Ordnance. 1 MK-25, 1 MK-58

External Support. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required

4.14.3 Night Search and Rescue (NSAR)

4.14.3.1 Purpose. Develop proficiency in Night Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

4.14.3.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

RSUIs may begin the night SAR syllabus training prior to completion of the

entire day SAR syllabus. Prior to commencement of the NSAR syllabus flight; the corresponding SAR syllabus flight shall be completed.

Rescue Swimmers may fly the night SAR syllabus codes with or without the aid of Night Vision Devices (NVD). The intent of this syllabus is to develop the skills critical to the Search and Rescue mission versus NVD proficiency. NVD proficiency/currency should be considered when conducting NVD SAR flights. When complete with the night SAR training syllabus, aircrew should have the ability to conduct night SAR missions under various atmospheric conditions.

RSUIs may receive training from both Rescue Swimmer Instructors (RSI) and Medical Technician Instructors (MTI) for all flights other than SAR-3113, SAR-3115, SAR-3116, and SAR-3119. Initial training flights for NSAR-3200 and NSAR-3204 shall be flown with a Night System SAR Instructor (NSSI).

4.14.3.3 Crew Requirement. HAC, H2P, CC, NSI/NSSI/RSI/MTI, RSUI

4.14.3.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes. The following prerequisites are required prior to commencing the Night SAR flights:

NSAR-3200 1.5 365 B,R NS A 1 HH-46E

Goal. Conduct night search patterns and overland search procedures.

Requirement

Brief/Discuss

- Standard Voice Communications
- Night SAR procedures
- Search Patterns
- Remote Hover Coupler Station
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Probability of detection
- Aircraft lighting to include the Night Sun and Aldis lamp

Introduce/Demonstrate

- Search Patterns
- Remote Hover Coupler Station
- Manual and Coupled approaches
- Night Sun/Aldis lamp limitations and procedures

Performance Standard

RSUI shall assist the pilots in conducting a search pattern consisting of a minimum of 5 checkpoints, and maintain within 500 meters of course line. RSUI shall provide calls, using standard terminology, to the pilot to conduct a hover over a simulated survivor while maintaining within 5 feet of the hover point.

Prerequisite. SAR-3100

NSAR-3201 1.5 * B NS A 1 HH-46E

Goal. Conduct night overland hoisting operations utilizing the Rescue Strop, Forest Penetrator, Rescue Basket, Stokes Litter, MEDEVAC Litter, and Hoisting Vest (if available).

Requirement

Brief/Discuss

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure

Use of quick splice and Chicago grip
Review hand and arm and Aldis lamp signals with an emphasis on the night environment
Rescue equipment functions, capabilities and limitations
Rigging of rescue equipment to include chemlite placement and safety checks

Introduce/Demonstrate

Night overland hoisting procedures per the NTTP 3-50.1
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter with chemlites
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Hoisting operations while acting in the capacity of the Crew Chief
Hoisting operations while acting in the capacity of the Rescue Swimmer on the deck

Performance Standard

RSUI shall rig and perform 2 hoisting evolutions acting in the capacity of the Crew Chief while maintaining a hover within 5 feet of the hover point. One shall be done using the forest penetrator/rescue seat and one using rescue basket. RSUI shall also perform a minimum of 1 hoisting evolution for each piece of rescue equipment while acting in the capacity of the Rescue Swimmer.

Prerequisite. SAR-3101

NSAR-3202	1.5	30	B,R,M	NS	A	1	HH-46E

Goal. Conduct night overland live hoisting operations utilizing the belay line.

Requirement

Brief/Discuss

Hoist capabilities and limitations
Emergency procedures and troubleshooting for hoist failure
Use of quick splice and Chicago grip
Review hand and arm and Aldis lamp signals
Rescue equipment functions, capabilities and limitations
Rigging of rescue equipment and safety checks
Rigging and limitations of the belay line

Introduce/Demonstrate

Night overland hoisting procedures per the NTTP 3-50.1
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter with chemlites
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Live hoisting operations while acting in the capacity of the Crew Chief
Live hoisting operations while acting in the capacity of the Rescue Swimmer
Live hoisting operations for dual recoveries while acting in the capacity of the Rescue Swimmer both connected and on the deck

Performance Standard

RSUI shall rig and perform one deployment of a Medical Technician and one recovery of a simulated survivor in the rescue seat while acting in the capacity of the crew chief. RSUI shall perform a minimum of 1 hoisting evolution for each piece of rescue equipment while acting in the capacity of the Rescue Swimmer on the deck. RSUI shall also one dual recovery of the MEDEVAC litter with the RSI tending the trail line.

Prerequisite. SAR-3102, NSAR-3201

NSAR-3203 2.0 365 B,R NS A 1 HH-46E

Goal. Conduct night overland SAREX.

Requirement

Brief/Discuss

- Night overland SAR procedures, to include search patterns and CAL selections
- Crewmember responsibilities and cabin preparations
- Cabin lighting configurations
- Communication procedures

Introduce/Demonstrate

- Cabin preparation and actions while en route to scene
- Conduct/assist in patient(s) assessment, treatment and packaging
- Loading and securing patient(s) inside aircraft
- Provide/assist in patient care while en route to a Medical Treatment Facility
- Unloading and transferring patient(s)
- Familiarization with medical equipment on board

Performance Standard

RSUI shall act in the capacity of the Rescue Swimmer during a simulated Search and Rescue Exercise. RSUI shall safely perform one hoisting evolution from the deck and demonstrate an ability to safely care for patients throughout the entire evolution.

Prerequisite. SAR-3103, NSAR-3200, NSAR-3202

NSAR-3204 1.5 60 B,R,M NS A 1 HH-46E

Goal. Conduct night over water search and Doppler approaches.

Requirement

Brief/Discuss

- Standard Voice Communications
- Over water SAR procedures
- Search Patterns
- Remote Hover Coupler Station
- Doppler capabilities and procedures
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures in the night environment
- Survival gear
- Flare capabilities, arming/disarming and deployment techniques
- Ordnance hazards and safety precautions

Introduce/Demonstrate

- Flare deployment
- Standard Voice Communications
- Remote Hover Coupler Station
- Manual and Coupled approaches
- Over water search techniques

Performance Standard

RSUI shall conduct a minimum of 1 verbal control for manual approaches and 1 verbal control for coupled approaches while maintain within 5 feet of hover point. RSUI will safely conduct a minimum of 5 simulated hoisting evolutions utilizing any piece of SAR equipment.

Prerequisite. SAR-3104, NSAR-3200

Ordnance. 1 MK-25, 1 MK-58

NSAR-3205 1.5 * B,R NS A 1 HH-46E

Goal. Conduct night Rescue Swimmer deployment and recovery with rescue strop and basket.

Requirement

Brief/Discuss

- Impact of sea state and weather concerning swimmer deployment
- Rescue Swimmer deployment and recovery procedures
- Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
- Short haul purpose and procedures
- Normal and emergency hoisting procedures
- ICS communications and standard hand and arm signals
- Ordnance hazards and safety
- Lighting control in the water
- Equipment hazards in the night environment

Introduce/Demonstrate

- Rescue swimmer deployments at via the rescue hoist
- Night single recovery utilizing the rescue strop and rescue basket with simulated a survivor
- Night dual recovery utilizing the rescue strop and rescue basket with simulated a survivor
- Short haul to simulated survivor

Performance Standard

RSUI shall safely conduct 2 day deployments from the rescue hoist and recover via rescue strop and rescue basket. RSUI shall safely perform single and dual recoveries utilizing the rescue strop and rescue basket with a short haul on 1 of the recoveries.

Prerequisite. SAR-3105, NSAR-3202, NSAR-3204

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

NSAR-3206 1.5 180 B,R,M NS A 1 HH-46E

Goal. Conduct night Rescue Swimmer deployment and recovery with the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

- Impact of sea state and weather concerning swimmer deployment
- Rescue Swimmer deployment and recovery procedures
- Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
- The use of the trail line assembly
- Normal and emergency hoisting procedures
- ICS communications and standard hand and arm signals
- Ordnance hazards and safety
- Standard procedures regarding litters in the water

Trail line and litter hazards in the night environment
Lighting control in the water

Introduce/Demonstrate

Rescue swimmer deployments via the rescue hoist
Day deployment and recovery utilizing the Stokes litter with a simulated survivor
Day deployment and recovery utilizing the MEDEVAC litter with a simulated survivor

Performance Standard

RSUI shall safely conduct a minimum of 2 night deployments via the rescue hoist and safely recover 2 simulated patients utilizing both the Stokes litter and the MEDEVAC litter.

Prerequisite. SAR-3106, NSAR-3205

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

NSAR-3207	1.5	*	B,R	NS	A	1 HH-46E

Goal. Conduct night SAR boat hoisting utilizing the rescue strop, rescue basket and hoisting vest

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat in the night environment
Rescue personnel and equipment hook-up procedures
Chemlite placement and procedures

Introduce/Demonstrate

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the rescue strop and rescue basket

Performance Standard

RSUI shall safely conduct 6 hoisting evolutions utilizing the rescue strop, rescue basket and hoisting vest (if applicable); a minimum of 2 times each while acting in the capacity of the Rescue Swimmer on the deck.

Prerequisite. SAR-3107, NSAR-3204

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

NSAR-3208	1.5	180	B,R,M	NS	A	1 HH-46E

Goal. Conduct night SAR boat hoisting utilizing the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat

Rescue personnel and equipment hook-up procedures
Use of the trail line assembly
Introduce/Demonstrate
Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the Stokes and MEDEVAC litters with the trail line assembly

Performance Standard

RSUI shall conduct a minimum of 2 dry runs prior to hoisting one rescue personnel to the deck while acting in the capacity of the Crew Chief. The RSUI shall conduct a minimum of 4 hoisting evolutions utilizing the Stokes litter and the MEDEVAC litter a minimum of 2 times each while acting in the capacity of the Rescue Swimmer on the deck.

Prerequisite. SAR-3108, NSAR-3207

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

NSAR-3209 2.0 * B,R NS A 1 HH-46E

Goal. Conduct night over water SAREX.

Requirement
Brief/Discuss
Over water SAR procedures, to include search patterns, sea conditions and patient locations
Crewmember responsibilities and cabin preparations
Survivor marking procedures
Communication procedures
Introduce/Demonstrate
Cabin preparation and actions while en route to scene
Conduct scene survey and survivor marking
Conduct survivor(s) assessment, approaches/carries, escapes/releases, disentanglement and recovery
Provide/assist in patient care while en route to a Medical Treatment Facility
Cabin lighting configurations
Review medical treatment procedures and protocols
Familiarization with medical equipment on board
Unloading and transferring patient(s)

Performance Standard

RSUI shall act in the capacity of the Rescue Swimmer during a simulated night over water Search and Rescue Exercise. RSUI shall safely deploy from the aircraft and demonstrate the ability to properly rescue and provide care to the simulated survivors until the arrival at a Medical Treatment Facility.

Prerequisite. SAR-3109, NSAR-3203, NSAR-3206, NSAR-3208

Ordnance. 1 MK-25, 1 MK-58

External Support. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required

4.15 CORE PLUS MISSION SKILL PHASE (4000)

4.15.1 General. The Core Plus Mission Skill Phase is designed to ensure a small cadre of RESCUE Swimmers are properly trained and qualified in skill sets not used in the normal day to day operations.

4.16 CORE PLUS MISSION SKILL STAGES (4000)

STAGE	EVENTS
4.16.1	Academics (ACAD)
4.16.2	Day Rappel Aircrew Procedures (RAP)
4.16.3	Night Rappel Aircrew Procedures (NRAP)
4.16.4	Direct Deployment (DIR)
4.16.5	Over the Ramp Hoisting (ORH)
4.16.6	Carrier Qualification (CQ)
4.16.7	Formation (FORM)

4.16.1 Academics (ACAD)

4.16.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each RS. A summary of academic classes that is required for Core Plus Mission Skill Phase (4000) are listed below with their corresponding T&R code.

4.16.1.2 General. The Academic syllabus is designed to ensure RS are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS CORE SKILLS PHASE (4000)
ACAD-4000	DAY RAPPEL AIRCREW PROCEDURES*
ACAD-4001	NIGHT RAPPEL AIRCREW PROCEDURES*
ACAD-4002	OVERLAND DIRECT DEPLOYMENT*
ACAD-4003	MARITIME DIRECT DEPLOYMENT*
ACAD-4004	OVER THE RAMP HOISTING*
ACAD-4005	FIELD CARRIER LANDING PRACTICE
ACAD-4006	CARRIER QUALIFICATION
ACAD-4007	FORMATION TACTICS

4.16.2 Rappel Aircrew Procedures (RAP)

4.16.2.1 Purpose. Develop the RSs knowledge and proficiency of day rappel procedures, equipment limitations, equipment set-up and usage, and safety checks.

4.16.2.2 General. The T&R Program Manual addresses the Commanding Officer’s authority to modify this training as required. A NATOPS Instructor will monitor the trainee’s progress during the flight training syllabus.

RSs must be a graduate of CNO approved Basic Rappel Indoctrination Course (D-050-2600) as required by OPNAVIST 3130.6 (series).

RSs who have not completed the appropriate RAP syllabus should not perform day rappelling. RSUI may start the Day Rappel syllabus prior to completion of the 3000 phase.

A rappel instructor constitutes as any Rescue Swimmer Instructor or Medical Technician Instructor who has completed the RAP and NRAP stages of the T&R and is designated a HIRA Instructor (HIRAI) by the Commanding Officer.

Upon completion of this stage of training, RS should be able to correctly perform all required equipment set-ups and safely rappel from the aircraft during the day environment.

4.16.2.3 Crew Requirement. HAC, H2P, HIRA-CC, HIRAI, RSUI

4.16.2.8 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes

RAP-4100 1.0 * B D A 1 HH-46E

Goal. Introduce day SAR rappelling and short haul operations

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Hoisting vest

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups

Proper rappelling techniques and procedures

Single, double and modified lock-offs

Standard and bagless rappelling

Short haul procedures and use of hoisting vest

Performance Standard
The RSUI shall conduct a minimum of 1 bagless rappel descent and 4 standard rappel descents with 1 ending in a short haul of a simulated survivor in the hoisting vest.

Prerequisite. SAR-3102, ACAD-4000

RAP-4101 1.0 90 B,R,M D A 1 HH-46E

Goal. Conduct day SAR rappelling and short haul operations.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Rappelling with equipment
Short haul procedures with a litter

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups

Proper rappelling techniques and procedures

Single, double and modified lock-offs

Rappelling with equipment

Short haul procedures with a litter

Performance Standard

The RSUI shall conduct a minimum of 4 rappels descents with 2 ending in a short haul of a simulated survivor in a litter.

Prerequisite. RAP-4100

RAP-4102 1.0 * B,R D E A 1 HH-46E

Goal. Conduct a day HIRA evaluation.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up

Short haul procedures and lock off techniques

Postflight inspections of rappel equipment

Introduce/Practice/Review

Rappel rope and belay line rigging and set-up
Standard and bagless rappel descents with equipment
Short haul and lock-off procedures

Performance Standard

The RSUI should properly setup the rappel and belay line and conduct safety checks without assistance. The RSUI shall perform 2 rappel descents with equipment that end in the short haul of a simulated survivor in a litter.

Prerequisite. RAP-4101

4.16.3 Night Rappel Aircrew Procedures (NRAP)

4.16.3.1 Purpose. Develop the RSs knowledge and proficiency of night rappel procedures, equipment limitations, equipment set-up and usage, and safety checks.

4.16.3.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

RSs must be complete with the RAP stage prior to commencing the NRAP stage. RSs who have not completed the appropriate NRAP syllabus should not perform night rappelling.

A rappel instructor constitutes as any Rescue Swimmer Instructor or Medical Technician Instructor who has completed the RAP and NRAP stages of the T&R and is designated a HIRA Instructor (HIRAI) by the Commanding Officer.

Upon completion of this stage of training, RS should be able to correctly perform all required equipment set-ups and safely rappel from the aircraft during the night environment.

4.16.3.3 Crew Requirement. HAC, H2P, CC, RACI, RACUI

4.16.3.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

NRAP-4200 1.0 * B NS A 1 HH-46E

Goal. Introduce night SAR rappelling and short haul operations.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Hoisting vest

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups

Proper rappelling techniques and procedures

Single, double and modified lock-offs

Standard and bagless rappelling

Short haul procedures and use of hoisting vest

Performance Standard

The RSUI shall conduct a minimum of 1 bagless rappel descent and 4 standard rappel descents with 1 ending in a short haul of a simulated survivor in the hoisting vest.

Prerequisite. SAR-3202, RAP-4102, ACAD-4001

NRAP-4201 1.0 90 B,R,M NS A 1 HH-46E

Goal. Conduct night SAR rappelling and short haul operations.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Rappelling with equipment
Short haul procedures with a litter

Introduce/Practice/Review

Rappel rope and belay line rigging and set-ups

Proper rappelling techniques and procedures

Single, double and modified lock-offs

Rappelling with equipment

Short haul procedures with a litter

Performance Standard

The RSUI shall conduct a minimum of 4 rappels descents with 2 ending in a short haul of a simulated survivor in a litter.

Prerequisite. NRAP-4200

NRAP-4202 1.0 * B,R NS E A 1 HH-46E

Goal. Conduct a night HIRA evaluation.

Requirement

Brief/Discuss

Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals

Equipment inventory, preflight inspection and set-up

Short haul procedures and lock off techniques

Postflight inspections of rappel equipment

Introduce/Practice/Review

Rappel rope and belay line rigging and set-up
Standard and bagless rappel descents with equipment
Short haul and lock-off procedures

Performance Standard

The RSUI should properly setup the rappel and belay line and conduct safety checks without assistance. The RSUI shall perform 2 rappel descents with equipment that end in the short haul of a simulated survivor in a litter.

Prerequisite. NRAP-4201

4.16.4 Direct Deployment (DIR)

4.16.4.1 Purpose. Develop the RSs knowledge and proficiency in overland and over water direct deployment during both the day and night environment

4.16.4.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

RSs must be complete with the entire DIR stage prior to being designated as a Direct Deployment Rescue Swimmer. RSUI may not start the DIR syllabus prior to completion of the 3000 phase.

A Direct Deployment instructor constitutes as any Rescue Swimmer Instructor who is a graduate of USCG Advanced Helicopter Rescue School (AHRS) or has been locally qualified by a graduate of USCG AHRS, complete with the DIR stage of the T&R syllabus and has been designated by the Commanding Officer.

Upon completion of this stage of training, RS should be able to correctly perform all Direct Deployment procedures in overland and over water environments during both day and night time.

4.16.4.3 Crew Requirement. HAC, H2P, CC, RSI, RSUI

4.16.4.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

DIR-4300 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day overland direct deployment.

Requirement

Brief/Discuss

Safety considerations

Belay rigging procedures and limitations

Direct Deployment rigging procedures

Standard Direct Deployment procedures to include standard ICS terminology and hand and arm signals

Site evaluation, route planning and emergency procedures

Approach planning techniques

Rescue hoist limitations and capabilities

Single lift recovery method

Double lift recovery method

Introduce/Practice/Review

Direct Deployment rigging procedures

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals

Site evaluation, route planning and emergency procedures

Approach planning techniques

Single lift recovery method

Double lift recovery method

Performance Standard

The RSUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method.

Prerequisite. SAR-3109, ACAD-4002

DIR-4301 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day over water direct deployment.

Requirement

Brief/Discuss

Safety considerations

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals

Impact of sea state and weather concerning Rescue Swimmer direct deployment

Site evaluation and emergency procedures

Approach planning techniques

Rescue hoist limitations and capabilities

Single lift recovery method

Double lift recovery method

Ordnance hazards safety

Introduce/Practice/Review

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals

Impact of sea state and weather concerning Rescue Swimmer direct deployment

Site evaluation and emergency procedures

Approach planning techniques

Single lift recovery method

Double lift recovery method

Performance Standard

The RSUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method.

Prerequisite. SAR-3109, ACAD-4003

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

DIR-4310 1.5 365 B,R,M NS A 1 HH-46E

Goal. Develop knowledge and proficiency in night overland direct deployment.

Requirement

Brief/Discuss

- Safety considerations in the environment
- Belay rigging procedures and limitations
- Direct Deployment rigging procedures
- Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
- Site evaluation, route planning and emergency procedures
- Approach planning techniques
- Rescue hoist limitations and capabilities
- Single lift recovery method
- Double lift recovery method

Introduce/Practice/Review

- Direct Deployment rigging procedures
- Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
- Site evaluation, route planning and emergency procedures
- Approach planning techniques
- Single lift recovery method
- Double lift recovery method

Performance Standard

The RSUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method.

Prerequisite. NSAR-3209, DIR-4300

DIR-4311 1.5 365 B,R,M NS A 1 HH-46E

Goal. Develop knowledge and proficiency in night over water direct deployment.

Requirement

Brief/Discuss

- Safety considerations
- Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
- Impact of sea state and weather concerning Rescue Swimmer direct deployment

Site evaluation and emergency procedures

Approach planning techniques

Rescue hoist limitations and capabilities

Single lift recovery method

Double lift recovery method

Ordnance hazards safety

Introduce/Practice/Review

Standard Direct Deployment procedures to include ICS terminology and hand and arm signals

Impact of sea state and weather concerning Rescue Swimmer direct deployment

Site evaluation and emergency procedures

Approach planning techniques

Single lift recovery method

Double lift recovery method

Performance Standard

The RSUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method.

Prerequisite. SAR-3209, DIR-4301

Ordnance. 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

4.16.5 Over The Ramp Hoisting (ORH)

4.16.5.1 Purpose. To develop knowledge and proficiency in over the ramp hoisting during the day and night environment.

4.16.5.2 General. RSUI must receive this training from a qualified Crew Chief Instructor or Night System SAR Instructor. RSUI do not have to be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. This flight must be flown on the corresponding flight of the pilot ORH stage. All initial syllabus training flights require an ATF.

4.16.5.3 Crew Requirement. HAC, H2P, CCI/NSSI, RSUI, RS/MT

4.16.5.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

ORH-4400	1.5	365	B,R,M	D	A	1	HH-46E

Goal. Develop knowledge and proficiency in day hoisting operations utilizing the internal cargo winch through the aft cargo hatch.

Requirement

Brief/Discuss

Standard Internal Cargo winch hoisting procedures

Standard voice communication procedures

Internal cargo winch capabilities and limitations

Emergency procedures and troubleshooting for internal cargo winch failure

Rigging of internal cargo winch and remote handgrip
Review hand and arm signals
Rescue equipment functions, capabilities and limitations
Rigging of rescue equipment and safety checks

Introduce/Practice/Review
Over the ramp hoisting procedures per the NTTP 3-50.1
Cabin preparation and configuration
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Hoisting operations while acting in the capacity of the Crew Chief
Hoisting operations while acting in the capacity of the Rescue Swimmer on the ground

Performance Standard

The RSUI shall rig the internal cargo winch and remote hand grip. The RSUI shall conduct a minimum of 2 hoist evolutions utilizing the rescue basket while acting in the capacity of the Crew Chief. RSUI shall also conduct a minimum of 4 hoist evolutions while acting in the capacity of the Rescue Swimmer on the ground utilizing the rescue seat, rescue basket and MEDEVAC/Stokes litter.

Prerequisite. SAR-3102, ACAD-4004

ORH-4410	1.5	365	B,R,M	NS	A	1	HH-46E

Goal. Develop knowledge and proficiency in night hoisting operations utilizing the internal cargo winch through the aft cargo hatch.

Requirement

Brief/Discuss
Over the ramp hoisting safety considerations in the night environment
Standard Internal Cargo winch hoisting procedures
Standard voice communication procedures
Internal cargo winch capabilities and limitations
Emergency procedures and troubleshooting for internal cargo winch failure
Rigging of internal cargo winch and remote handgrip
Review hand and arm signals
Rescue equipment functions, capabilities and limitations
Rigging of rescue equipment and safety checks

Introduce/Practice/Review
Over the ramp hoisting procedures per the NTTP 3-50.1
Cabin preparation and configuration
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Hoisting operations while acting in the capacity of the Crew Chief

Hoisting operations while acting in the capacity of the Rescue Swimmer on the ground

Performance Standard

The RSUI shall rig the internal cargo winch station and remote hand grip. The RSUI shall conduct a minimum of 2 hoist evolutions utilizing the rescue basket while acting in the capacity of the Crew Chief. RSUI shall also conduct a minimum of 4 hoist evolutions while acting in the capacity of the Rescue Swimmer on the ground utilizing the rescue seat, rescue basket and MEDEVAC/Stokes litter.

Prerequisite. NSAR-3202, ORH-4400

4.16.6 Carrier Qualification (CQ)

4.16.6.1 Purpose

4.16.6.2 General. Training includes FCLP/CQ and NVG operations. Extended searches may require shipboard operations for refueling, casualty recovery, and/or remote site launches. The benefits of NVG operations cannot be over emphasized, and every effort should be made to ensure all crew members are SAR Night Systems Qualified (NSQ).

RSUI must receive this training from a qualified Crew Chief Instructor or Night System SAR Instructor that was previously Carrier Qualified in the CH-46E T&R Manual. RSUI do not have to be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. This flight must be flown on the corresponding flight of the pilot FCLP stage. All initial syllabus training flights require an ATF.

Refer to the NATOPS Manual, NWP 3-04.1 (Helicopter Operations for Air Capable Ships), and LHA/LPH/LHD NATOPS.

Five day and five NVD landings required for qualification/currency.

4.16.6.3 Crew Requirement. HAC, H2P, CCI/NSSI, RSUI, RS/MT

4.16.6.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

FCLP-4500	1.5	365	B,R	D	A	1 HH-46E

Goal. Conduct day, carrier pattern familiarization.

Requirement

Brief/Discuss

Introduce day FCLP patterns and approaches
Discuss emergency procedures peculiar to shipboard operations
Discuss aircrew coordination
Discuss verbal/visual communications used during shipboard landings and launches
Discuss LSE signal
Brief water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce day FCLP patterns and approaches
Practice Field Carrier Landings and approaches
Review LSE signals
Introduce LHD and LHA carriers

Performance Standard

The RSUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform shipboard flight operations to include LSE hand and arm signals. The RSUI shall successfully complete 5

approaches, landings and launches of the aircraft on an authorized field carrier.

Prerequisite. 2000 Phase complete, ACAD-4005

FCLP-4510 1.5 365 B,R,M NS A 1 HH-46E

Goal. Conduct NVG carrier pattern familiarization.

Requirement

Brief/Discuss

Introduce day FCLP patterns and approaches
Discuss emergency procedures peculiar to shipboard operations
Discuss aircrew coordination
Discuss verbal/visual communications used during shipboard landings and launches
Discuss LSE signal
Brief water landing/ditching, and aircraft lighting

Introduce/Practice/Review

Introduce day FCLP patterns and approaches
Practice Field Carrier Landings and approaches
Review Night LSE signals
Introduce LHD and LHA carriers

Performance Standard

The RSUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The RSUI shall successfully complete 5 approaches, landings and launches of the aircraft on an authorized field carrier in the night environment.

Prerequisite. FCLP-4500

CQ-4600 1.5 365 B,R D A 1 HH-46E

Goal. Conduct day, carrier qualifications.

Requirement

Brief/Discuss

CQ patterns, approaches and landings
Emergency procedures particular to shipboard operations
Discuss height over various decks
Aircrew coordination
Verbal and visual communications used during shipboard landings and launches
LSE signals
Water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce day carrier qualification per NATOPS.
Introduce day CQ patterns and approaches
Practice Carrier Landings and approaches
Review LSE signals
Introduce LHD and LHA carriers

Performance Standard

The RSUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The RSUI shall successfully

complete 5 approaches, landings and launches of the aircraft on a carrier.

Prerequisite. FCLP-4500, ACAD-4006

CQ-4610 1.5 365 B,R,M NS A 1 HH-46E

Goal. Conduct night, carrier qualifications.

Requirement

Brief/Discuss

CQ patterns, approaches and landings
Emergency procedures particular to shipboard operations
Discuss height over various decks
Aircrew coordination
Verbal and visual communications used during shipboard landings and launches
LSE signals
Water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce night carrier qualification per NATOPS.
Introduce night CQ patterns and approaches
Practice Carrier Landings and approaches
Review night LSE signals
Introduce LHD and LHA carriers

Performance Standard

The RSUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The RSUI shall successfully complete 5 approaches, landings and launches of the aircraft on a carrier in the night environment.

Prerequisite. CQ-4600

4.16.7 Formation (FORM)

4.16.7.1 Crew Requirement. HAC, CP, CCI, RSUI, CC (or qualified RS or MT)

4.16.7.2 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

FORM-4700 1.5 180 B,R,M D A 2 HH-46E

Goal. Review day formation flying and conduct day navigation as a section or division.

Requirement

Brief/Discuss.

CRM.
Crew comfort levels.
Lead changes.
Lead considerations.
Standard terminology.
Formation maneuvering.
Aircraft clearance.
Intra and inter aircraft communications.
Distance estimation.
Mass casualty response procedures and triage.

Introduce/Review.

Combat spread and combat cruise.
Parade.
IIMC Breakup.
Cruise principles,
Turn patterns,
Crossover,
Break-up and rendezvous,
Lead changes.
Lookout doctrine.
ICS procedures.

Performance Standards. Demonstrate the ability to perform and understand formation maneuvering, utilize standard terminology while maintaining a high level of situational awareness and maintain awareness of friendly aircraft while maintaining a proper scan and lookout doctrine.

Prerequisite. 2000 PHASE COMPLETE, ACAD-4007

FORM-4701	1.5	180	B,R,M	D	A	2	HH-46E

Goal. Conduct section aircraft formation approaches, landings and departures to/from a confined area.

Requirement

Brief/Discuss.

CRM.
Lookout doctrine.
Obstacle clearance.
Distance estimation.
Wingman position.
Wave off/brownout procedures.
Section formation.

Introduce/Review.

Crew responsibilities during section CAL operations.
Lookout doctrine emphasizing responsibilities during section operations.

Performance Standards. Demonstrate the ability to clear the aircraft for landing into confined areas while recognizing closure rate, drift error and effectively utilizing proper distance estimation and depth perception. Maintain SA of wingman throughout the evolution.

Prerequisite. FORM-4700

FORM-4710	1.5	180	B,R,M	NS	A	2	HH-46E

Goal. Conduct NS section navigation.

Requirement

Brief/Discuss.

CRM.
Crew comfort levels.
Lead changes.
Aircraft lighting.
Closure rate.
Distance estimation.
NVG procedures and emergencies.

Relative motion and depth perception problems at night.
Lookout doctrine.

Introduce/Review.

Combat spread and combat cruise.
Parade.
IIMC Breakup.
Cruise principles,
Turn patterns,
Crossover,
Break-up and rendezvous,
Lead changes.

Performance Standards. Demonstrate the ability to conduct formation flight while utilizing NVGs. Maintain SA of wingman and communicate his position throughout the evolution.

Prerequisite. FORM-4700

FORM-4711 1.5 180 B,R,M NS A 2 HH-46E

Goal. Conduct NS section approaches, landings, and departures to a confined area.

Requirement

Brief/Discuss.

CRM.
Crew comfort levels.
NVG navigation techniques.
NVG failures.
Emergencies.
Inadvertent IMC.
Aircraft lighting.
Use of IR searchlight.
Depth perception.
Obstacle clearance.

Introduce/Review.

Section takeoffs/landings at various unlit CAL sites.

Performance Standards. Utilizing NVGs, demonstrate the ability to clear the aircraft for landing into confined areas while recognizing closure rate, drift error and effectively utilizing proper distance estimation and depth perception. Maintain SA of wingman throughout the evolution.

Prerequisite. FORM-4701, FORM-4710

4.17 INSTRUCTOR TRAINING PHASE (5000)

4.17.1 General. The instructor training phase is designed to provide the Squadron with a cadre of highly skilled instructors to ensure Rescue Swimmers receive consistent, comprehensive training designed to ensure their mission success.

4.18 INSTRUCTOR TRAINING STAGES (5000)

STAGE	EVENT
4.18.1	Rescue Swimmer Instructor (RSI)

4.18.1 Rescue Swimmer Instructor (RSI)

4.18.1.1 Purpose. Develop qualified Rescue Swimmer Instructors with the ability to teach SAR operations using standardized flight training.

4.18.1.2 General. RSIUT must be a designated a HH-46E Rescue Swimmer. Upon completion of the RSI syllabus, Rescue Swimmers may be designated an HH-46E Rescue Swimmer Instructor.

4.18.1.3 Crew Requirement. HAC, H2P, CC, RSI, MT, RSIUT

4.18.1.4 Ground/Academic Training. Prior to the beginning of this stage, the RSIUT will be provided the required ACAD classes.

RSI-5100 1.5 * B,R D E A 1 HH-46E

Goal. Demonstrate instructional techniques during day FAM/EP/CAL/INT maneuvers and procedures.

Requirement

Brief/Discuss

- Crew coordination
- Local area and familiarization maneuvers
- Confined area landings
- Emergency Procedures
- Internal cargo, patient and passenger loading
- Instructional techniques

Review

- Confined area landings
- Emergency procedures
- Familiarization maneuvers

Performance Standard

The RSIUT will demonstrate instructional techniques in crew responsibilities/coordination during preflight, start, taxi, take-off, landing, in-flight emergency procedures, ICS procedures and confined area landings.

Prerequisite. DESG-6210

RSI-5101 1.5 * B,R D E A 1 HH-46E

Goal. Develop instructional techniques during Bambi Bucket operations.

Requirement

Discuss

- Crew coordination
- Pre/Post/In-flight procedures for Bambi Bucket operations
- Bambi Bucket and external cargo hook limitations
- Principles of fire fighting
- Emergency procedures
- Water bucket delivery techniques
- Maximum HOGE weight for pickup and delivery and flight envelops with water buckets

Review

- Bambi Bucket operations

Performance Standard

The RSIUT will demonstrate instructional techniques in crew responsibilities/coordination during preflight, in-flight and post flight for Bambi Bucket operations.

Prerequisite. IUT-5100

RSI-5102 1.5 * B,R D E A 1 HH-46E

Goal. Develop instructional techniques during Overland Search and Rescue operations.

Requirement

Brief/Discuss

- Instructional techniques
- Overland SAR procedures
- Techniques for planning and evaluating Overland SAR exercises
- Evaluations guidelines and standards per the SOP
- Crew responsibilities during Overland SAR exercises
- Training site set-up and roles of simulated survivors to pertinent aircrew members

Review

- Overland hoisting procedures
- Overland Search and Rescue techniques
- Overland SAR exercise planning, procedures and evaluation techniques

Performance Standard

The RSIUT shall demonstrate instructional techniques for overland search patterns and hoisting operations. RSIUT will also demonstrate proficient knowledge in all procedures related to planning and executing an Overland SAR exercise unassisted.

Prerequisite. IUT-5100

RSI-5103 1.5 * B,R D E A 1 HH-46E

Goal. Develop instructional techniques during Overwater Search and Rescue operations.

Requirement

Brief/Discuss

- Instructional techniques
- Overwater SAR procedures
- Techniques for planning and evaluating Overwater SAR exercises
- Evaluations guidelines and standards per the SOP
- Crew responsibilities during Overwater SAR exercises
- Training site set-up and roles of simulated survivors to pertinent aircrew members
- In water procedures to include safety checks and rescue methods

Review

I
- Rescue Swimmer deployment and recovery procedures
- Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
- Normal and emergency hoisting procedures
- Ordnance hazards and safety
- Rescue swimmer deployments at 10/10 and 15/0
- Overwater SAR exercise planning, procedures and evaluation Techniques

Performance Standard

The RSIUT shall demonstrate instructional techniques for overwater search patterns, approaches and rescue operations. RSIUT will also

demonstrate proficient knowledge in all procedures related to planning and executing an Overwater SAR exercise unassisted.

Prerequisite. IUT-5100

Ordnance. 1 MK-25, 1 MK-58

External Support. Aircraft with safety swimmer or a safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required

4.19 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) PHASE (6000)

4.19.1 General. The 6000 phase encompasses the events required to maintain currency with all certifications, qualifications, and designations. Completion of these events ensures the RESCUE AIR CREWMEN is qualified to execute the various missions assigned to the Squadron.

4.20 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) STAGES (6000)

T&R CODE	EVENT
4.21.1	Academics (ACAD)
4.21.2	NATOPS (NTPS)
4.21.4	Designation Flight (DESG)

4.20.1 Academics (ACAD)

4.20.1.1 Purpose. To complete the academic requirements for subsequent annual evaluation flights.

T&R CODE	ACADEMIC SYLLABUS CORE SKILLS PHASE (4000)
ACAD-6001	NATOPS OPEN BOOK
ACAD-6002	NATOPS CLOSED BOOK
ACAD-6003	NATOPS ORAL EXAM
ACAD-6007	CRM GROUND CLASS
ACAD-6008	MONTHLY EP QUIZ
ACAD-6010	SAR RESCUE SWIMMER EXAM
ACAD-6013	HIRA RESCUE CREWMAN EXAM

ACAD-6001 4.0 365 B,R,M E

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the Rescue Swimmer's knowledge of the appropriate publications and the aircraft.

Performance Standard

Achieve a minimum score of 3.5 on the open book examination.

ACAD-6002 2.0 365 B,R,M E

Goal. The purpose of the closed book examination is to evaluate the Rescue Air Crewmen's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard

Achieve a minimum score of 3.3 on the closed book examination. An incorrect answer on any question in the critical stage will result in a grade of Unqualified being assigned to that examination.
Prerequisite. ACAD-6001

ACAD-6003 2.0 365 B,R,M E

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the Rescue Swimmer's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard

Achieve a minimum grade of qualified on the oral examination.

Prerequisite. NTPS-6002 within 60 days preceding this event.

ACAD-6007 2.0 365 B,R,M E

Goal. CRM ground instruction in accordance with applicable directives and instructions.

Performance Standard
Demonstrate satisfactory knowledge of CRM principles and their application.

ACAD-6008 1.0 30 B,R,M E

Goal. Monthly Emergency Procedures Exam.

Requirement. Conduct a monthly EP Exam.

ACAD-6010 1.0 365 B,R,M E

Goal. Annual SAR Rescue Swimmer Exam.

Requirement. Conduct an annual SAR Rescue Swimmer Exam per OPNAVINST 3130.6E.

ACAD-6013 1.0 365 B,R,M E

Goal. Annual HIRA Rescue Crewman Exam.

Requirement. Conduct an annual HIRA Rescue Air Crewman Exam per OPNAVIST 3130.6E.

4.20.2 NATOPS Evaluations (NTPS)

4.20.2.1 Purpose. Provide annual NATOPS and CRM evaluation flights.

NTPS-6100 1.5 365 B,R,M (N) E A/S 1 HH-46E

Goal. Conduct annual NATOPS evaluation.

Requirement. Proficiency in the utilization of all aspects of the HH-46E as a system. The proficiency expected by the evaluator in this flight shall be commensurate with the experience of the CC under evaluation. Upon successful completion of this evaluation, a CC may be designated a HH-46E (non-SAR) Rescue Swimmer at the discretion of the Commanding Officer.

Performance Standard. The performance expected by the evaluator in this flight shall be commensurate with the experience level of the RS under evaluation.

Prerequisite. 2000 Phase complete, ACAD-6003

NTPS-6101 1.5 365 B,R,M (N) E A/S 1 HH-46E

Goal. Conduct annual CRM evaluation.

Requirement. Perform initial/annual CRM flight evaluation per applicable directives. May be flown in conjunction with annual NATOPS evaluation flight.

Performance Standard. Performance standards will be according to the HH-46E NFM.

Prerequisite. 2000 Phase complete, ACAD-6007

4.20.3 Designation Flights (DESG)

4.20.3.1 Purpose. To provide SAR designations.

4.20.3.2 General. Upon successful completion of DESG-6200, a RS may be designated Day SAR RS at the discretion of the Commanding Officer. Upon successful completion of DESG-6210 a RS may be designated a fully qualified SAR RS at the discretion of the Commanding Officer.

DESG-6200 2.0 365 B,R,M D E A 1 HH-46E

Goal. Condcut Day SAREX. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement

Brief/Discuss

SAR duty crew requirements, limitations, and Alert conditions
Short fused information collection
Mission update briefing techniques
Aircraft configuration
SAR equipment
Coordinating agencies
Use of SAR TACAID
Emergency procedures

Introduce/Review

Emergency response/recall procedures
Scenario based overland SAR exercise
SAR aircraft configurations
Search patterns
Hoisting operations
Hover position/techniques
Hand/arm signals
Gear delivery procedures
Confined area delivery/pickup techniques

Performance Standard.

Rescue Swimmer under evaluation shall act in the capacity of the Rescue Swimmer during a simulated Search and Rescue Exercise. RSUI shall safely demonstrate an ability to safely care for patients throughout the entire evolution involving simulated survivors in the water or on land.

Prerequisite. SAR-3100 through SAR-3109, ACAD-6010

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, etc.) Safety swimmer and survivor(s) as required.

DESG-6210 2.0 365 B,R,M NS E A 1 HH-46E

Goal. Night SAR evaluation. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement

Brief/Discuss

SAR duty crew requirements, limitations, and Alert conditions
Short fused information collection
Mission update briefing techniques
Aircraft configuration
SAR equipment
Coordinating agencies
Use of SAR TACAID
Emergency procedures

Review

Emergency response/recall procedures
Scenario based overland SAR exercise
SAR aircraft configurations
Search patterns
Hoisting operations
Hover position/techniques
Hand/arm signals
Gear delivery procedures
Confined area delivery/pickup techniques

Performance Standard

Rescue Swimmer under evaluation shall act in the capacity of the Rescue Swimmer during a simulated Search and Rescue Exercise. RSUI shall safely demonstrate an ability to safely care for patients throughout the entire evolution involving simulated survivors in the water or on land.

Prerequisite. 3000 Phase complete, ACAD-6010

External Support. Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

4.21 T&R SYLLABUS MATRICES

VMR-1 RESCUE SWIMMER T&R MATRIX															
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
CORE SKILL TRAINING (2000 PHASE EVENTS)															
SAR ACADEMICS (ACAD)															
ACAD	2000	COMMAND MISSION	B,R					*		1.0					
ACAD	2001	CREW RESPONSIBILITIES CLASS	B,R					*		1.0					
ACAD	2002	FLIGHT EQUIPMENT AND SAFETY PROCE	B,R					*		1.0					
ACAD	2003	EGRESS AND EMERGENCY PROCEDURES	B,R					365		1.0					
ACAD	2004	CONFINED AREA LANDINGS	B,R					*		1.0					
ACAD	2005	SAR AND MEDICAL GEAR FAMILIARIZATION	B,R					*		1.0					
ACAD	2006	NIGHT SYSTEMS CLASS	B,R					*		1.0					
ACAD	2007	NIGHT SYSTEMS LAB	B,R					*		1.0					
ACAD	2009	PRINCIPLES OF FIRE FIGHTING	B,R					365		1.0					
ACAD	2010	PASSENGER AND MEDICAL TRANSPORTS	B,R					365		1.0					
TOTAL DAY SAR STAGE									9	9.0		0.0			
FAMILIARIZATION (FAM)															
FAM	2103	AREA FAM	B,R		A	1	D	365				1.5	2000,2001,2002		203
FAM	2104	EP FAM	B,R,M		A	1	D	90				1.5	2003,2103	2103	204
TOTAL FAM STAGE									0	0.0	2	3.0			
CONFINED AREA LANDING (CAL)															
CAL	2200	DAY CALS	B,R,M		A	1	D	45				1.5	2004,2104	2103	220
CAL	2201	REVIEW OF DAY CALS	B		A	1	D	*				1.5	2200	2103	221
TOTAL CAL STAGE									0	0.0	2	3.0			
NAVIGATION (NAV)															
NAV	2300	LOCAL HOSPITAL FAM	B,R,M		A	1	D	365				1.5	2005,2103,2200	2103	250
NAV	2301	DISTANT HOSPITAL FAM	B,R		A	1	D	*				2.5	2005,2103,2200	2103	251
TOTAL NAV STAGE									0	0.0	2	4.0			
NIGHT SYSTEMS (NS)															
NS	2400	INTRODUCTORY NS FAM	B,R		A	1	NS	*				1.5	2006,2007,2104,2201,2300,2301		300
NS	2401	NS FAM	B,R		A	1	NS	*				1.5	2400		301
NS	2402	NS NAV	B,R		A	1	NS	*				1.5	2401		302
NS	2403	NS NAV & CAL	B,R,M		A	1	NS	45				1.5	2402	2201	303
TOTAL NS STAGE									0	0.0	4	6.0			
AERIAL FIREFIGHTING (FF)															
FF	2500	FIRE BUCKET	B,R,M		A	1	D	365				1.5	2009,2104,2201	2201	240
TOTAL FF STAGE									0	0.0	1	1.5			

VMR-1 RESCUE SWIMMER T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
AERIAL TRANSPORT (AT)															
AT	2600	AERIAL TRANSPORT	B,R,M		A	1	(NS)	365				1.5	2010,2201,2300,2301,2403,2104	2201,2103	
TOTAL AT STAGE									0	0.0	1	1.5			
TOTAL 2000 PHASE EVENTS									9	9.0	11	16.0			
MISSION SKILL TRAINING (3000 PHASE EVENTS)															
SAR ACADEMICS (ACAD)															
ACAD	3004	LEVEL A MEDICAL KIT	B,R,M					365		1.0					
ACAD	3005	FIRST AID 1	B,R,M					365		1.0					
ACAD	3006	FIRST AID 2	B,R,M					365		1.0					
ACAD	3007	FIRST AID 3	B,R,M					365		1.0					
ACAD	3008	FIRST AID 4	B,R,M					365		1.0					
ACAD	3009	SAR PUBS/INST/REPORTS	B,R,M					365		1.0					
ACAD	3010	SAR PROCEDURES	B,R,M					365		1.0					
ACAD	3011	RESCUE DEVICES	B,R,M					365		1.0					
ACAD	3012	RESCUE HAND SIGNALS	B,R,M					365		1.0					
ACAD	3013	SURVIVOR MARKER / LOCATOR DEVICES	B,R,M					365		1.0					
ACAD	3014	AIRCREW SURVIVAL EQUIPMENT	B,R,M					365		1.0					
ACAD	3015	MARITIME DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	3016	OVERLAND DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	3017	INANIMATE OBJECT RECOVERY	B,R,M					365		1.0					
ACAD	3018	RP OCCUPATIONAL HAZARDS	B,R,M					365		1.0					
ACAD	3019	SAR ORGANIZATION	B,R,M					365		1.0					
ACAD	3020	SAR PLANNING	B,R,M					365		1.0					
ACAD	3021	SAR COMMUNICATIONS	B,R,M					365		1.0					
ACAD	3022	PRC-149 SWIMMER RADIO	B,R,M					365		1.0					
ACAD	3023	ANNUAL CPR PROCIFICIENCY	B,R,M					365		1.0					
ACAD	3024	RESCUE SWIMMER EQUIPMENT	B,R,M					365		1.0					
ACAD	3025	RESCUE SWIMMER PROCEDURES	B,R,M					365		1.0					
ACAD	3026	PARACHUTE DISENTANGLEMENT PROC	B,R,M					365		1.0					
ACAD	3027	RS LIFESAVING PROC	B,R,M					365		1.0					
ACAD	3028	BELAY PROCEDURES	B,R,M					365		1.0					
ACAD	3029	RAPPEL PROCEDURES	B,R,M					365		1.0					
ACAD	3030	HIRA SHORT HAUL EPs	B,R,M					365		1.0					
ACAD	3031	TRAUMA ASSESSMENT	B,R,M					365		1.0					
ACAD	3032	MEDICAL ASSESSMENT	B,R,M					365		1.0					

VMR-1 RESCUE SWIMMER T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
ACAD	3033	PATIENT MONITORING EQUIPMENT	B,R,M					365		1.0					
ACAD	3035	ADVANCED AIRWAY MANAGEMENT	B,R,M					365		1.0					
ACAD	3038	IV THERAPY	B,R,M					365		1.0					
ACAD	3045	COMPRESSED AIR INJURIES	B,R,M					365		1.0					
ACAD	3046	CARDIOVASCULAR ILLNESSES	B,R,M					365		1.0					
ACAD	3050	HEAT AND COLD RELATED INJURIES	B,R,M					365		1.0					
ACAD	3051	PROTOCOL REVIEWS	B,R,M					365		1.0					
ACAD	3052	OVERLAND HOISTING PROCEDURES	B,R,M					365		1.0					
ACAD	3053	MARITIME HOISTING PROCEDURES	B,R,M					365		1.0					
ACAD	3054	VESSEL HOISTING PROCEDURES	B,R,M					365		1.0					
TOTAL DAY SAR STAGE									29	29.0	0	0.0			
SEARCH AND RESCUE (SAR)															
SAR	3100	DAY LAND SEARCH PATTERNS	B,R		A	1	D	365				1.5	2000 PHASE COMPLETE,3004-3014		252
SAR	3101	DAY LAND HOIST	B		A	1	D	*				1.5	2000 PHASE COMPLETE,3004-3014,3052		253
SAR	3102	DAY LAND LIVE HOIST	B,R,M		A	1	D	30				1.5	3016,3028-3030,3101		253
SAR	3103	DAY OVERLAND SAREX	B,R,M		A	1	D	365				2.0	3018-3023,3031-3033,3035,3038,3045,3046,3050,3102,3100	3100	255
SAR	3104	DAY SWIMMER DEPLOYMENT/DOPPLER	B,R,M		A	1	D	60				1.5	3015,3100		256
SAR	3105	DAY SWIMMER DEPLOYMENT (STROP)	B,R		A	1	D	*				1.5	3024-3027,3053,3102,3104	3104	258
SAR	3106	DAY SWIMMER DEPLOYMENT (LITTERS)	B,R,M		A	1	D	180				1.5	3105	3104,3105	259
SAR	3107	DAY BOAT HOIST	B,R		A	1	D	*				1.5	3054,3105		260
SAR	3108	DAY BOAT HOIST	B,R,M		A	1	D	180				1.5	3107	3107	260
SAR	3109	DAY OVERWATER SAREX	B,R		A	1	D	*				2.0	3017,3051,3103,3106,3108	3104	
TOTAL DAY SAR STAGE									0	0.0	10	16.0			

VMR-1 RESCUE SWIMMER T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
NIGHT SEARCH AND RESCUE (NSAR)															
NSAR	3200	NIGHT LAND SEARCH PATTERNS	B,R		A	1	NS	365				1.5	3100		320
NSAR	3201	NIGHT LAND HOIST	B		A	1	NS	*				1.5	3101		321
NSAR	3202	NIGHT LAND LIVE HOIST	B,R,M		A	1	NS	30				1.5	3102,3201	3201	321
NSAR	3203	NIGHT OVERLAND SAREX	B,R		A	1	NS	365				2.0	3103,3200,3202	3200,3201	322
NSAR	3204	NIGHT WATER SEARCH/DOPPLER	B,R,M		A	1	NS	60				1.5	3104,3200		323
NSAR	3205	NIGHT SWIMMER DEPLOYMENT (STROP)	B,R		A	1	NS	*				1.5	3105,3202,3204	3204	330
NSAR	3206	NIGHT SWIMMER DEPLOYMENT (LITTERS)	B,R,M		A	1	NS	180				1.5	3106,3205	3204,3205	331
NSAR	3207	NIGHT BOAT HOIST (STROP)	B,R		A	1	NS	*				1.5	3107,3204	3204	332
NSAR	3208	NIGHT BOAT HOIST (LITTER)	B,R,M		A	1	N	180				1.5	3108,3207	3204,3207	333
NSAR	3209	NIGHT OVERWATER SAREX	B,R		A	1	NS	*				2.0	3109,3203,3206,3208	3204	340
TOTAL NIGHT SAR STAGE									0	0.0	10	16.0			
TOTAL MISSION SKILLS PHASE									29	29.0	20	32.0			
TOTAL 2000 & 3000 PHASE									38	38.0	31	48.0			
CORE PLUS MISSION SKILL TRAINING (4000 PHASE EVENTS)															
CORE PLUS MISSION SKILLS ACADEMICS (ACAD)															
ACAD	4000	DAY RAPPEL AIRCREW PROCEDURES	B,R,M					365		1.0					
ACAD	4001	NIGHT RAPPEL AIRCREW PROCEDURES	B,R,M					365		1.0					
ACAD	4002	OVERLAND DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	4003	MARITIME DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	4004	OVER THE RAMP HOISTING	B,R,M					365		1.0					
ACAD	4005	FIELD CARRIER LANDING PRACTICE	B,R,M					365		1.0					
ACAD	4006	CARRIER LANDINGS	B,R,M					365		1.0					
ACAD	4007	FORMATION TACTICS	B,R,M					365		1.0					
TOTAL ACAD STAGE									8	8.0	0	0.0			
RAPPEL AIRCREW PROCEDURES (RAP)															
RAP	4100	INTRO TO DAY RAPPEL	B		A	1	D	*				1.0	3102,4000		400
RAP	4101	DAY RAPPEL	B,R,M		A	1	D	90				1.0	4100		401
RAP	4102	DAY RAPPEL EVAL	B,R	E	A	1	D	*				1.0	4101	4101	403
TOTAL RAP STAGE									0	0.0	3	3.0			

VMR-1 RESCUE SWIMMER T&R MATRIX															
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
NIGHT RAPPEL AIRCREW PROCEDURES (NRAP)															
NRAP	4200	INTO TO NIGHT RAPPEL	B		A	1	NS	*				1.0	3202,4001,4102		
NRAP	4201	NIGHT RAPPEL	B,R,M		A	1	NS	90				1.0	4200		
NRAP	4202	NIGHT RAPPEL EVAL	B,R	E	A	1	NS	*				1.0	4201	4201	
TOTAL NRAP STAGE									0	0.0	3	3.0			
DIRECT DEPLOYMENT (DIR)															
DIR	4300	DAY OVERLAND DIR	B,R,M		A	1	D	365				1.5	3109,4002	3102	
DIR	4301	DAY OVERWATER DIR	B,R,M		A	1	D	365				1.5	3109,4003	3105	
DIR	4310	NIGHT OVERLAND DIR	B,R,M		A	1	NS	365				1.5	3209,4300	3202	
DIR	4311	NIGHT OVERLWATER DIR	B,R,M		A	1	NS	365				1.5	3209,4301	3205	
TOTAL DIR STAGE									0	0.0	4	6.0			
OVER THE RAMP HOISTING (ORH)															
ORH	4400	DAY OVER THE RAMP HOIST	B,R,M		A	1	D	365				1.5	3102,4004		254
ORH	4410	NIGHT OVER THE RAMP HOIST	B,R,M		A	1	NS	365				1.5	3202,4400		
TOTAL ORH STAGE									0	0.0	2	3.0			
FIELD CARRIER LANDING PRACTICE (FCLP)															
FCLP	4500	DAY FCLP	B,R		A	1	D	365				1.5	2000 PHASE COMPLETE,4005		
FCLP	4510	NIGHT FCLP	B,R,M		A	1	NS	365				1.5	4500	4500	
TOTAL FCLP STAGE									0	0.0	2	3.0			
CARRIER QUALIFICATION (CQ)															
CQ	4600	DAY CQ	B,R		A	1	D	365				1.5	4006,4500		
CQ	4610	NIGHT CQ	B,R,M		A	1	NS	365				1.5	4600	4600	
TOTAL CQ STAGE									0	0.0	2	3.0			
FORMATION (FORM)															
FORM	4700	FORMATION NAV	B,R,M		A	2	D	180				1.5	2000 PHASE COMPLETE,4007	2103	
FORM	4701	SECTION CALS	B,R,M		A	2	D	180				1.5	4700	2200,4700	
FORM	4710	NS SECTION NAV	B,R,M		A	2	NS	180				1.5	4700	2401,4700	
FORM	4711	NS SECTION CALS	B,R,M		A	2	NS	180				1.5	4701,4710	2403,4701,4710	
TOTAL FORM STAGE									0	0.0	4	6.0			
TOTAL CORE PLUS PHASE									8	8.0	20	30.0			

VMR-1 RESCUE SWIMMER T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
INSTRUCTOR TRAINING (5000 PHASE EVENTS)															
RESCUE SWIMMER INSTRUCTOR (RSI)															
RSI	5100	DAY FAM/CAL/EP	B,R	E	A	1	D	*				1.5	6210		500
RSI	5101	FIREFIGHTING	B,R	E	A	1	D	*				1.5	5100		503
RSI	5102	OVERLAND SAR	B,R	E	A	1	D	*				1.5	5100		504
RSI	5103	OVERWATER SAR	B,R	E	A	1	D	*				1.5	5100		502
TOTAL IUT STAGE									0	0.0	6	4.5			
REQUIREMENT, QUALIFICATIONS AND DESIGNATIONS (RQD) (6000 PHASE EVENTS)															
RQD ACADEMICS (ACAD)															
ACAD	6001	NATOPS OPEN BOOK	B,R,M	E				365		4.0					
ACAD	6002	NATOPS CLOSED BOOK	B,R,M	E				365		2.0			6001		
ACAD	6003	NATOPS ORAL EXAM	B,R,M	E				365		2.0			6002		
ACAD	6007	CRM GROUND CLASS	B,R,M	E				365		2.0					
ACAD	6008	MONTHLY EP QUIZ	B,R,M	E				30		1.0					
ACAD	6010	SAR RESCUE SWIMMER EXAM	B,R,M	E				365		1.0					
ACAD	6013	HIRA RESCUE CREWMAN EXAM	B,R,M	E				365		1.0					
TOTAL ACAD STAGE									7	13.0	0	0.0			
NATOPS (NTPS)															
NTPS	6100	NATOPS EVALUATIONS	B,R,M	E	A	1	(N)	365				1.5	2000 PHASE COMPLETE,6003		600
NTPS	6101	CRM FLIGHT EVALUATIONS	B,R,M	E	A	1	(N)	365				1.5	2000 PHASE COMPLETE,6007		640
TOTAL NTPS STAGE									0	0.0	2	3.0			
SAR DESIGNATIONS (DESG)															
DESG	6200	DAY SAR DESIGNATION	B,R,M	E	A	1	D	365				2.0	3109,6010		602
DESG	6210	NIGHT SAR DESIGNATION	B,R,M	E	A	1	NS	365				2.0	3209,6010		602
TOTAL DESG STAGE									0	0.0	2	4.0			

CHAPTER 5

SAR MEDICAL TECHNICIAN / (8401)

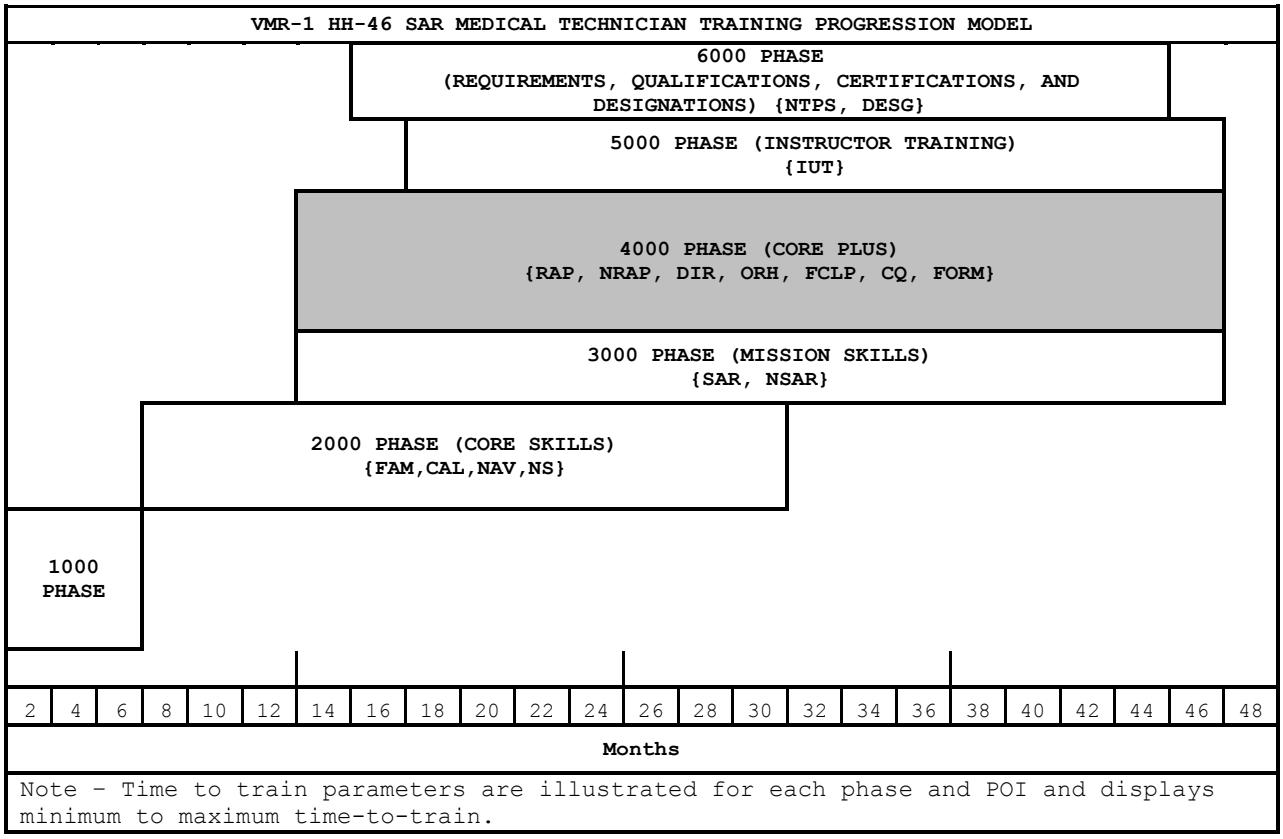
CHAPTER 5

HH-46E SAR MEDICAL TECHNICIAN

INDIVIDUAL TRAINING AND READINESS REQUIREMENTS

5.0 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core, Mission, and Core Plus Skills. The goal of this chapter is to develop individual and unit Search and Rescue capabilities.

5.1 TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average VMR-1 HH-46E SAR Medical Technician. Units should use the model as a guide to generate individual training plans.



Note – Time to train parameters are illustrated for each phase and POI and displays minimum to maximum time-to-train.

5.2 ABBREVIATIONS

VMR-1 HH-46E SAR MEDICAL TECHNICIAN	
CORE/MISSION/CORE PLUS SKILL ABBREVIATIONS	
CORE SKILLS (2000 Phase)	
ACAD	Academics
FAM	Familiarization
CAL	Confined Area Landings
NAV	Navigation
NS	Night Systems
FF	Aerial Fire Fighting
AT	Aerial Transport
MISSION SKILLS (3000 Phase)	
ACAD	Academics
SAR	Search and Rescue
NSAR	Night Search and Rescue
CORE PLUS (4000 Phase)	
ACAD	Academics
RAP	Day Rappel
NRAP	Night Rappel
DIR	Direct Deployment
ORH	Over the Ramp Hoisting
INSTRUCTOR (5000 Phase)	
SMTI	SAR Medical Technician Instructor
QUALIFICATIONS AND DESIGNATIONS (6000 Phase)	
ACAD	Academics
NTPS	NATOPS
DESG	Designation

5.3 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	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

5.4 INDIVIDUAL CORE/MISSION/CORE PLUS SKILL PROFICIENCY REQUIREMENTS

5.4.1 Management of individual CSP/MSP/CPSP/CPMP serves as the foundation for developing proficiency requirements in DRRS.

5.4.2 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.

5.4.3 Proficiency is attained by individual Core/Mission/Core Plus skill and the training events to be executed within that skill set are determined by POI assignment (Basic, Transition, Conversion, Series Conversion, or Refresher).

5.4.4 Once proficiency has been attained by Core/Mission/Core Plus Skill (by any POI assignment) then the individual maintains proficiency by executing those events within the maintain column. An individual maintains proficiency by individual Core/Mission/Core Plus Skill.

Note

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

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

VMR-1 HH-46E SAR MEDICAL TECHNICIAN					
CORE/MISSION/CORE PLUS ATTAIN & MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				**MAINTAIN PROFICIENCY**	
BASIC POI		**REFRESHER POI**		**MAINTAIN POI**	
SKILL	**CODE**	**SKILL**	**CODE**	**skill**	**CODE**
ACAD	**2000**	**ACAD**	**2000**	**ACAD**	
	2001		**2001**		
	2002		**2002**		
	2003		**2003**		**2003**
	2004		**2004**		
	2005		**2005**		
	2006		**2006**		
	2007		**2007**		
	2009		**2009**		**2009**
	2010		**2010**		**2010**
FAM	2103	FAM	2103	FAM	2103
	2104		2104		2104
CAL	2200		2200		2200
	2201				
NAV	2300	NAV	2300	NAV	2300
	2301		2301		
NS	2400	NS	2400	NS	
	2401		2401		
	2402		2402		2402
	2403		2403		2403
FF	2500		2500		2500
AT	2600		2600		2600

MISSION SKILLS (3000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
	3004		3004		3004
	3005		3005		3005
	3006		3006		3006
	3007		3007		3007
	3008		3008		3008
	3009		3009		3009
	3010		3010		3010
	3011		3011		3011
	3012		3012		3012
	3013		3013		3013
	3014		3014		3014
	3015		3015		3015
	3016		3016		3016
	3017		3017		3017
	3018		3018		3018
	3019		3019		3019
	3020		3020		3020
	3021		3021		3021
	3022		3022		3022
	3023		3023		3023
	3024		3024		3024
	3025		3025		3025
	3026		3026		3026
	3027		3027		3027
	3028		3028		3028
ACAD	3029	ACAD	3029	ACAD	3029
	3030		3030		3030
	3031		3031		3031
	3032		3032		3032
	3033		3033		3033
	3034		3034		3034
	3035		3035		3035
	3036		3036		3036
	3037		3037		3037
	3038		3038		3038
	3039		3039		3039
	3040		3040		3040
	3041		3041		3041
	3042		3042		3042
	3043		3043		3043
	3044		3044		3044
	3045		3045		3045
	3046		3046		3046
	3047		3047		3047
	3048		3048		3048
	3049		3049		3049
	3050		3050		3050
	3051		3051		3051
	3052		3052		3052
	3053		3053		3053
	3054		3054		3054
	3100		3100		
	3101				
	3102		3102		3102
	3103		3103		3103
SAR	3104	SAR	3104	SAR	3104
	3105				
	3106		3106		3106
	3107				
	3108		3108		3108
	3110		3110		
	3200		3200		
	3201				
	3202		3202		3202
	3203		3203		3203
	3204		3204		3204
NSAR	3205	NSAR		NSAR	
	3206		3206		3206
	3207				
	3208		3208		3208
	3210		3210		
FF	2500	FF	2500	FF	2500
AT	2600	AT	2600	AT	2600

CORE PLUS SKILLS (4000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	CODE	SKILL	CODE	SKILL	CODE
ACAD	4000	ACAD	4000	ACAD	4000
	4001		4001		4001
	4002		4002		4002
	4003		4003		4003
	4004		4004		4004
	4005		4005		4005
	4006		4006		4006
	4007		4007		4007
RAP	4100	RAP		RAP	
	4101		4101		4101
	4102		4102		
NRAP	4200	NRAP		NRAP	
	4201		4201		4201
	4202		4202		
DIR	4300	DIR	4300	DIR	4300
	4310		4310		4310
ORH	4400	ORH	4400	ORH	4400
	4410		4410		4410
FCLP	4500	FCLP	4500	FCLP	4500
	4510		4510		4510
CQ	4600	CQ	4600	CQ	4600
	4610		4610		4610
FORM	4700	FORM	4700	FORM	4700
	4701		4701		4701
	4710		4710		4710
	4711		4711		4711

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

5.5.1 Instructor Training

VMR-1 HH-46E SAR MEDICAL TECHNICIAN INSTRUCTOR DESIGNATIONS (5000 Phase)	
INSTRUCTOR DESIGNATION	EVENTS
SMTI	5100,5101,5102,5103

5.5.2 Requirements, Certifications, Qualifications, and Designations

VMR-1 HH-46E SAR MEDICAL TECHNICIAN REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (R,C,Q,& D) [6000 Phase]	
QUALIFICATIONS	EVENTS
NATOPS	6000,6001,6002,6100
CRM	6007,6101
DAY SAR	6200
NIGHT SAR	6210

5.6 VMR-1 HH-46E SAR MEDICAL TECHNICIAN PROGRAMS OF INSTRUCTION (POI). These tables reflect average time-to-train versus the minimum to maximum time-to-train parameters in the Training Progression Model.

5.6.1 General. The Basic POI is for all SMTs assigned for their first time to a SAR unit utilizing the HH-46E. The Refresher POI is for all RSs who have previously been assigned to a SAR unit utilizing the HH-46 aircraft. Personnel who have previously been assigned duties as a SMT in another platform must complete the Basic POI.

5.6.2 Basic POI

VMR-1 HH-46E SAR MEDICAL TECHNICIAN Basic POI		
Weeks	Phase of Instruction	Unit
14	Hospital Corps School	Ft. Sam Houston, TX
10	Aerospace Med Technician School	NAS Pensacola
4	Naval Aircrew Candidate School	NAS Pensacola
4	Flight Medic Course	Ft. Rucker, AL
2	SAR Ground Training	VMR-1
6	Core Skill (2000 Phase)	VMR-1
10	Mission Skill (3000 Phase)	VMR-1
8	Core Plus (4000 Phase)	VMR-1

5.6.3 Refresher POI

VMR-1 HH-46E SAR MEDICAL TECHNICIAN Refresher POI		
Weeks	**Phase of Instruction**	**Unit**
1	SAR Ground Training	VMR-1
4	Core Skill (2000 Phase)	VMR-1
8	Mission Skill (3000 Phase)	VMR-1
6	Core Plus (4000 Phase)	VMR-1

5.7 SYLLABUS NOTES

5.7.1 Environmental Conditions Matrix

Environmental Conditions	
Code	**Meaning**
D	Shall be flown during hours of daylight: (by exception - there is no use of a symbol)
N	Shall be flown during hours of darkness, may be aided or unaided
N*	Shall be flown during hours of darkness must be flown unaided
(N*)	May be flown during hours of darkness – If flown during hours of darkness must be flown unaided
(N)	May be flown during darkness – If flown during hours of darkness; may be flown aided or unaided
NS	Shall be flown during hours of darkness – Mandatory use of Night Vision Devices
(NS)	May be flown during darkness – If flown during hours of darkness; must be flown with Night Vision Devices

5.7.2 Device Matrix

DEVICE (Aviation Flying)	
Symbol	**Meaning**
A	Flown in Aircraft
A/S	Aircraft preferred may be flown in Simulator
S	Flown in Simulator
S/A	Simulator preferred may be flown in Aircraft

5.7.3 Program of Instruction Matrix

PROGRAM OF INSTRUCTION MATRIX			
Program of Instruction (POI)	**Symbol**	**Aviation Flying**	**Aviation Ground**
Basic	**B**	Initial MOS/Skill Training	Initial MOS Training
Refresher	**R**	DIFDEN to DIFOPS in same T/M/S	Return to community from non (MOS/Skill) associated tour
Maintain	**M**	All individuals who have attained CSP/MSP/CPP by initial POI assignment are re-assigned to the M POI to maintain proficiency.	

5.7.4 Event Terms

EVENT TERMS	
TERM	**DESCRIPTION**
Discuss	An explanation of systems, procedures, or maneuvers during the brief, in flight, or post flight. Student is responsible for knowledge of procedures.
Demonstrate	The description and performance of a particular maneuver/event by the instructor, observed by the PUI/student. The PUI/student is responsible for knowledge of the procedures prior to the demonstration of a required maneuver/student.
Introduce	The instructor may demonstrate a procedure or maneuver to a student, or may coach the PUI through the maneuver without demonstration. The PUI performs the procedures or maneuver with coaching as necessary. The PUI is responsible for knowledge of the procedures.
Practice	The performance of a maneuver or procedure by the PUI/student that may have been previously introduced in order to attain a specified level of performance.
Review	Demonstrated proficiency of a maneuver by the PUI/student.
Evaluate	Any flight designed to evaluate aircrew standardization that does not fit another category such as SARCK, HACCK, T2PCK, etc.
E-Coded	This term means that documentation (ATF) is required each time the event is logged. Requires evaluation by a certified standardization instructor (NATOPS I, WTI, INST Evaluator etc.)

5.7.5 REQUIREMENTS FOR SAR MEDICAL TECHNICIAN DESIGNATION

5.7.5.1 Complete all required academic lecture for the 2000 and 3000 levels of the syllabus.

5.7.5.2 Complete SAR Closed Book Examination, NATOPS Open and Closed Book Exams, and SAR Fitness Test.

5.7.5.3 T&R codes complete through the 3000 level syllabus.

5.7.5.4 Personnel may be designated as Day SAR Medical Technician at the discretion of the Commanding Officer once SAR T&R codes complete through SAR-3109. Personnel may be designated as HH-46E non-SAR Air Crewman once T&R codes complete through AT-2600 and a current NATOPS and CRM Evaluation. An HH-46E non-SAR Air Crewman may participate in all non-SAR flights and missions.

5.8 CORE SKILL INTRODUCTION FRS ACADEMIC PHASE (0000 Phase). There are no 0000 Phase events in the HH-46E T&R manual.

5.8.1 The following courses are required prior to the start of this T&R syllabus.

COURSE/PHASE	ACTIVITY
Hospital Corpsman "A" School	Ft. Sam Houston, TX
Aerospace Med Tech School	NAS Pensacola, FL
Naval Aircrew Candidate School	NAS Pensacola, FL
Rappel Indoctrination Course*	HSC-3
Emergency Medical Technician- Basic**	Lenoir Community College

*Completion of the Rappel Indoctrination Course is highly recommended but not required.

**Emergency Medical Technician- Basic certification is not required to start T&R syllabus, but is required prior to SAR Medical Technician designation.

5.8.2 The Squadron training listed below is required prior to the first flight.

NATOPS Flight Manual and NATOPS Pocket Checklist
Search and Rescue (SAR) Publications
Safety Publications
Squadron Standard Operating Procedures (SOPs)

Inspection, Utilization, and Limitations of Personal Aviation Survival Equipment
Inspection, Utilization, and Limitations of SAR Equipment
Inspection, Utilization, and Limitations of SAR Medical Equipment
Hand and Arm Signals
BLS Certification
ACLS Certification
PEPP or equivalent Certification
ITLS or equivalent Certification
IV Certification
Search and Rescue Techniques
Fire Bucket (Bambi Bucket) Operations Manual
Night Vision Device Ground Training
Ordnance Safety

5.9 CORE SKILL INTRODUCTION PHASE (1000). There is no 1000 Phase.

5.10 CORE SKILL INTRODUCTION STAGES (1000). There are no 1000 Stage events in the HH-46E T&R manual.

5.11 CORE SKILL PHASE (2000)

5.11.1 General. Core Skill Phase in the HH-46E provides the SAR Medical Technician with an opportunity to become familiar with the HH-46E. At the completion of the 2000 phase events the SAR Medical Technicians should be comfortable with the aircraft and local course rules and prepared to learn the mission requirements. All initial flights shall be flown with a designated NATOPS/Assistant NATOPS Instructor. Personnel will complete the appropriate NAMTRAGRUDET and NATOPS ground school syllabus prior to commencing the flight training syllabus.

5.12 CORE SKILL INTRODUCTION STAGES (2000)

STAGE	EVENTS
5.12.1	Academics (ACAD)
5.12.2	Familiarization (FAM)
5.12.3	Confined Area Landings (CAL)
5.12.4	Navigation (NAV)
5.12.5	Night Systems (NS)
5.12.6	Aerial Fire Fighting (FF)
5.12.7	Aerial Transport (AT)

5.12.1 ACADEMICS (ACAD)

5.12.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each SMT. A summary of academic classes that is required for the Core Skill Phase (2000) are listed below with their corresponding T&R code.

4.12.1.2 General. The Academic syllabus is designed to ensure SMTs are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training (2000-6000) there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	CORE SKILLS PHASE (2000)
ACAD-2000	COMMAND MISSION
ACAD-2001	CREW RESPONSIBILITIES CLASS
ACAD-2002	FLIGHT EQUIPMENT AND SAFETY PROCEDURES
ACAD-2003	EGRESS AND EMERGENCY PROCEDURES*
ACAD-2004	CONFINED AREA LANDINGS
ACAD-2005	SAR AND MEDICAL GEAR FAMILIARIZATION
ACAD-2006	NIGHT SYSTEMS CLASS
ACAD-2007	NIGHT SYSTEMS LAB
ACAD-2009	PRINCIPLES OF FIRE FIGHTING*
ACAD-2010	PASSENGER AND MEDICAL TRANSPORTS*

*Denotes annual training requirement

5.12.2 Familiarization (FAM)

5.12.2.1 Purpose. Become familiar with aircraft flight characteristics, limitations, and emergency procedures; develop proficiency in all maneuvers contained in the familiarization stage.

4.12.2.2 General. These flights may be flown on any appropriate flight of the pilot syllabus. Initial syllabus training flights require an ATF.

4.12.2.3 Crew Requirements. HAC, H2P, CC, SMTI, SMTUI

4.12.2.4 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes.

FAM-2103 1.5 365 B,R,M D A 1 HH-46E

Goal. Conduct an area and aircraft familiarization. Introduce HH-46 characteristics, SMT responsibilities, and discuss crew coordination.

Requirement

Brief/Discuss
- Use of ICS
- Standard Terminology
- Interaction with pilots
- HH-46E nomenclature
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Look-out doctrine

Introduce/Demonstrate
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Operation of communication equipment
- Crew comfort levels
- Depth Perception
- Taxiing/directing procedures
- Look-out doctrine
- Hot fuel procedures

Performance Standard

SMTUI shall become familiar with the local operating areas, the HH-46E and exhibit a basic understanding of SMT duties.

Prerequisite. ACAD-2000, ACAD-2001, ACAD-2002

FAM-2104 1.5 90 B,R,M D E A 1 HH-46E

Goal. Conduct emergency procedure familiarization and review area familiarization.

Requirement

Brief/Discuss

- HH-46E nomenclature
- Preflight/Postflight procedures
- Equipment inventory and inspection
- Ground and in-flight emergencies
- Ditching and Egress procedures
- Take-off and landing emergencies
- Precautionary landings
- Emergency landings
- Autorotations

Introduce/Demonstrate

- Preflight/Postflight procedures to include equipment inventory and inspection
- Ground and in-flight emergencies
- Ditching and Egress procedures

Performance Standard

SMTUI shall demonstrate knowledge of aircraft systems, perform basic FAM maneuvers, and be able to satisfactorily perform emergency procedures per NATOPS manual.

Prerequisite. FAM-2103, ACAD-2003

5.12.3 Confined Area Landing (CAL)

5.12.3.1 Purpose. To familiarize the SAR Medical Technician with local area CALs, practice CAL landings in the HH-46E aircraft and develop crew coordination during confined area operations.

5.12.3.2 General. These flights may be flown on any flight of the pilot CAL stage. Initial syllabus training flights require an ATF.

5.12.3.3 Crew Requirements. HAC, H2P, CCI, SMT, SMTUI

5.12.3.4 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes.

CAL-2200 1.5 45 B,R,M D A 1 HH-46E

Goal. Conduct day CALs.

Requirement

Brief/Discuss

- HH-46E nomenclature to include specific blade clearance lengths and measurements
- CAL zone evaluation
- Crew coordination and responsibilities to include obstacle avoidance lookout responsibilities

Demonstrate/Introduce

- HH-46E nomenclature to include specific blade clearance lengths and measurements
- CAL zone selection and evaluation
- Crew coordination and responsibilities
- Standard voice communications and lost ICS procedures

Emergency procedures and departure routes

Performance Standard

SMTUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings, 3 being performed with the SMTUI acting as the crew chief.

Prerequisite. FAM-2103,2104, ACAD-2004

CAL-2201 1.5 * B D A 1 HH-46E

Goal. Review day CALs.

Requirement

Brief/Discuss

HH-46E nomenclature to include specific blade clearance lengths and measurements
CAL zone evaluation
Crew coordination and responsibilities to include obstacle avoidance lookout responsibilities

Demonstrate/Introduce

HH-46E nomenclature to include specific blade clearance lengths and measurements
CAL zone selection and evaluation
Crew coordination and responsibilities
Standard voice communications and lost ICS procedures
Emergency procedures and departure routes

Performance Standard

SMTUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings, 3 being performed with the SMTUI acting as the crew chief.

Prerequisite. CAL-2200

5.12.4 Navigation (NAV)

5.12.4.1 Purpose. To familiarize the SAR Medical Technician with the location and landing procedures for hospitals in the area.

5.12.4.2 General. These flights may be flown on any flight of the pilot NAV stage. Initial syllabus training flights require an ATF.

5.12.4.3 Crew Requirements. HAC, H2P, CCI, SMT, SMTUI

5.12.4.4 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes.

NAV-2300 1.5 365 B,R,M D A 1 HH-46E

Goal. Familiarize the SMTUI with navigation to and from local area hospitals with landing procedures involved.

Requirement.

Brief/Discuss.

Navigational procedures to include use of GPS and aeronautical charts
GPS and dead reckoning navigation
Local area hospitals and their medical capabilities/locations
Local medical protocols and Flight Surgeon recall procedures for hospital-to-hospital transfers
Cabin preparation and rigging of the litters

Use of radios in relaying patient information to the destination medical facility and use of the aircraft utility electrical power supply

Demonstrate/Introduce.

Identify local area hospital landing zones
Use of aircraft electrical system and radio contact receiving medical facility

Performance Standard. SMTUI shall safely prepare the cabin for litter carriage using the stanchions, and should demonstrate the ability to utilize the radio and/or the ICS to relay patient information to the pilots or emergency department.

Prerequisite. FAM-2103, CAL-2200, ACAD-2005

NAV-2301 2.5 * B,R D A 1 HH-46E

Goal. Familiarize the SMTUI with navigation to and from hospitals located outside the local area with landing procedures involved.

Requirement

Brief/Discuss

Navigational procedures to include use of GPS and aeronautical Charts
GPS and dead reckoning navigation
Distant area hospitals and their medical capabilities/locations
Local medical protocols and Flight Surgeon recall procedures for hospital-to-hospital transfers
Cabin preparation and rigging of the litters
Use of radios in relaying patient information to the destination medical facility and use of the aircraft utility electrical power supply

Demonstrate/Introduce

Identify distant area hospital landing zones
Cabin preparation for transferring patients
Assisting Medical Technician with receiving the report from on-scene providers, performing assessments and packaging patient for transport
Use aircraft electrical system and radio to contact receiving facility

Performance Standard. SMTUI shall safely prepare the cabin for litter carriage using the stanchions and demonstrate knowledge in en-route medical care of patients.

Prerequisite. FAM-2103, CAL-2200, ACAD-2005

5.12.5 Night Systems (NS)

5.12.5.1 Purpose. Ensure the SMTUI is proficient in Night Systems use on the HH-46E during HHL and LLL.

5.12.5.2 General. Completion of NVG Night LAB and FAM CAL and NAV flights are required before starting NS-2400. Initial syllabus training flights utilizing NVDs shall be flown with a Night System SAR Instructor (NSSI) and require an ATF.

5.12.5.3 Crew Requirements. HAC, H2P, NSSI, SMT, SMTUI

4.12.5.4 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes.

NS-2400 1.5 * B,R NS A 1 HH-46E

Goal. Familiarize the SMTUI with HH-46E and local area while using NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement

Brief/Discuss

- CRM
- Crew comfort levels
- Aircraft lighting
- Use and limitations of NVDs
- NVD tube and battery failure
- Scanning techniques
- Obstacle clearance
- Emergency procedures

Demonstrate/Introduce

- Wear and use of NVDs during low work and touch and go landings

Performance Standard. SMTUI shall be able to safely perform familiarization maneuvers while on NVGs per NFM, and MAWTS-1 NVG Manual.

Prerequisite. ACAD-2006,2007, FAM-2104, CAL-2201, NAV-2300,2301

NS-2401 1.5 * B,R NS A 1 HH-46E

Goal. Develop proficiency in conducting navigation and CALs while utilizing NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement

Brief/Discuss

- Obstacle clearance
- Terrain suitability
- Rate of closure
- Loss of depth perception
- Lookout doctrine
- NVD scan techniques
- Vertigo
- Emergency procedures

Demonstrate/Introduce

- Low level navigation
- Navigation from a CAL site to a hospital landing pad
- Obstacles along route of flight
- CAL landings

Performance Standard. SMTUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings while wearing NVDs, 3 being performed with the SMTUI acting as the crew chief.

Prerequisite. NS-2400

NS-2402 1.5 365 B,R,M NS A 1 HH-46E

Goal. Familiarize the SMTUI in navigation in the local area while using NVDs. This flight may be conducted during HLL or LLL conditions.

Requirement.

Brief/Discuss
- Lookout Doctrine
- CRM
- Crew comfort levels
- Aircraft lighting
- Use and limitations of NVDs
- NVD tube and battery failure
- Location and lighting of approved landing zones
- Scanning techniques
- Emergency procedures

Demonstrate/Introduce
- Wear and use of NVDs during low work and touch and go landings

Performance Standard. SMTUI shall be able to safely assist the pilots in navigation routes, maintain good lookout doctrine and remain oriented on route within 500 meters.

Prerequisite. NS-2401

NS-2403	1.5	45	B,R,M	NS	A	1 HH-46E

Goal. Ensure SMTUI is proficient in navigation and CAL landings while using NVDs. This flight may be flown during HLL or LLL conditions.

Requirement.

Brief/Discuss
- Obstacle clearance
- Terrain suitability
- Rate of closure
- Loss of depth perception
- Lookout doctrine
- NVD scan techniques
- Vertigo
- Emergency procedures

Demonstrate/Introduce
- Low level navigation
- Navigation from a CAL site to a hospital landing pad
- Obstacles along route of flight
- CAL landings

Performance Standard. SMTUI will demonstrate the ability to successfully crew the aircraft to the deck for a minimum of 5 landings while wearing NVDs,3 being performed with the SMTUI acting as the crew chief, and be able to assist with navigation when asked by the pilots in HLL/LLL conditions.

Prerequisite. NS-2402

5.12.6 Aerial Fire Fighting (FF)

5.12.6.1 Purpose. Develop the ability to conduct water bucket operations.

5.12.6.2 General. These flights may be flown on any flight of the pilot FF stage. Initial syllabus training flights shall be flown with a SAR Crew Chief Instructor (CCI) and require an ATF.

5.12.6.3 Crew Requirements. HAC, H2P, CCI, SMT, SMTUI

4.12.6.4 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes.

FF-2500 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop the ability to conduct Bambi bucket operations.

Requirement

Brief/Discuss

Bambi Bucket and external cargo hook limitations.
Preflight and post flight procedures.
Connecting and disconnecting procedures.
Water bucket pickup and release procedures
Crew Coordination
ICS voice procedures
Lost communications hand signals
Emergency procedures
Maximum HOGE weight for pickup and delivery and flight envelopes with water buckets
Water bucket delivery techniques

Demonstrate/Introduce.

Water Bucket operations.

Performance Standard. SMTUI shall be able to safely fill the Bambi Bucket, complete a minimum of 5 pickups and water drops, and deliver water to fire within 5 meters of intended point of impact.

Prerequisite. ACAD-2009, FAM-2104, CAL-2201

5.12.7 Aerial Transport (AT)

5.12.7.1 Purpose. Develop the ability to transfer patients and passengers on non-SAR related missions.

5.12.7.2 General. These flights may be flown on any flight of the pilot AT stage. Initial syllabus training flights shall be flown with a SAR Medical Technician Instructor (SMTI) and require an ATF.

5.12.7.3 Crew Requirements. HAC, H2P, CC, SMTI, SMTUI

5.12.7.4 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes.

AT-2600 1.5 365 B,R,M (N) A 1 HH-46E

Goal. Review procedures for patient loading, passenger briefing, proper medical treatment, and safety procedures.

Requirement

Brief/Discuss.

Passenger manifesting and safety briefing
Patient loading procedures
Cargo loading and unloading procedures
Locations and uses of onboard medical assets
Proper hospital to hospital patient turn over procedures
SAR Reports and necessary medical paperwork

Demonstrate/Introduce.

Passenger manifesting and safety briefing
Patient loading procedures
Cargo loading and unloading procedures
Locations and uses of onboard medical assets
Proper patient care procedures en route to medical facilities
Proper hospital to hospital patient turn over procedures

SAR Reports and necessary medical paperwork
Standard terminology for patient updates

Performance Standard. SMTUI will be able to properly embark and disembark patients, passengers and cargo in a simulated Hospital to Hospital transfer. SMTUI will demonstrate knowledge on all the medical equipment as well as properly assessing and treating patients. Upon completion of this flight, SMTUI will demonstrate the ability to properly fill out and file all necessary paperwork and reports.

Prerequisite. ACAD-2010, FAM-2104, CAL-2201, NAV-2300,2301, NS-2403

5.13 MISSION SKILLS PHASE (3000)

5.13.1 General. The Mission Skill Phase is designed to familiarize the RSUI with the unique missions and challenges associated with VMR-1 and the HH-46E.

5.14 Mission Skill Stages (3000)

T&R CODE	EVENT
5.14.1	Academics (ACAD)
5.14.2	Search and Rescue (SAR)
5.14.3	Night Search and Rescue (NSAR)

5.14.1 Academics (ACAD)

5.14.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each SMT. A summary of academic classes that is required for the Mission Skill Phase (3000) are listed below with their corresponding T&R code.

5.14.1.2 General. The Academic syllabus is designed to ensure SMTs are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase. See T&R Matrix for list of courses.

5.14.2 Search and Rescue (SAR)

5.14.2.1 Purpose. Develop proficiency in Day Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

5.14.2.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

5.14.2.3 SAR Medical Technicians who have not completed the appropriate SAR syllabus shall not be assigned to SAR duty (day or night) until completion of the appropriate syllabus. Local commands are granted the authority to designate personnel as Day SAR Medical Technician qualified upon completion of the Day Search and Rescue syllabus.

5.14.2.4 SMTUIs may begin the night SAR syllabus training prior to completion of the entire day SAR syllabus. Prior to commencement of a night SAR syllabus flight; the corresponding day SAR syllabus flight shall be completed.

5.14.2.5 SMTUIs may receive training from both Rescue Swimmer Instructors (RSI) and SAR Medical Technician Instructors (SMTI) for all flights other than SAR-3103, SAR-3105, SAR-3106, and SAR-3110. SMTUIs may also receive training from SAR Crew Chief Instructor (CCI) but only for flights SAR-3100 and SAR-3104 in the mission skill stage.

5.14.2.6 Crew Requirement. HAC, H2P, CC, CCI/RSI/SMTI, SMTUI

5.14.2.7 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

SAR-3100 1.5 365 B,R D A 1 HH-46E

Goal. Conduct day search patterns and overland search procedures.

Requirement.

Brief/Discuss

- Standard Voice Communications
- Day SAR procedures
- Search Patterns
- Overland search procedures
- Remote Hover Coupler Station
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Probability of detection

Introduce/Demonstrate.

- Search Patterns
- Remote Hover Coupler Station
- Manual and Coupled approaches

Performance Standard.

SMTUI shall assist the pilots in conducting a search pattern consisting of a minimum of 5 checkpoints, and maintain within 500 meters of course line. SMTUI shall provide calls, using standard terminology, to the pilot to conduct a hover over a simulated survivor while maintaining within 5 feet of the hover point.

Prerequisite. 2000 Phase complete, ACAD-3004-3014

SAR-3101 1.5 * B D A 1 HH-46E

Goal. Conduct day overland hoisting operations utilizing the Rescue Strop, Forest Penetrator, Rescue Basket, Stokes Litter, MEDEVAC Litter, and Hoisting Vest (if available).

Requirement

Brief/Discuss

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure
- Use of quick splice and Chicago grip
- Review hand and arm and Aldis lamp signals
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment and safety checks

Introduce/Demonstrate

- Overland hoisting procedures per the NTTP 3-50.1
- Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
- Utilization of SAR equipment
- Utilization of the Quick Splice and Chicago Grip

Hoisting ops while acting in the capacity of the Crew Chief
Hoisting ops while acting in the capacity of the Rescue Swimmer on the deck

Performance Standard

SMTUI shall rig and perform 2 hoisting evolutions acting in the capacity of the Crew Chief while maintaining a hover within 5 feet of the hover point. One shall be done using the forest penetrator/rescue seat and one using rescue basket. SMTUI shall also perform 1 hoisting evolution for each piece of rescue equipment while acting in the capacity of the SAR Medical Technician.

Prerequisite. 2000 Phase complete, ACAD-3004 through ACAD-3014, ACAD-3052

SAR-3102 1.5 30 B,R,M D A 1 HH-46E

Goal. Conduct day overland live hoisting operations utilizing the belay line.

Requirement.

Brief/Discuss.

Hoist capabilities and limitations
Emergency procedures and troubleshooting for hoist failure
Use of quick splice and Chicago grip
Review hand and arm and Aldis lamp signals
Rescue equipment functions, capabilities and limitations
Rigging of rescue equipment and safety checks
Rigging and limitations of the belay line

Introduce/Demonstrate.

Overland hoisting procedures per the NTTP 3-50.1
Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Live hoisting operations while acting in the capacity of the Crew Chief
Live hoisting operations while acting in the capacity of the SAR Medical Technician
Live hoisting operations for dual recoveries while acting in the capacity of the SAR Medical Technician both connected and on the deck

Performance Standard. SMTUI shall rig and perform one deployment of a Rescue Aircrewman and one recovery of a simulated survivor in the rescue seat while acting in the capacity of the crew chief. SMTUI shall perform 1 hoisting evolution for each piece of rescue equipment while acting in the capacity of the SAR Medical Technician on the deck. SMTUI shall also complete one dual recovery of the MEDEVAC litter with the SMTI tending the trail line.

Prerequisite. SAR-3101, ACAD-3016, ACAD-3028-3030

SAR-3103 2.0 365 B,R,M D A 1 HH-46E

Goal. Conduct day overland SAREX

Requirement

Brief/Discuss

Overland SAR procedures, to include search patterns and CAL selections
Crewmember responsibilities and cabin preparations

Communication procedures

Introduce/Demonstrate

Cabin preparation and actions while en route to scene
Conduct/assist in patient(s) assessment, treatment and packaging
Loading and securing patient(s) inside aircraft
Provide/assist in patient care while en route to a Medical Treatment Facility
Unloading and transferring patient(s)
Familiarization with medical equipment on board

Performance Standard. SMTUI shall act in the capacity of the SAR Medical Technician during a simulated Search and Rescue Exercise. SMTUI shall safely perform one hoisting evolution from the deck and demonstrate an ability to properly assess and care for patients throughout the entire evolution.

Prerequisite. SAR-3100,3102, ACAD-3018-3023, ACAD-3031-3035, ACAD-3038, ACAD-3045-3046, ACAD-3050

SAR-3104	1.5	60	B,R,M	D	A	1 HH-46E

Goal. Conduct day over water search and Doppler approaches

Requirement.

Brief/Discuss.

Standard Voice Communications
Over water SAR procedures
Search Patterns
Remote Hover Coupler Station
Doppler capabilities and procedures
Vertigo
Manual and Coupled approaches
Survivor spotting and marking procedures
Survival gear
Flare capabilities, arming/disarming and deployment techniques
Ordnance hazards and safety precautions

Introduce/Demonstrate.

Flare deployment
Standard Voice Communications
Remote Hover Coupler Station
Manual and Coupled approaches
Over water search techniques

Performance Standard. SMTUI shall conduct a minimum of 1 verbal control for manual approaches and 1 verbal control for coupled approaches while maintain within 5 feet of hover point. SMTUI will safely conduct a minimum of 5 simulated hoisting evolutions utilizing any piece of SAR equipment.

Prerequisite. SAR-3100, ACAD-3015

Ordnance: 1 MK-25, 1 MK-58

SAR-3105	1.5	*	B	D	A	1 HH-46E

Goal. Conduct day Rescue Swimmer deployment and recovery with rescue strop and basket

Requirement.

Brief/Discuss.

Impact of sea state and weather concerning swimmer deployment
Rescue Swimmer deployment and recovery procedures
Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures

Short haul purpose and procedures
Normal and emergency hoisting procedures
ICS communications and standard hand and arm signals
Ordnance hazards and safety

Introduce/Demonstrate.

Rescue swimmer deployments at 10/10 and 15/0
Day single recovery utilizing the rescue strop and rescue basket with simulated a survivor
Day dual recovery utilizing the rescue strop and rescue basket with simulated a survivor
Short haul to simulated survivor

Performance Standard. SMTUI shall safely conduct 3 day deployments from 10/10 or 15/0 and recover via rescue strop and rescue basket. SMTUI shall safely perform single and dual recoveries utilizing the rescue strop and rescue basket with a short haul on 1 of the recoveries.

Prerequisite. SAR-3102, SAR-3104, ACAD-3024 through ACAD-3027, ACAD-3053

Ordnance: 1 MK-25, 1 MK-58

External Support: Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

SAR-3106	1.5	180	B,R,M	D	A	1 HH-46E

Goal. Conduct day Rescue Swimmer deployment and recovery with the Stokes and MEDEVAC litters.

Requirement.

Brief/Discuss.

Impact of sea state and weather concerning swimmer deployment
Rescue Swimmer deployment and recovery procedures
Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
The use of the trail line assembly
Normal and emergency hoisting procedures
ICS communications and standard hand and arm signals
Ordnance hazards and safety
Standard procedures regarding litters in the water

Introduce/Demonstrate.

Rescue swimmer deployments at 10/10 and 15/0
Day deployment and recovery utilizing the Stokes litter with a simulated survivor
Day deployment and recovery utilizing the MEDEVAC litter with a simulated survivor

Performance Standard. SMTUI shall safely conduct a minimum of 2 day deployments at either 10/10 or 15/0 and safely recover 2 simulated patients utilizing both the Stokes litter and the MEDEVAC litter.

Prerequisite. SAR-3105

Ordnance: 1 MK-25, 1 MK-58

External Support: Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

SAR-3107	1.5	*	B	D	A	1 HH-46E

Goal. Conduct day SAR boat hoisting utilizing the rescue strop, rescue basket and hoisting vest

Requirement.

Brief/Discuss.

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat
Rescue personnel and equipment hook-up procedures

Introduce/Demonstrate.

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the rescue strop and rescue basket

Performance Standard. SMTUI shall conduct a minimum of 2 dry runs acting in the capacity of the Crew Chief, prior to being hoisted to the boat deck. SMTUI shall safely conduct 6 hoisting evolutions utilizing the rescue strop, rescue basket and hoisting vest (if applicable); a minimum of 2 times each while acting in the capacity of the SAR Medical Technician on the deck.

Prerequisite. SAR-3105, ACAD-3054

External Support: Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

SAR-3108	1.5	180	B,R,M	D	A	1 HH-46E

Goal. Conduct day SAR boat hoisting utilizing the Stokes and MEDEVAC litters

Requirement.

Brief/Discuss.

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat
Rescue personnel and equipment hook-up procedures
Use of the trail line assembly

Introduce/Demonstrate.

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the Stokes and MEDEVAC litters with the trail line assembly

Performance Standard. The SMTUI shall conduct a minimum of 4 hoisting evolutions utilizing the Stokes litter and the MEDEVAC litter a minimum of 2 times each while acting in the capacity of the SAR Medical Technician on the deck

Prerequisite. SAR-3107

External Support: Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required

SAR-3110	2.0	*	B,R	D	A	1 HH-46E

Goal. Conduct day Mass Casualty Exercise (MASSCAL)

Requirement.

Brief/Discuss.

Overland SAR procedures, to include search patterns and CAL selections
Crewmember responsibilities and cabin preparations
Communication procedures

Introduce/Demonstrate.

Cabin preparation and actions while en route to scene
Efficient use of crew coordination
Conduct proper patient assessments, treatments, and packaging
Utilize situation appropriate recovery methods for patients
Loading and securing patients inside aircraft
Provide patient care while en route to a Medical Treatment Facility
Unloading and transferring patient
Familiarization with medical equipment on board aircraft
Accurately complete Medical Report and submit properly

Performance Standard. SMTUI shall act in the capacity of the SAR Medical Technician during a simulated Mass Casualty Incident. SMTUI shall properly assess and provide medical treatment to a minimum of 3 patients.

Prerequisite. SAR-3108, ACAD-3017, 3029, 3030, 3034, 3036, 3037, 3039 through 3044, 3047 through 3049, 3051

5.14.3 Night Search and Rescue (NSAR)

5.14.3.1 Purpose. Develop proficiency in Night Search and Rescue operations and navigation, to include search planning, search patterns and techniques, Doppler approach procedures, overland and over water rescue/recovery procedures, and safety regulations.

5.14.3.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

5.14.3.3 SMTUIs may begin the night SAR syllabus training prior to completion of the entire day SAR syllabus. Prior to commencement of the NSAR syllabus flight; the corresponding SAR syllabus flight shall be completed.

5.14.3.4 SAR Medical Technicians may fly the night SAR syllabus codes with or without the aid of Night Vision Devices (NVD). The intent of this syllabus is to develop the skills critical to the Search and Rescue mission versus NVD proficiency. NVD proficiency/currency should be considered when conducting NVD SAR flights. When complete with the night SAR training syllabus, aircrew should have the ability to conduct night SAR missions under various atmospheric conditions.

5.14.3.5 SMTUIs may receive training from both Rescue Swimmer Instructors (RSI) and SAR Medical Technician Instructors (SMTI) for all flights other than SAR-3113, SAR-3115, SAR-3116, and SAR-3119. Initial training flights for NSAR-3200 and NSAR-3204 shall be flown with a Night System SAR Instructor (NSSI).

5.14.3.6 Crew Requirement. HAC, H2P, CC, CCI/RSI/SMTI, SMTUI

5.14.3.7 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes. The following prerequisites are required prior to commencing the Night SAR flights:

The SAR Medical Technician must have completed the NS flights
Ground training in ground-to-air signals to include body, panel, lighting signals, and international ground-to-air emergency codes

NSAR-3200 1.5 365 B,R NS A 1 HH-46E

Goal. Conduct night search patterns and overland search procedures.

Requirement.

Brief/Discuss.

- Standard Voice Communications
- Night SAR procedures
- Search Patterns
- Remote Hover Coupler Station
- Vertigo
- Manual and Coupled approaches
- Survivor spotting and marking procedures
- Survival gear
- Probability of detection
- Aircraft lighting to include the Night Sun and Aldis lamp

Introduce/Demonstrate.

- Search Patterns
- Remote Hover Coupler Station
- Manual and Coupled approaches
- Night Sun/Aldis lamp limitations and procedures

Performance Standard.

SMTUI shall assist the pilots in conducting a search pattern consisting of a minimum of 5 checkpoints, and maintain within 500 meters of course line. SMTUI shall provide calls, using standard terminology, to the pilot to conduct a hover over a simulated survivor while maintaining within 5 feet of the hover point.

Prerequisite. Academics 3000 Stage complete, SAR-3100

NSAR-3201 1.5 * B NS A 1 HH-46E

Goal. Conduct night overland hoisting operations utilizing the Rescue Strop, Forest Penetrator, Rescue Basket, Stokes Litter, MEDEVAC Litter, and Hoisting Vest (if available).

Requirement.

Brief/Discuss.

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure
- Use of quick splice and Chicago grip
- Review hand and arm and Aldis lamp signals with an emphasis on the night environment
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment to include chemlite placement and safety checks

Introduce/Demonstrate.

- Night overland hoisting procedures per the NTTP 3-50.1
- Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter with chemlites
- Utilization of SAR equipment
- Utilization of the Quick Splice and Chicago Grip
- Hoisting operations while acting in the capacity of the Crew Chief
- Hoisting operations while acting in the capacity of the Rescue Swimmer on the deck

Performance Standard. SMTUI shall rig and perform 2 hoisting evolutions acting in the capacity of the Crew Chief while maintaining a

hover within 5 feet of the hover point. One shall be done using the forest penetrator/rescue seat and one using rescue basket. SMTUI shall also perform a minimum of 1 hoisting evolution for each piece of rescue equipment while acting in the capacity of the SAR Medical Technician.

Prerequisite. SAR-3101

NSAR-3202 1.5 30 B,R,M NS A 1 HH-46E

Goal. Conduct night overland live hoisting operations utilizing the belay line.

Requirement

Brief/Discuss

- Hoist capabilities and limitations
- Emergency procedures and troubleshooting for hoist failure
- Use of quick splice and Chicago grip
- Review hand and arm and Aldis lamp signals
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment and safety checks
- Rigging and limitations of the belay line

Introduce/Demonstrate

- Night overland hoisting procedures per the NTTP 3-50.1
- Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter with chemlites
- Utilization of SAR equipment
- Utilization of the Quick Splice and Chicago Grip
- Live hoisting operations while acting in the capacity of the Crew Chief
- Live hoisting operations while acting in the capacity of the Rescue Swimmer
- Live hoisting operations for dual recoveries while acting in the capacity of the Rescue Swimmer both connected and on the deck

Performance Standard. SMTUI shall rig and perform one deployment of a Rescue Aircrewman and one recovery of a simulated survivor in the rescue seat while acting in the capacity of the crew chief. SMTUI shall perform a minimum of 1 hoisting evolution for each piece of rescue equipment while acting in the capacity of the SAR Medical Technician on the deck. SMTUI shall also one dual recovery of the MEDEVAC litter with the SMTI tending the trail line.

Prerequisite. SAR-3102, NSAR-3201

NSAR-3203 2.0 365 B,R,M NS A 1 HH-46E

Goal. Conduct night overland SAREX

Requirement.

Brief/Discuss.

- Night overland SAR procedures, to include search patterns and CAL selections
- Crewmember responsibilities and cabin preparations
- Cabin lighting configurations
- Communication procedures

Introduce/Demonstrate.

- Cabin preparation and actions while en route to scene
- Conduct/assist in patient(s) assessment, treatment and packaging
- Loading and securing patient(s) inside aircraft
- Provide/assist in patient care while en route to a Medical Treatment Facility

Unloading and transferring patient(s)
Familiarization with medical equipment on board

Performance Standard. SMTUI shall act in the capacity of the SAR Medical Technician during a simulated Search and Rescue Exercise. SMTUI shall safely perform one hoisting evolution from the deck and demonstrate an ability to safely care for patients throughout the entire evolution.

Prerequisite. SAR-3103, NSAR-3200,3202

NSAR-3204 1.5 60 B,R,M NS A 1 HH-46E

Goal. Conduct night over water search and Doppler approaches

Requirement.

Brief/Discuss.

Standard Voice Communications
Over water SAR procedures
Search Patterns
Remote Hover Coupler Station
Doppler capabilities and procedures
Vertigo
Manual and Coupled approaches
Survivor spotting and marking procedures in the night environment
Survival gear
Flare capabilities, arming/disarming and deployment techniques
Ordnance hazards and safety precautions

Introduce/Demonstrate.

Flare deployment
Standard Voice Communications
Remote Hover Coupler Station
Manual and Coupled approaches
Over water search techniques

Performance Standard. SMTUI shall conduct a minimum of 1 verbal control for manual approaches and 1 verbal control for coupled approaches while maintain within 5 feet of hover point. SMTUI will safely conduct a minimum of 5 simulated hoisting evolutions utilizing any piece of SAR equipment.

Prerequisite. SAR-3104, NSAR-3200

Ordnance. 1 MK-25, 1 MK-58

NSAR-3205 1.5 * B NS A 1 HH-46E

Goal. Conduct night Rescue Swimmer deployment and recovery with rescue strop and basket

Requirement

Brief/Discuss

Impact of sea state and weather concerning swimmer deployment
Rescue Swimmer deployment and recovery procedures
Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
Short haul purpose and procedures
Normal and emergency hoisting procedures
ICS communications and standard hand and arm signals
Ordnance hazards and safety
Lighting control in the water
Equipment hazards in the night environment

Introduce/Demonstrate

Rescue swimmer deployments at via the rescue hoist

Night single recovery utilizing the rescue strop and rescue basket with simulated a survivor
Night dual recovery utilizing the rescue strop and rescue basket with simulated a survivor
Short haul to simulated survivor

Performance Standard. SMTUI shall safely conduct 2 day deployments from the rescue hoist and recover via rescue strop and rescue basket. SMTUI shall safely perform single and dual recoveries utilizing the rescue strop and rescue basket with a short haul on 1 of the recoveries.

Prerequisite. SAR-3105, NSAR-3202, NSAR-3204

Ordnance: 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

NSAR-3206 1.5 180 B,R,M NS A 1 HH-46E

Goal. Conduct night Rescue Swimmer deployment and recovery with the Stokes and MEDEVAC litters.

Requirement

Brief/Discuss

Impact of sea state and weather concerning swimmer deployment
Rescue Swimmer deployment and recovery procedures
Survivor assessments, approaches/carries, escapes/releases, disentanglements and recovery procedures
The use of the trail line assembly
Normal and emergency hoisting procedures
ICS communications and standard hand and arm signals
Ordnance hazards and safety
Standard procedures regarding litters in the water
Trail line and litter hazards in the night environment
Lighting control in the water

Introduce/Demonstrate

Rescue swimmer deployments via the rescue hoist
Day deployment and recovery utilizing the Stokes litter with a simulated survivor
Day deployment and recovery utilizing the MEDEVAC litter with a simulated survivor

Performance Standard. SMTUI shall safely conduct a minimum of 2 night deployments via the rescue hoist and safely recover 2 simulated patients utilizing both the Stokes litter and the MEDEVAC litter.

Prerequisite. SAR-3106, NSAR-3205

Ordnance: 1 MK-25, 1 MK-58

External Support. Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

NSAR-3207 1.5 * B NS A 1 HH-46E

Goal. Conduct night SAR boat hoisting utilizing the rescue strop, rescue basket and hoisting vest.

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning

Special considerations when acting on or around a boat in the night environment
Rescue personnel and equipment hook-up procedures
Chemlite placement and procedures

Introduce/Demonstrate

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the rescue strop and rescue basket

Performance Standard. SMTUI shall safely conduct 6 hoisting evolutions utilizing the rescue strop, rescue basket and hoisting vest (if applicable); a minimum of 2 times each while acting in the capacity of the SAR Medical Technician on the deck.

Prerequisite. SAR-3107, NSAR-3204

External Support: Safety boat that is suitable for hoisting (i.e. U.S. Coast Guard or affiliate, U.S. military vessel, local municipal rescue/fire department water rescue units, ect.) Safety swimmer and survivor(s) as required.

NSAR-3208 1.5 180 B,R,M NS A 1 HH-46E

Goal. Conduct night SAR boat hoisting utilizing the Stokes and MEDEVAC litters

Requirement

Brief/Discuss

Normal and emergency procedures to include standard ICS terminology and hand and arm signals
Aircraft approach procedures and positioning
Special considerations when acting on or around a boat
Rescue personnel and equipment hook-up procedures
Use of the trail line assembly

Introduce/Demonstrate.

Practice runs and simulated hoisting calls
Deployment and recovery of rescue personnel to the boat
Hoisting procedures utilizing the Stokes and MEDEVAC litters with the trail line assembly

Performance Standard. SMTUI shall conduct a minimum of 2 dry runs acting in the capacity of the Crew Chief, prior to being hoisted to the boat deck. The SMTUI shall conduct a minimum of 4 hoisting evolutions utilizing the Stokes litter and the MEDEVAC litter a minimum of 2 times each while acting in the capacity of the SAR Medical Technician on the deck.

Prerequisite. SAR-3108, NSAR-3207

Ordnance: 1 MK-25, 1 MK-58

External Support: Safety boat or aircraft with safety swimmer aboard. Survivor(s) as required.

NSAR-3210 2.0 * B,R NS A 1 HH-46E

Goal. Conduct night Mass Casualty Exercise (MASSCAL)

Requirement

Brief/Discuss

Overland SAR procedures, to include search patterns and CAL selections
Crewmember responsibilities and cabin preparations
Communication procedures

Introduce/Demonstrate

Cabin preparation and actions while en route to scene
Efficient use of crew coordination
Conduct proper patient assessments, treatments, and packaging
Utilize situation appropriate recovery methods for patients
Loading and securing patients inside aircraft
Provide patient care while en route to a Medical Treatment Facility
Unloading and transferring patient
Familiarization with medical equipment on board aircraft
Accurately complete Medical Report and submit properly

Performance Standard. SMTUI shall act in the capacity of the SAR Medical Technician during a simulated Mass Casualty Incident. SMTUI shall properly assess and provide medical treatment to a minimum of 3 patients.

Prerequisite. SAR-3110, NSAR-3203, NSAR-3206, NSAR-3208

5.15 CORE PLUS MISSION SKILL PHASE (4000)

5.15.1 General. The Core Plus Mission Skill Phase is designed to ensure a small cadre of SAR Medical Technicians are properly trained and qualified in skill sets not used in the normal day to day operations.

5.16 CORE PLUS MISSION SKILL STAGES (4000)

STAGE	EVENTS
5.16.1	Academics (ACAD)
5.16.2	Day Rappel Aircrew Procedures (RAP)
5.16.3	Night Rappel Aircrew Procedures (NRAP)
5.16.4	Direct Deployment (DIR)
5.16.5	Over the Ramp Hoisting (ORH)
5.16.6	FCLP/CQ (FCLP//CQ)
5.16.7	Formation (FORM)

5.16.1 Academics (ACAD)

5.16.1.1 Purpose. The purpose of adding the academic syllabus is to ensure the required academic courses for each phase/stage of training are completed and logged in M-SHARP for each SMT. A summary of academic classes that is required for Core Plus Mission Skill Phase (4000) are listed below with their corresponding T&R code.

5.16.1.2 General. The Academic syllabus is designed to ensure SMT are receiving the proper academic training prior to starting a new phase and stage of training. Within each phase of training there are corresponding stages, each stage has a required academic syllabus that must be completed prior to starting that stage of instruction. The required academic syllabus for each stage of training is further delineated in the beginning paragraphs of each phase.

T&R CODE	ACADEMIC SYLLABUS
	CORE SKILLS PHASE (4000)
ACAD-4000	DAY RAPPEL AIRCREW PROCEDURES*
ACAD-4001	NIGHT RAPPEL AIRCREW PROCEDURES*
ACAD-4002	OVERLAND DIRECT DEPLOYMENT*
ACAD-4003	MARITIME DIRECT DEPLOYMENT*
ACAD-4004	OVER THE RAMP HOISTING*
ACAD-4005	FCLP
ACAD-4006	CQ
ACAD-4007	FORMATION TACTICS

5.16.2 Rappel Aircrew Procedures (RAP)

5.16.2.1 Purpose. Develop the SMTs knowledge and proficiency of day rappel procedures, equipment limitations, equipment set-up and usage, and safety checks.

5.16.2.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

5.16.2.3 SMTs must be a graduate of CNO approved Basic Rappel Indoctrination Course (D-050-2600) as required by OPNAVIST 3130.6 (series).

5.16.2.4 SMTs who have not completed the appropriate RAP syllabus should not perform day rappelling. SMTUI may start the Day Rappel syllabus prior to completion of the 3000 phase.

5.16.2.5 A rappel instructor constitutes as any Rescue Swimmer Instructor or Medical Technician Instructor who has completed the RAP and NRAP stages of the T&R and is designated a HIRA Instructor (HIRAI) by the Commanding Officer.

5.16.2.6 Upon completion of this stage of training, SMT should be able to correctly perform all required equipment set-ups and safely rappel from the aircraft during the day environment.

5.16.2.7 Crew Requirement. HAC, H2P, HIRA-CC, HIRAI, SMTUI

5.16.2.8 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

RAP-4100 1.0 * B D A 1 HH-46E

Goal. Introduce day SAR rappelling and short haul operations

Requirement

Brief/Discuss

- Safety considerations
- Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals
- Equipment inventory, preflight inspection and set-up
- Short haul procedures and lock-off techniques
- Hoisting vest

Introduce/Practice/Review

- Rappel rope and belay line rigging and set-ups
- Proper rappelling techniques and procedures
- Single, double and modified lock-offs
- Standard and bagless rappelling
- Short haul procedures and use of hoisting vest

Performance Standard. The SMTUI shall conduct a minimum of 1 bagless rappel descent and 4 standard rappel descents with 1 ending in a short haul of a simulated survivor in the hoisting vest.

Prerequisite. SAR-3102, ACAD-4000

RAP-4101 1.0 90 B,R,M D A 1 HH-46E

Goal. Conduct day SAR rappelling and short haul operations

Requirement

Brief/Discuss

- Safety considerations

Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals
Equipment inventory, preflight inspection and set-up
Short haul procedures and lock-off techniques
Rappelling with equipment
Short haul procedures with a litter

Introduce/Practice/Review
Rappel rope and belay line rigging and set-ups
Proper rappelling techniques and procedures
Single, double and modified lock-offs
Rappelling with equipment
Short haul procedures with a litter

Performance Standard. The SMTUI shall conduct a minimum of 4 rappels descents with 2 ending in a short haul of a simulated survivor in a litter.

Prerequisite. RAP-4100

RAP-4102	1.0	*	B,R	D	E	A	1 HH-46E

Goal. Conduct a day HIRA evaluation

Requirement

Brief/Discuss
Safety considerations
Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals
Equipment inventory, preflight inspection and set-up
Short haul procedures and lock off techniques
Postflight inspections of rappel equipment

Introduce/Practice/Review
Rappel rope and belay line rigging and set-up
Standard and bagless rappel descents with equipment
Short haul and lock-off procedures

Performance Standard. The SMTUI should properly setup the rappel and belay line and conduct safety checks without assistance. The SMTUI shall perform 2 rappel descents with equipment that end in the short haul of a simulated survivor in a litter.

Prerequisite. RAP-4101

5.16.3 Night Rappel Aircrew Procedures (NRAP)

5.16.3.1 Purpose. Develop the SMTs knowledge and proficiency of day rappel procedures, equipment limitations, equipment set-up and usage, and safety checks.

5.16.3.2 General. The T&R Program Manual addresses the Commanding Officer's authority to modify this training as required. A NATOPS Instructor will monitor the trainee's progress during the flight training syllabus.

5.16.3.3 SMTs must be complete with the RAP stage prior to commencing the NRAP stage. SMTs who have not completed the appropriate NRAP syllabus should not perform night rappelling. SMTUI may start the Day Rappel syllabus prior to completion of the 3000 phase.

5.16.3.4 A rappel instructor constitutes as any Rescue Swimmer Instructor or Medical Technician Instructor who has completed the RAP and NRAP stages of the T&R and is designated a HIRA Instructor (HIRAI) by the Commanding Officer.

5.16.3.5 Upon completion of this stage of training, SMT should be able to correctly perform all required equipment set-ups and safely rappel from the aircraft during the night environment.

5.16.3.6 Crew Requirement. HAC, H2P, HIRA-CC, HIRAI, SMTUI

5.16.3.7 Ground/Academic Training. Prior to the beginning of this stage, the SMTUI will be provided the required ACAD classes.

NRAP-4200 1.0 * B NS A 1 HH-46E

Goal. Introduce night SAR rappelling and short haul operations

Requirement

Brief/Discuss

- Safety considerations
- Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals
- Equipment inventory, preflight inspection and set-up
- Short haul procedures and lock-off techniques
- Hoisting vest

Introduce/Practice/Review

- Rappel rope and belay line rigging and set-ups
- Proper rappelling techniques and procedures
- Single, double and modified lock-offs
- Standard and bagless rappelling
- Short haul procedures and use of hoisting vest

Performance Standard. The SMTUI shall conduct a minimum of 1 bagless rappel descent and 4 standard rappel descents with 1 ending in a short haul of a simulated survivor in the hoisting vest.

Prerequisite. SAR-3202, RAP-4102, ACAD-4001

NRAP-4201 1.0 90 B,R,M NS A 1 HH-46E

Goal. Conduct night SAR rappelling and short haul operations

Requirement

Brief/Discuss

- Safety considerations
- Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals
- Equipment inventory, preflight inspection and set-up
- Short haul procedures and lock-off techniques
- Rappelling with equipment
- Short haul procedures with a litter

Introduce/Practice/Review

- Rappel rope and belay line rigging and set-ups
- Proper rappelling techniques and procedures
- Single, double and modified lock-offs
- Rappelling with equipment
- Short haul procedures with a litter

Performance Standard. The SMTUI shall conduct a minimum of 4 rappels descents with 2 ending in a short haul of a simulated survivor in a litter.

Prerequisite. NRAP-4200

NRAP-4202 1.0 * B,R NS E A 1 HH-46E

Goal. Conduct a night HIRA evaluation

Requirement

Brief/Discuss

Safety considerations
Crew coordination and communication during rappel operations to include standard ICS terminology and hand and arm signals
Equipment inventory, preflight inspection and set-up
Short haul procedures and lock off techniques
Postflight inspections of rappel equipment

Introduce/Practice/Review

Rappel rope and belay line rigging and set-up
Standard and bagless rappel descents with equipment
Short haul and lock-off procedures

Performance Standard. The SMTUI should properly setup the rappel and belay line and conduct safety checks without assistance. The SMTUI shall perform 2 rappel descents with equipment that end in the short haul of a simulated survivor in a litter.

Prerequisite. NRAP-4201

5.16.4 Direct Deployment (DIR)

5.16.4.1 Purpose. Develop the SMTs knowledge and proficiency in overland and over water direct deployment during both the day and night environment.

5.16.4.2 General.

5.16.4.3 Crew Requirement.

5.16.4.4 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

5.16.4.5 Prerequisites.

DIR-4300 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day overland direct deployment.

Requirement

Brief/Discuss

Safety considerations
Belay rigging procedures and limitations
Direct Deployment rigging procedures
Standard Direct Deployment procedures to include standard ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method

Introduce/Practice/Review

Direct Deployment rigging procedures
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Single lift recovery method

Double lift recovery method

Performance Standard

The RSUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method.

Prerequisite. SAR-3108, ACAD-4002

DIR-4310 1.5 365 B,R,M NS A 1 HH-46E

Goal. Develop knowledge and proficiency in night overland direct deployment.

Requirement

Brief/Discuss

Safety considerations in the environment
Belay rigging procedures and limitations
Direct Deployment rigging procedures
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Rescue hoist limitations and capabilities
Single lift recovery method
Double lift recovery method

Introduce/Practice/Review

Direct Deployment rigging procedures
Standard Direct Deployment procedures to include ICS terminology and hand and arm signals
Site evaluation, route planning and emergency procedures
Approach planning techniques
Single lift recovery method
Double lift recovery method

Performance Standard

The RSUI shall complete a minimum of 1 direct deployment from the aircraft utilizing the single lift recovery method and a minimum of 1 deployment from the aircraft utilizing the double lift recovery method.

Prerequisite. NSAR-3203, DIR-4300

5.16.5 Over The Ramp Hoisting (ORH)

5.16.5.1 Purpose. To develop knowledge and proficiency in over the ramp hoisting during the day and night environment.

5.16.5.2 General. SMTUI must receive this training from a qualified Crew Chief Instructor or Night System SAR Instructor. SMTUI do not have to be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. This flight must be flown on the corresponding flight of the pilot ORH stage. All initial syllabus training flights require an ATF.

5.16.5.3 Crew Requirement. HAC, H2P, CCI/NSSI, SMTUI, RS/MT

5.16.5.4 Ground/Academic Training. Prior to the beginning of this stage, the MTUI will be provided the required ACAD classes.

ORH-4400 1.5 365 B,R,M D A 1 HH-46E

Goal. Develop knowledge and proficiency in day hoisting operations utilizing the internal cargo winch through the aft cargo hatch.

Requirement

Brief/Discuss

- Standard Internal Cargo winch hoisting procedures
- Standard voice communication procedures
- Internal cargo winch capabilities and limitations
- Emergency procedures and troubleshooting for internal cargo winch failure
- Rigging of internal cargo winch and remote handgrip
- Review hand and arm signals
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment and safety checks

Introduce/Practice/Review

- Over the ramp hoisting procedures per the NTTP 3-50.1
- Cabin preparation and configuration
- Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
- Utilization of SAR equipment
- Utilization of the Quick Splice and Chicago Grip
- Hoisting operations while acting in the capacity of the Crew Chief
- Hoisting operations while acting in the capacity of the Rescue Swimmer on the ground

Performance Standard

The MTUI shall rig the internal cargo winch and remote hand grip. The MTUI shall conduct a minimum of 2 hoist evolutions utilizing the rescue basket while acting in the capacity of the Crew Chief. MTUI shall also conduct a minimum of 4 hoist evolutions while acting in the capacity of the Rescue Swimmer on the ground utilizing the rescue seat, rescue basket and MEDEVAC/Stokes litter.

Prerequisite. SAR-3102, ACAD-4004

ORH-4410 1.5 365 B,R,M NS A 1 HH-46E

Goal. Develop knowledge and proficiency in night hoisting operations utilizing the internal cargo winch through the aft cargo hatch.

Requirement

Brief/Discuss

- Over the ramp hoisting safety considerations in the night environment
- Standard Internal Cargo winch hoisting procedures
- Standard voice communication procedures
- Internal cargo winch capabilities and limitations
- Emergency procedures and troubleshooting for internal cargo winch failure
- Rigging of internal cargo winch and remote handgrip
- Review hand and arm signals
- Rescue equipment functions, capabilities and limitations
- Rigging of rescue equipment and safety checks

Introduce/Practice/Review

- Over the ramp hoisting procedures per the NTTP 3-50.1
- Cabin preparation and configuration

Rigging of rescue strop, forest penetrator/rescue seat, rescue basket, Stokes litter and MEDEVAC litter
Utilization of SAR equipment
Utilization of the Quick Splice and Chicago Grip
Hoisting operations while acting in the capacity of the Crew Chief
Hoisting operations while acting in the capacity of the Rescue Swimmer on the ground

Performance Standard

The MTUI shall rig the internal cargo winch station and remote hand grip. The MTUI shall conduct a minimum of 2 hoist evolutions utilizing the rescue basket while acting in the capacity of the Crew Chief. MTUI shall also conduct a minimum of 4 hoist evolutions while acting in the capacity of the Rescue Swimmer on the ground utilizing the rescue seat, rescue basket and MEDEVAC/Stokes litter.

Prerequisite. NSAR-3202, ORH-4400

5.16.6 Carrier Qualification (CQ)

5.16.6.1 Purpose. To qualify the MTUI in shipboard operations.

5.16.6.2 General. Training includes FCLP/CQ and NVG operations. Extended searches may require shipboard operations for refueling, casualty recovery, and/or remote site launches. The benefits of NVG operations cannot be over emphasized, and every effort should be made to ensure all crew members are SAR Night Systems Qualified (NSQ).

5.16.6.3 RSUI must receive this training from a qualified Crew Chief Instructor or Night System SAR Instructor that was previously Carrier Qualified in the CH-46E T&R Manual. RSUI do not have to be complete with the 3000 phase of the T&R syllabus prior to the commencement of this stage. This flight must be flown on the corresponding flight of the pilot FCLP stage. All initial syllabus training flights require an ATF. Refer to the NATOPS Manual, NWP 3-04.1 (Helicopter Operations for Air Capable Ships), and LHA/LPH/LHD NATOPS. Five day and five NVD landings required for qualification/ currency.

5.16.6.4 Crew Requirement. HAC, H2P, CCI/NSSI, RSUI, RS/MT

FCLP-4500	1.5	365	B,R,M	D	A	1 HH-46E

Goal. Conduct day, carrier pattern familiarization.

Requirement

Brief/Discuss

Introduce day FCLP patterns and approaches
Discuss emergency procedures peculiar to shipboard operations
Discuss aircrew coordination
Discuss verbal/visual communications used during shipboard landings and launches
Discuss LSE signal
Brief water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce day FCLP patterns and approaches
Practice Field Carrier Landings and approaches

Review LSE signals
Introduce LHD and LHA carriers

Performance Standard

The MTUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform shipboard flight operations to include LSE hand and arm signals. The MTUI shall successfully complete 5 approaches, landings and launches of the aircraft on an authorized field carrier.

Prerequisite. 2000 PHASE COMPLETE, ACAD-4005

FCLP-4510	1.5	365	B,R,M	NS	A	1 HH-46E

Goal. Conduct NVG carrier pattern familiarization.

Requirement

Brief/Discuss

Introduce day FCLP patterns and approaches
Discuss emergency procedures peculiar to shipboard operations
Discuss aircrew coordination
Discuss verbal/visual communications used during shipboard landings and launches
Discuss LSE signal
Brief water landing/ditching, and aircraft lighting

Introduce/Practice/Review

Introduce day FCLP patterns and approaches
Practice Field Carrier Landings and approaches
Review Night LSE signals
Introduce LHD and LHA carriers

Performance Standard

The MTUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The MTUI shall successfully complete 5 approaches, landings and launches of the aircraft on an authorized field carrier in the night environment.

Prerequisite. FCLP-4500

CQ-4600	1.5	365	B,R,M	D	A	1 HH-46E

Goal. Conduct day, carrier qualifications.

Requirement

Brief/Discuss

CQ patterns, approaches and landings
Emergency procedures particular to shipboard operations
Discuss height over various decks
Aircrew coordination
Verbal and visual communications used during shipboard landings and launches
LSE signals
Water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce day carrier qualification per NATOPS.
Introduce day CQ patterns and approaches
Practice Carrier Landings and approaches
Review LSE signals
Introduce LHD and LHA carriers

Performance Standard
The MTUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The MTUI shall successfully complete 5 approaches, landings and launches of the aircraft on a carrier.

Prerequisite. FCLP-4500, ACAD-4006

CQ-4610 1.5 365 B,R,M NS A 1 HH-46E

Goal. Conduct night, carrier qualifications.

Requirement

Brief/Discuss

CQ patterns, approaches and landings
Emergency procedures particular to shipboard operations
Discuss height over various decks
Aircrew coordination
Verbal and visual communications used during shipboard landings and launches
LSE signals
Water landing/ditching, and aircraft lighting.

Introduce/Practice/Review

Introduce night carrier qualification per NATOPS.
Introduce night CQ patterns and approaches
Practice Carrier Landings and approaches
Review night LSE signals
Introduce LHD and LHA carriers

Performance Standard. The MTUI, acting in the capacity of the crew chief, shall demonstrate the ability/knowledge to perform night shipboard flight operations to include night LSE hand and arm signals. The MTUI shall successfully complete 5 approaches, landings and launches of the aircraft on a carrier in the night environment.

Prerequisite. CQ-4600

5.16.7 Formation (FORM)

5.16.7.1 Crew Requirement. HAC, CP, CCI, MTUI, CC (or qualified RS or MT)

5.16.7.2 Ground/Academic Training. Prior to the beginning of this stage, the RSUI will be provided the required ACAD classes.

FORM-4700 1.5 180 B,R,M D A 2 HH-46E

Goal. Review day formation flying and conduct day navigation as a section or division.

Requirement

Brief/Discuss

CRM.
Crew comfort levels.
Lead changes.
Lead considerations.
Standard terminology.
Formation maneuvering.

Aircraft clearance.
Intra and inter aircraft communications.
Distance estimation.
Mass casualty response procedures and triage.

Introduce/Review

Combat spread and combat cruise.
Parade.
IIMC Breakup.
Cruise principles,
Turn patterns,
Crossover,
Break-up and rendezvous,
Lead changes.
Lookout doctrine.
ICS procedures.

Performance Standards. Demonstrate the ability to perform and understand formation maneuvering, utilize standard terminology while maintaining a high level of situational awareness and maintain awareness of friendly aircraft while maintaining a proper scan and lookout doctrine.

Prerequisite. 2000 PHASE COMPLETE, ACAD-4007

FORM-4701	1.5	180	B,R,M	D	A	2 HH-46E

Goal. Conduct section aircraft formation approaches, landings and departures to/from a confined area.

Requirement

Brief/Discus

CRM.
Lookout doctrine.
Obstacle clearance.
Distance estimation.
Wingman position.
Wave off/brownout procedures.
Section formation.

Introduce/Review

Crew responsibilities during section CAL operations.
Lookout doctrine emphasizing responsibilities during section operations.

Performance Standards. Demonstrate the ability to clear the aircraft for landing into confined areas while recognizing closure rate, drift error and effectively utilizing proper distance estimation and depth perception. Maintain SA of wingman throughout the evolution.

Prerequisite. FORM-4700

FORM-4710	1.5	180	B,R,M	NS	A	2 HH-46E

Goal. Conduct NS section navigation.

Requirement

Brief/Discuss

CRM.
Crew comfort levels.
Lead changes.

Aircraft lighting.
Closure rate.
Distance estimation.
NVG procedures and emergencies.
Relative motion and depth perception problems at night.
Lookout doctrine.

Introduce/Review

Combat spread and combat cruise.
Parade.
IIMC Breakup.
Cruise principles,
Turn patterns,
Crossover,
Break-up and rendezvous,
Lead changes.

Performance Standards. Demonstrate the ability to conduct formation flight while utilizing NVGs. Maintain SA of wingman and communicate his position throughout the evolution.

Prerequisite. FORM-4700

FORM-4711	1.5	180	B,R,M	NS	A	2 HH-46E

Goal. Conduct NS section approaches, landings, and departures to a confined area.

Requirement

Brief/Discuss

CRM.
Crew comfort levels.
NVG navigation techniques.
NVG failures.
Emergencies.
Inadvertent IMC.
Aircraft lighting.
Use of IR searchlight.
Depth perception.
Obstacle clearance.

Introduce/Review

Section takeoffs/landings at various unlit CAL sites.

Performance Standards. Utilizing NVGs, demonstrate the ability to clear the aircraft for landing into confined areas while recognizing closure rate, drift error and effectively utilizing proper distance estimation and depth perception. Maintain SA of wingman throughout the evolution.

Prerequisite. FORM-4701, FORM-4710

5.17 Instructor Training Phase (5000)

5.17.1 General. The instructor training phase is designed to provide the Squadron with a cadre of highly skilled instructors to ensure SMTUIs receive consistent, comprehensive training designed to ensure their mission success.

5.18 Instructor Training Stages (5000)

STAGE	EVENT
5.18.1	SAR Medical Technician Instructor (SMTI)

5.18.1 Instructor Under Training (IUT)

5.18.1.1 Purpose. Develop qualified SAR Medical Technician Instructors (SMTI) with the ability to teach SAR operations using standardized flight training.

5.18.1.2 General. SMTIUT must be a designated SMT

5.18.1.3 Crew Requirement. HAC, H2P, CC, SMTI, SMTIUT

5.18.1.4 Ground/Academic Training. Prior to the beginning of this stage, the SMTIUT will be provided the required ACAD classes.

IUT-5100 1.5 * B,R D E A 1 HH-46E

Goal. Demonstrate instructional techniques during day FAM/EP/CAL maneuvers and procedures.

Requirement

Brief/Discuss

- Crew coordination
- Confined area landings
- Emergency procedures
- Instrument checklists
- Attitude instrument flight
- Instrument approaches
- Flight planning

Review

- All FAM stage maneuvers
- CALs
- Instrument procedures

Performance Standard. SMTIUT will demonstrate instructional techniques in crew responsibilities during preflight, start, taxi, take-off, landing, in-flight emergency procedures, ICS procedures, and confined area landings.

Prerequisite. DESG-6200

IUT-5101 1.5 * B,R D E A 1 HH-46E

Goal. Instructional water bucket operations and personnel hoisting procedures.

Requirement

Discuss

- Crew coordination
- Load computation/planning
- Emergency procedures

Review

- Water bucket operations
- External hoist operations
- Hoist operations using internal winch

Performance Standard. The SMTIUT will demonstrate instructional techniques during water bucket operations emphasizing cargo hook operation and limitations, load stability, emergency procedures, lookout doctrine, crew coordination, ICS procedures, and obstacle clearance.

Prerequisite. IUT-5100

IUT-5102 1.5 * B,R D E A 1 HH-46E

Goal. Review all instructional techniques for SAR in-flight procedures.

Requirement

Brief/Discuss

- Aircraft configuration
- SAR equipment
- Coordinating agencies
- Flare patterns
- Crew coordination
- Emergency procedures

Review

- Search patterns
- Manual and coupled approaches
- Deployment of swimmer/corpsman
- Inland/Maritime survivor recovery
- Use of enroute checklists

Performance Standard. The SMTIUT will demonstrate instructional techniques in crew responsibilities and procedures during SAR operations, emphasizing SAR procedures, hoist operations, crew coordination, safety, ICS procedures, obstacle clearance, and flare deployment.

Prerequisite. DESG-5100

IUT-5103 1.5 * B,R D E A 1 HH-46E

Goal. Review all instructional techniques for SAR in-flight procedures.

Requirement

Brief/Discuss

- Aircraft configuration
- SAR equipment
- Coordinating agencies
- Flare patterns
- Crew coordination
- Emergency procedures

Review

- Search patterns
- Manual and coupled approaches
- Deployment of swimmer/corpsman
- Inland/Maritime survivor recovery
- Use of enroute checklists

Performance Standard. The SMTIUT will demonstrate instructional techniques in crew responsibilities and procedures during SAR operations, emphasizing SAR procedures, hoist operations, crew coordination, safety, ICS procedures, obstacle clearance, and flare deployment.

Prerequisite. DESG-5102

5.19 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) PHASE (6000)

5.19.1 General. The 6000 phase encompasses the events required to maintain currency with all certifications, qualifications, and designations.

Completion of these events ensures the SAR Medical Technician is qualified to execute the various missions assigned to the Squadron.

5.20 Requirements, Certifications, Qualifications, And Designations (RCQD) Stages (6000)

T&R CODE	EVENT
5.20.1	Academics (ACAD)
5.20.2	NATOPS (NTPS)
5.20.4	Designation Flight (DESG)

5.20.1 Academics (ACAD)

ACAD-6000 4.0 365 B,R,M E

Goal. The open book examination shall consist of, but not be limited to the question bank. The purpose of the open book examination is to evaluate the SAR Medical Technician's knowledge of the appropriate publications and the aircraft.

Performance Standard. Achieve a minimum score of 3.5 on the open book examination.

ACAD-6001 2.0 365 B,R,M E

Goal. The purpose of the closed book examination is to evaluate the SAR Medical Technician's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard. Achieve a minimum score of 3.3 on the closed book examination.
Prerequisite. ACAD-6000

ACAD-6002 2.0 365 B,R,M E

Goal. The oral examination shall consist of, but not be limited to the question bank. The instructor may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the SMT's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard. Achieve a minimum grade of qualified on the oral examination.

Prerequisite. NTPS-6001

ACAD-6007 2.0 365 B,R,M E

Goal. CRM ground instruction in accordance with applicable directives and instructions.

Performance Standard. Demonstrate satisfactory knowledge of CRM principles and their application.

ACAD-6008 1.0 30 B,R,M E

Goal. Monthly Emergency Procedures Exam.

Requirement. Conduct a monthly EP Exam per NAVMC 3500.14.

ACAD-6010 1.0 365 B,R,M E

Goal. Annual SAR Medical Technician Exam.

Requirement. Conduct a annual SAR Medical Technician Exam per OPNAVINST 3130.6E.

ACAD-6013 1.0 365 B,R,M E

Goal. Annual HIRA Rescue Crewman Exam.

Requirement. Conduct a annual HIRA Rescue Air Crewman Exam per OPNAVIST 3130.6E.

5.20.2 NATOPS Evaluations (NTPS)

5.20.2.1 Purpose. Provide annual NATOPS and CRM evaluation flights.

NTPS-6100 1.5 365 B,R,M (N) E A/S 1 HH-46E

Goal. Conduct annual NATOPS evaluation.

Requirement. Proficiency in the utilization of all aspects of the HH-46E as a system. The proficiency expected by the evaluator in this flight shall be commensurate with the experience of the SMT under evaluation. Upon successful completion of this evaluation, a SMT may be designated a HH-46E (non-SAR) Rescue Air Crewman at the discretion of the Commanding Officer.

Performance Standard. The performance expected by the evaluator in this flight shall be commensurate with the experience level of the SMT under evaluation.

Prerequisite. ACAD-6002

NTPS-6101 1.0 365 B,R,M (N) E A/S 1 HH-46E

Goal. Conduct annual CRM evaluation.

Requirement. Perform initial/annual CRM flight evaluation per applicable directives. May be flown in conjunction with annual NATOPS evaluation flight.

Performance Standard. Performance standards will be according to the HH-46E NFM.

Prerequisite. ACAD-6007

5.20.3 Designation Flights (DESG)

5.20.3.1 Purpose. To provide SAR designations.

5.20.3.2 General. Upon successful completion of DESG-6200, a SMT may be designated Day SAR SMT at the discretion of the Commanding Officer. Upon successful completion of DESG-6201 a SMT may be designated a fully qualified SAR SMT at the discretion of the Commanding Officer.

DESG-6200 2.0 365 B,R,M D E A 1 HH-46E

Goal. Condcut Day SAREX. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement

Brief/Discuss

SAR duty crew requirements, limitations, and Alert conditions
Short fused information collection

Mission update briefing techniques
Aircraft configuration
SAR equipment
Coordinating agencies
Use of SAR TACAID
Emergency procedures

Introduce

Emergency response/recall procedures
Scenario based overland SAR exercise

Review

SAR aircraft configurations
Search patterns
Hoisting operations
Hover position/techniques
Hand/arm signals
Gear delivery procedures
Confined area delivery/pickup techniques

Performance Standard. SMTUI shall act in the capacity of the SAR Medical Technician during a simulated Search and Rescue Exercise. SMTUI shall demonstrate an ability to properly assess and care for patients throughout the entire evolution.

Prerequisite. SAR-3110

DESG-6210 2.0 365 B,R,M NS E A 1 HH-46E

Goal. Night SAR evaluation. This flight may be flown in conjunction with an annual NATOPS evaluation.

Requirement. The check will be conducted per the criteria contained in the NATOPS Flight Manual, OPNAVINST 3710.7, applicable SAR publications, and will cover all practicable night SAR operations and procedures contained in this syllabus.

Performance Standard. SMTUI shall act in the capacity of the SAR Medical Technician during a simulated Search and Rescue Exercise. SMTUI shall safely perform one hoisting evolution from the deck and demonstrate an ability to properly assess and care for patients throughout the entire evolution.

Prerequisite. NSAR-3210.

5.21 T&R SYLLABUS MATRICES

VMR-1 MEDICAL TECHNICIAN T&R MATRIX															
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
CORE SKILL TRAINING (2000 PHASE EVENTS)															
SAR ACADEMICS (ACAD)															
ACAD	2000	COMMAND MISSION	B,R					*		1.0					
ACAD	2001	CREW RESPONSIBILITIES CLASS	B,R					*		1.0					
ACAD	2002	FLIGHT EQUIPMENT AND SAFETY PROC	B,R					*		1.0					
ACAD	2003	EGRESS AND EMERGENCY PROCEDURES	B,R,M					365		1.0					
ACAD	2004	CONFINED AREA LANDINGS	B,R					*		1.0					
ACAD	2005	SAR AND MEDICAL GEAR FAM	B,R					*		1.0					
ACAD	2006	NIGHT SYSTEMS CLASS	B,R					*		1.0					
ACAD	2007	NIGHT SYSTEMS LAB	B,R					*		1.0					
ACAD	2009	PRINCIPLES OF FIRE FIGHTING	B,R,M					365		1.0					
ACAD	2010	PAX AND MEDICAL TRANSPORTS	B,R,M					365		1.0					
TOTAL DAY SAR STAGE									10	10.0		0.0			
FAMILIARIZATION (FAM)															
FAM	2103	AREA FAM	B,R,M		A	1	D	365				1.5	2000,2001,2002		203
FAM	2104	EP FAM	B,R,M	E	A	1	D	90				1.5	2003,2103		204
TOTAL FAM STAGE									0	0.0	2	3.0			
CONFINED AREA LANDING (CAL)															
CAL	2200	DAY CALS	B,R,M		A	1	D	45				1.5	2004,2103,2104	2103	220
CAL	2201	REVIEW OF DAY CALS	B		A	1	D	*				1.5	2200	2103	221
TOTAL CAL STAGE									0	0.0	2	3.0			
NAVIGATION (NAV)															
NAV	2300	LOCAL HOSPITAL FAM	B,R,M		A	1	D	365				1.5	2005,2103,2200	2103	250
NAV	2301	DISTANT HOSPITAL FAM	B,R		A	1	D	*				2.5	2005,2103,2200	2103	251
TOTAL NAV STAGE									0	0.0	2	4.0			
NIGHT SYSTEMS (NS)															
NS	2400	INTRODUCTORY NS FAM	B,R		A	1	NS	*				1.5	2104,2201,2006,2007,2300,2301		300
NS	2401	NS FAM	B,R		A	1	NS	*				1.5	2400	2400	301
NS	2402	NS NAV	B,R,M		A	1	NS	365				1.5	2401	2400,2401	302
NS	2403	NS NAV & CAL	B,R,M		A	1	NS	45				1.5	2402	2400,2401,2402	303
TOTAL NS STAGE									0	0.0	4	6.0			
AERIAL FIREFIGHTING (FF)															
FF	2500	FIRE BUCKET	B,R,M		A	1	D	365				1.5	2009,2201,2104		240
TOTAL FF STAGE									0	0.0	1	1.5			
AERIAL TRANSPORT (AT)															
AT	2600	AERIAL TRANSPORT	B,R,M		A	1	(N)	365				1.5	2010,2201,2300,2301,2403	2103,2201,2300,2301	
TOTAL AT STAGE									0	0.0	1	1.5			
TOTAL 2000 PHASE EVENTS									10	10.0	12	19.0			

VMR-1 MEDICAL TECHNICIAN T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
MISSION SKILL TRAINING (3000 PHASE EVENTS)															
SAR ACADEMICS (ACAD)															
ACAD	3004	LEVEL A MEDICAL KIT	B,R,M					365		1.0					
ACAD	3005	FIRST AID 1	B,R,M					365		1.0					
ACAD	3006	FIRST AID 2	B,R,M					365		1.0					
ACAD	3007	FIRST AID 3	B,R,M					365		1.0					
ACAD	3008	FIRST AID 4	B,R,M					365		1.0					
ACAD	3009	SAR PUBS/INSTRUCTIONS/REPORTS	B,R,M					365		1.0					
ACAD	3010	SAR PROCEDURES	B,R,M					365		1.0					
ACAD	3011	RESCUE DEVICES	B,R,M					365		1.0					
ACAD	3012	RESCUE HAND SIGNALS	B,R,M					365		1.0					
ACAD	3013	SURVIVOR MARKER / LOCATOR DEVICES	B,R,M					365		1.0					
ACAD	3014	AIRCREW SURVIVAL EQUIPMENT	B,R,M					365		1.0					
ACAD	3015	MARITIME DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	3016	OVERLAND DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	3017	INANIMATE OBJECT RECOVERY	B,R,M					365		1.0					
ACAD	3018	RESCUE PER OCCUPATIONAL HAZARDS	B,R,M					365		1.0					
ACAD	3019	SAR ORGANIZATION	B,R,M					365		1.0					
ACAD	3020	SAR PLANNING	B,R,M					365		1.0					
ACAD	3021	SAR COMMUNICATIONS	B,R,M					365		1.0					
ACAD	3022	PRC-149 SWIMMER RADIO	B,R,M					365		1.0					
ACAD	3023	ANNUAL CPR PROCIFICIENCY	B,R,M					365		1.0					
ACAD	3024	RESCUE SWIMMER EQUIPMENT	B,R,M					365		1.0					
ACAD	3025	RESCUE SWIMMER PROCEDURES	B,R,M					365		1.0					
ACAD	3026	PARACHUTE DISENTANGLEMENT PROC	B,R,M					365		1.0					
ACAD	3027	RESUCE SWIMMER LIFESAVING PROC	B,R,M					365		1.0					
ACAD	3028	BELAY PROCEDURES	B,R,M					365		1.0					
ACAD	3029	RAPPEL PROCEDURES	B,R,M					365		1.0					
ACAD	3030	HIRA SHORT HAUL EMERGENCY PROC	B,R,M					365		1.0					
ACAD	3031	TRAUMA ASSESSMENT	B,R,M					365		1.0					
ACAD	3032	MEDICAL ASSESSMENT	B,R,M					365		1.0					
ACAD	3033	PATIENT MONITORING EQUIPMENT	B,R,M					365		1.0					
ACAD	3034	MEGACODE	B,R,M					180		1.0					
ACAD	3035	ADVANCED AIRWAY MANAGEMENT	B,R,M					365		1.0					
ACAD	3036	OXYGEN ADMINISTERING DEVICES	B,R,M					365		1.0					
ACAD	3037	TENSION PNEUMOTHORAX	B,R,M					365		1.0					
ACAD	3038	IV THERAPY	B,R,M					365		1.0					
ACAD	3039	MILITARY ANTISHOCK TROUSER	B,R,M					365		1.0					
ACAD	3040	ORTHO IMMOBILIZATION DEVICES	B,R,M					365		1.0					
ACAD	3041	PHARMOCOLOGY	B,R,M					365		1.0					
ACAD	3042	BLOODBORNE PATHOGENS	B,R,M					365		1.0					
ACAD	3043	MEDICAL-LEGAL CONSIDERATIONS	B,R,M					365		1.0					
ACAD	3044	RESPIRATORY DISEASES	B,R,M					365		1.0					
ACAD	3045	COMPRESSED AIR INJURIES	B,R,M					365		1.0					
ACAD	3046	CARDIOVASCULAR ILLNESSES	B,R,M					365		1.0					

VMR-1 MEDICAL TECHNICIAN T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
ACAD	3047	SKULL OR CNS DISRUPTION	B,R,M					365		1.0					
ACAD	3048	OBSTETRICS AND PEDIATRCS	B,R,M					365		1.0					
ACAD	3049	GASTROINTESTINAL DISORDERS	B,R,M					365		1.0					
ACAD	3050	HEAT AND COLD RELATED INJURIES	B,R,M					365		1.0					
ACAD	3051	PROTOCOL REVIEWS	B,R,M					365		1.0					
ACAD	3052	OVERLAND HOISTING PROCEDURES	B,R,M					365		1.0					
ACAD	3053	MARITIME HOISTING PROCEDURES	B,R,M					365		1.0					
ACAD	3054	VESSEL HOISTING PROCEDURES	B,R,M					365		1.0					
TOTAL DAY SAR STAGE									51	51.0	0	0.0			
SEARCH AND RESCUE (SAR)															
SAR	3100	DAY LAND SEARCH PATTERNS	B,R		A	1	D	365				1.5	2000 PHASE COMPLETE,3004-3014		252
SAR	3101	DAY LAND HOIST	B		A	1	D	*				1.5	2000 PHASE COMPLETE,3004-3014,3052		253
SAR	3102	DAY LAND LIVE HOIST	B,R,M		A	1	D	30				1.5	3016,3101,3028 THROUGH 3030		253
SAR	3103	DAY OVERLAND SAREX	B,R,M		A	1	D	365				2.0	3018-3023,3031-3035,3038,3045,3046,3050,3100,3102	3100,3102	255
SAR	3104	DAY WATER SEARCH/DOPPLER	B,R,M		A	1	D	60				1.5	3015,3100		256
SAR	3105	DAY WATER WORKS (STROP)	B		A	1	D	*				1.5	3024-3027,3053,3102,3104	3104	258
SAR	3106	DAY WATER WORKS (LITTER)	B,R,M		A	1	D	180				1.5	3105	3104, 3105	259
SAR	3107	DAY BOAT HOIST	B		A	1	D	*				1.5	3054,3105		260
SAR	3108	DAY BOAT HOIST	B,R,M		A	1	D	180				1.5	3107	3108	260
SAR	3110	DAY MASS CASUALTY SAREX	B,R		A	1	D	*				2.0	3017,3029,3030,3034,3036,3037,3039-3044,3047-3049,3051,3108	3103,3102,3100	
TOTAL DAY SAR STAGE									0	0.0	10	16.0			
NIGHT SEARCH AND RESCUE (NSAR)															
NSAR	3200	NIGHT LAND SEARCH PATTERNS	B,R		A	1	NS	365				1.5	3000 ACAD STAGE COMPLETE,3100		320
NSAR	3201	NIGHT LAND HOIST	B		A	1	NS	*				1.5	3101		321
NSAR	3202	NIGHT LAND LIVE HOIST	B,R,M		A	1	NS	30				1.5	3102,3201		321
NSAR	3203	NIGHT OVERLAND SAREX	B,R,M		A	1	NS	365				2.0	3103,3200,3202	3200	322
NSAR	3204	NIGHT WATER SEARCH/DOPPLER	B,R,M		A	1	NS	60				1.5	3104,3200		323
NSAR	3205	NIGHT SWIMMER DEPLOYMENT (STROP)	B		A	1	NS	*				1.5	3105,3204,3202	3204	330
NSAR	3206	NIGHT SWIMMER DEPLOYMENT (LITTERS)	B,R,M		A	1	NS	180				1.5	3106,3205	3204	331
NSAR	3207	NIGHT BOAT HOIST (STROP)	B		A	1	NS	*				1.5	3107,3204	3204	332
NSAR	3208	NIGHT BOAT HOIST (LITTER)	B,R,M		A	1	NS	180				1.5	3108,3207	3204,3207	333
NSAR	3210	NIGHT MASS CASUALTY SAREX	B,R		A	1	NS	*				2.0	3110,3203,3206,3208	3203,3200	340
TOTAL NIGHT SAR STAGE									0	0.0	10	16.0			
TOTAL MISSION SKILLS PHASE									51	51.0	20	32.0			
CORE PLUS MISSION SKILL TRAINING (4000 PHASE EVENTS)															
CORE PLUS MISSION SKILLS ACADEMICS (ACAD)															
ACAD	4000	DAY RAPPEL PROCEDURES	B,R,M					365		1.0					
ACAD	4001	NIGHT RAPPEL PROCEDURES	B,R,M					365		1.0					
ACAD	4002	OVERLAND DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	4003	MARITIME DIRECT DEPLOYMENT	B,R,M					365		1.0					
ACAD	4004	OVER THE RAMP HOISTING	B,R,M					365		1.0					
ACAD	4005	FIELD CARRIER LANDING PRACTICE	B,R,M					365		1.0					
ACAD	4006	CARRIER LANDINGS	B,R,M					365		1.0					
ACAD	4007	FORMATION TACTICS	B,R,M					365		1.0					

VMR-1 MEDICAL TECHNICIAN T&R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
TOTAL ACAD STAGE									8	8.0	0	0.0			
DAY RAPPEL (RAP)															
RAP	4100	INTRO TO DAY RAPPEL	B		A	1	D	*				1.0	3102,4000		400
RAP	4101	DAY RAPPEL	B,R,M		A	1	D	90				1.0	4100		401
RAP	4102	DAY RAPPEL EVAL	B,R	E	A	1	D	*				1.0	4101	4101	403
TOTAL RAP STAGE									0	0.0	3	3.0			
NIGHT RAPPEL (NRAP)															
NRAP	4200	INTO TO NIGHT RAPPEL	B		A	1	NS	*				1.0	3202,4001,4102		
NRAP	4201	NIGHT RAPPEL	B,R,M		A	1	NS	90				1.0	4200		
NRAP	4202	NIGHT RAPPEL EVAL	B,R		A	1	NS	*				1.0	4201	4201,4101	
TOTAL NRAP STAGE									0	0.0	3	3.0			
DIRECT DEPLOYMENT DAY (DIR)															
DIR	4300	DAY OVERLAND DIR	B,R,M		A	1	D	365				1.5	3108,4002	3102	
DIR	4310	NIGHT OVERLAND DIR	B,R,M		A	1	NS	365				1.5	3203,4300	3202,4300	
TOTAL DIR STAGE									0	0.0	2	3.0			
DAY OVER THE RAMP HOISTING (ORH)															
ORH	4400	DAY OVER THE RAMP HOIST	B,R,M		A	1	D	365				1.5	3102,4004		254
ORH	4410	NIGHT OVER THE RAMP HOIST	B,R,M		A	1	NS	365				1.5	3202, 4400	4400	
TOTAL ORH STAGE									0	0.0	2	3.0			
FIELD CARRIER LANDING PRACTICE (FCLP)															
FCLP	4500	DAY FCLP	B,R,M		A	1	D	365				1.5	2000 PHASE COMPLETE,4005		
FCLP	4510	NIGHT FCLP	B,R,M		A	1	NS	365				1.5	4500	4500	
									0	0.0	2	3.0			
CARRIER QUALIFICATION (CQ)															
CQ	4600	DAY CQ	B,R,M		A	1	D	365				1.5	4006,4500	4500	
CQ	4610	NIGHT CQ	B,R,M		A	1	NS	365				1.5	4600	4600,4510,4500	
TOTAL CQ STAGE									0	0.0	2	3.0			
FORMATION (FORM)															
FORM	4700	FORMATION NAV	B,R,M		A	2	D	180				1.5	2000 PHASE COMPLETE,4007	2103	
FORM	4701	SECTION CALS	B,R,M		A	2	D	180				1.5	4700	2200,4700	
FORM	4710	NS SECTION NAV	B,R,M		A	2	NS	180				1.5	4700	2401,4700	
FORM	4711	NS SECTION CALS	B,R,M		A	2	NS	180				1.5	4701,4710	2403,4701,4710	
TOTAL FORM STAGE									0	0.0	4	6.0			
INSTRUCTOR TRAINING (5000 PHASE EVENTS)															
INSTRUCTOR UNDER TRAINING (IUT)															
IUT	5100	DAY FAM/CAL/EP	B,R	E	A	1	D	*				1.5	6200		500
IUT	5101	FIREFIGHTING	B,R	E	A	1	D	*				1.5	5100		503
IUT	5102	OVERLAND SAR	B,R	E	A	1	D	*				1.5	5100		504
IUT	5103	OVERWATER SAR	B,R	E	A	1	D	*				1.5	5102		502
TOTAL IUT STAGE									0	0.0	4	6.0			

VMR-1 MEDICAL TECHNICIAN T&R MATRIX															
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# of A/C	CON	REFLY	# OF ACAD	ACAD TIME	# OF FLTS	FLT TIME	PREREQUISITE	CHAINING	EVENT CONV
REQUIREMENT, QUALIFICATIONS AND DESIGNATIONS (RQD) (6000 PHASE EVENTS)															
RQD ACADEMICS (ACAD)															
ACAD	6000	NATOPS OPEN BOOK	B,R,M	E				365		4.0					
ACAD	6001	NATOPS CLOSED BOOK	B,R,M	E				365		2.0			6000		
ACAD	6002	NATOPS ORAL EXAM	B,R,M	E				365		2.0			6001		
ACAD	6007	CRM GROUND CLASS	B,R,M	E				365		2.0					
ACAD	6008	MONTHLY EP QUIZ	B,R,M	E				30		1.0					
ACAD	6010	SAR MEDICAL TECHNICIAN EXAM	B,R,M	E				365		1.0					
ACAD	6013	HIRA RESCUE CREWMAN EXAM	B,R,M	E				365		1.0					
TOTAL ACAD STAGE									7	13.0	0	0.0			
NATOPS (NTPS)															
NTPS	6100	NATOPS EVALUATIONS	B,R,M	E	A	1	(N)	365				1.0	6002		600
NTPS	6101	CRM FLIGHT EVALUATION	B,R,M	E	A	1	(N)	365				1.0	6007		640
TOTAL NTPS STAGE									0	0.0	2	2.0			
SAR DESIGNATIONS (DESG)															
DESG	6200	DAY SAR DESIGNATION	B,R,M	E	A	1	D	365				2.0	3110		602
DESG	6210	NIGHT SAR DESIGNATION	B,R,M	E	A	1	NS	365				2.0	3210		602
TOTAL DESG STAGE									0	0.0	2	4.0			