



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

NAVMC 3500.51D

C 466

MAR 19 2021

NAVMC 3500.51D

From: Commandant of the Marine Corps

To: Distribution List

Subj: AV-8B TRAINING AND READINESS MANUAL

Ref: (a) NAVMC 3500.14E

Encl: (1) AV-8B T&R Manual

1. Purpose. Per the reference, this Training and Readiness (T&R) Manual, contained in enclosure (1), establishes training standards, regulations, and policies regarding the training of AV-8B aircrew.

2. Cancellation. NAVMC 3500.51C.

3. Scope. Highlights of the major changes included in this manual are:

a. Chapter 1

(1) Significant additions to the critical military occupational specialty table have been made, focusing on aircraft maintenance, to provide enhanced ability for units to ensure mission accomplishment.

(2) The core model minimum requirement combat leadership table has been updated to reflect changes in combat leadership metrics.

b. Chapter 2

(1) Increased emphasis across all phases to create threat-aware, self-defense capable attack pilots.

(2) Added proficiency periods to the refresher, modified refresher, and safe-for-solo programs of instruction in the core introduction 1000 Phase.


(3) Previous armed reconnaissance and strike coordination armed reconnaissance (SCAR) stages have been merged into a single SCAR stage to better align with mission essential tasks.

(4) Enabled most range, environment, and adversary-restricted events to be maintained in the simulator.

4. Information. Commanding General (CG), Training and Education Command (TECOM) will update this T&R Manual as necessary to provide current and relevant training standards to commanders. All questions pertaining to this Manual should be directed to: CG, TECOM, Policy and Standards Division (C 466), 1019 Elliot Road, Quantico, Virginia 22134.

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

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


LEWIS A. CRAPAROTTA
Commanding General
Training and Education Command
By direction

DISTRIBUTION: PCN 1003197710

RECORD OF ADMINISTRATIVE CHANGES

Log completed change action as indicated.

Admin Change Number	Description	Chapter	Message Date-Time- Group
1	<ul style="list-style-type: none">-Added DMRT to applicable codes in the narrative.-Changed instructor requirement for CAS-3106 and 3107.-Adjusted chaining issues in the syllabus matrix where needed.	2	DoN Tracker 2021- TECOM_PSD _ASB-152 of 8 Sep 21

BLANK

CHAPTER 1

VMA AV-8B

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

BLANK

CHAPTER 1

AV-8B

1.0 TRAINING AND READINESS REQUIREMENTS. The goal of Marine Aviation is to attain and maintain combat readiness to support Expeditionary Maneuver Warfare while conserving resources. The standards established in this program are validated by subject matter experts to maximize combat capabilities for assigned METs. These standards describe and define unit capabilities and requirements necessary to maintain proficiency in mission skills and combat leadership. Training Events are based on specific requirements and performance standards to ensure a common base of training and depth of combat capability.

1.1 MISSION

1.1.1 Tactical Squadrons. Support the MAGTF Commander by destroying surface and airborne targets and escorting friendly aircraft, day or night, under all weather conditions, during expeditionary, joint, or combined operations.

1.1.2 VMAT-203 Fleet Replacement Squadron. Conduct Core Introduction attack training for selected aircrews in the AV-8B and provide technical training for aviation maintenance personnel.

Note: VMA-223 will assume the Core Introduction Mission in FY-22 and will become the AV-8B Fleet Replacement Detachment (FRD), VMAT-203 will Stand-down.

1.2 TABLE OF ORGANIZATION (T/O). Refer to Table of Organization managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for AV-8B squadrons. As of this publication date; VMA Squadrons, VMAT, and detachments are authorized:

1.2.1 Tactical Squadron

VMA AV-8B				
TABLE OF ORGANIZATION T/O				
CREW POSITION	SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT
	14 AIRCRAFT	10 AIRCRAFT	8 AIRCRAFT	6 AIRCRAFT
Pilots	22	13	11	9

1.2.2 Tactical Squadron's Critical Military Occupational Specialty* (MOS)

AV-8B TACTICAL AND RESERVE SQUADRON CRITICAL MOSs			
MOS Description	PRIMARY MOS	Billet and/or MOS Description	SECONDARY MOS
AV-8B Pilot	7509	Maintenance Control (Safe-for-flight)	6012
Avionics Tech	6332	Collateral Duty Inspector (CDI)	6016
Airframe Mechanic	6252	Collateral Duty QAR (CDQAR)	6017
Flight Equipment Technician	6048		
Powerline Mechanic	6212		
*Critical MOS - Those specialties that directly affect the unit's ability to undertake its mission. Definition per MCO 3000.13.			
Note: Flight Leadership MOS captured in Combat Leadership DRRS-MC reporting applicable to training level.			

1.2.3 VMAT-203 Fleet Replacement Squadron

VMAT-203	
TABLE OF ORGANIZATION T/O	
CREW POSITION	VMAT-203
Pilots	27
AV-8B	13
TAV-8B	13

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

VMA AV-8B		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	ABBREVIATION	DESCRIPTION
MCT 3.2.3.1.1	CAS	Conduct Close Air Support
MCT 3.2.3.1.2.1	STK	Conduct Strike
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance
CORE PLUS		
MET	ABBREVIATION	DESCRIPTION
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 1.3.3.3.2.1	FOB	Conduct Aviation Operations From Expeditionary Restricted Sites
MCT 3.2.3.2	OAAW	Conduct Antiair Warfare [Offensive Antiair Warfare (OAAW)]
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)
MCT 6.1.1.8	AAD	Conduct Active Air Defense
MCT 6.1.1.11	AESC	Conduct Aerial Escort

1.4 **MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION.**

VMA AV-8B							
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 3.2.3.1.1	CAS	X					
MCT 3.2.3.1.2.1	STK	X					
MCT 3.2.3.1.2.3	SCAR	X					X
CORE PLUS							
MCT 1.3.3.3.1	SEA	X					
MCT 1.3.3.3.2.1	FOB	X					
MCT 3.2.3.2	OAAW			X			
MCT 3.2.5.4	FAC(A)	X	X				
MCT 6.1.1.8	AAD			X			
MCT 6.1.1.11	AESC	X	X	X			

1.5 MET TO CORE/MISSION/CORE PLUS SKILL MATRIX. Depicts the relationship between a MET and each Core/Mission/Core Plus/Mission Plus skill associated with the MET for readiness reporting and resource allocation purposes. There shall be a one-to-one relationship between the MET and a corresponding Mission Skill. Shading indicates Core Plus.

VMA AV-8B																
MET TO CORE/MISSION/CORE PLUS/MISSION PLUS SKILLS MATRIX																
MET	SKILL ABBREVIATION	CORE SKILLS (2000 PHASE)								MISSION SKILLS (3000 PHASE)			CORE PLUS SKILLS (4000 PHASE)			
		FAM	TCT	AAR	LAT	INT	AS	NS	AA	CAS	STK	SCAR	CFE	FCLP (D)	FCLP (N)	NS LAT
MCT 3.2.3.1.1	CAS	X	X	X	X		X	X		X			X			
MCT 3.2.3.1.2.1	STK	X	X	X	X	X	X	X	X		X				X	
MCT 3.2.3.1.2.3	SCAR	X	X	X			X	X				X				
CORE PLUS																
MCT 1.3.3.3.1	SEA	X						X						X	X	
MCT 1.3.3.3.2.1	FOB	X						X								X
MCT 3.2.3.2	OAAW	X	X	X	X	X	X	X	X							X
MCT 3.2.5.4	FAC(A)	X	X	X	X	X	X	X					X			
MCT 6.1.1.8	AAD	X	X	X		X		X	X					X		
MCT 6.1.1.11	AESC	X	X	X	X	X	X	X	X					X		X

1.6 MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS. The following MET output standards are the required level of performance a VMA AV-8B squadron/detachment 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 VMA AV-8B squadron/detachment is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 1.3 hour average sortie duration. It assumes >70% MC aircraft and >90% T/O aircrew on hand. If unit MC aircraft is <70% or T/O aircrew <90%, core capability will be degraded by a like percentage.

VMA AV-8B													
MET OUTPUT STANDARDS MATRIX													
CORE													
MET	SKILL ABBREVIATION	MAXIMUM SORTIES PER MET				MAXIMUM DAILY SORTIES*							
		SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT	SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT				
		14 A/C	10 A/C	8 A/C	6 A/C	14 A/C	10 A/C	8 A/C	6 A/C				
MCT 3.2.3.1.1	CAS	20	12	10	8	20	12	10	8				
MCT 3.2.3.1.2.1	STK ¹	8	4	4	4								
MCT 3.2.3.1.2.3	SCAR	16	12	10	8								
MISSION PLUS													
MCT 1.3.3.3.1	SEA	20	12	10	8								
MCT 1.3.3.3.2.1	FOB	20	12	10	8								
MCT 3.2.3.2	OAAW ¹	8	4	4	4								
MCT 3.2.5.4	FAC(A) ³	4	2	2	2								
MCT 6.1.1.8	AAD ²	8	8	8	8								
MCT 6.1.1.11	AESC ³	8	4	4	4								
*Note: A 14/10/8/6 plane Mission Capable VMA squadron/squadron(-)/detachment is able to execute 20/12/10/8 total overall sorties on a daily (24 hour period) basis during contingency/combat operations. Based on historical flight hour data, average sortie duration is 1.3 hours for the AV-8B.													
Note 1: STK/OAAW sortie defined as one launch to recover against an assigned target. Expected tasking via division (i.e., 8 = 2 Divisions Daily)													
Note 2: AAD sorties are defined as one launch to recover/tanker against an assigned VUL or target. Expected tasking via division.													
Note 3: FAC(A) and AESC sorties only account for the FAC(A) or Escort Flight Lead.													

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

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

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

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

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

VMA AV-8B						
CMMR READINESS REPORTING MATRIX						
VMA MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY						
CORE						
MET	SKILL ABBREVIATION	PILOT	CREWS TRAINED BY MET			
			SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT
			14 AIRCRAFT	10 AIRCRAFT	8 AIRCRAFT	6 AIRCRAFT
MCT 3.2.3.1.1	CAS	MSP	20(14)	11(7)	11(7)	9(6)
MCT 3.2.3.1.2.1	STK	MSP	14(9)	6(4)	6(4)	6(4)
MCT 3.2.3.1.2.3	SCAR	MSP	16(11)	11(7)	11(7)	9(6)
MISSION PLUS						
MET	SKILL ABBREVIATION	PILOT	CREWS TRAINED BY MET*			
			SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT
			14 AIRCRAFT	10 AIRCRAFT	8 AIRCRAFT	6 AIRCRAFT
MCT 1.3.3.3.1	SEA	MSP	9(6)	9(6)	9(6)	8(5)
MCT 1.3.3.3.2.1	FOB	MSP	9(6)	9(6)	9(6)	8(5)
MCT 3.2.3.2	OAAW	MSP	8(5)	6(4)	6(4)	6(4)
MCT 3.2.5.4	FAC(A)	MSP	4 ² (2)	1 ² (1)	1 ² (1)	1 ² (1)
MCT 6.1.1.8	AAD	MSP	8(5)	6(4)	6(4)	6(4)
MCT 6.1.1.11	AESC	MSP	8(5)	4(2)	4(2)	4(2)
COMBAT LEADERSHIP						
DESIGNATION			PILOTS			
			SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT
			14 A/C	10 A/C	8 A/C	6 A/C
SECTION LEAD (SL)			10	6	5	5
DIVISION LEAD (DL)			5	4	3	3
MISSION COMMANDER (MC)			2	2	1	1
AIR DEFENSE FLIGHT LEAD (ADFL)			2	2	1	1
Note ¹ – Night Qualified only. Day Qualified aircrew numbers are 20/14, 11/7, 11/7, and 9/6 for an equivalent Advanced/Baseline Training Standard.						
Note ² - A FAC(A) capable crew requires 1 FAC(A) per Flight						

Squadron: Based on 70 percent MC of T/O aircraft and 90 percent of T/O pilots, a Harrier squadron can sustain 20 sorties per day. The number of pilots listed is the number required to execute a flight schedule of 6 T 6 T 4 T 4 with half the pilots flying twice per day. Some skills are reduced based on percentage requirements of that skill across the commensurate mission skills. Exceptions are FCLP/CQ, where all pilots on board would be expected to be at least CQ(D) and where 7 pilots would be required to support a 6-plane wave and a current night LSO.

Squadron(-): Based on 70 percent MC of T/O aircraft and 90 percent of T/O pilots, a 10 A/C Harrier squadron(-) can sustain 12 sorties per day. The number of pilots listed is the number required to execute a flight schedule of 4 T 4 T 4 with half the pilots flying twice per day. Some skills are reduced based on percentage requirements of that skill across the commensurate mission skills. Exceptions are FCLP/CQ, where all pilots on board would be expected to be at least CQ(D) and where 7 pilots would be required to support a surge 6-plane wave and a current night LSO.

Detachment: Based on 70 percent MC of T/O aircraft and 90 percent of T/O pilots, a 6-plane detachment can sustain 8 sorties per day. For a detachment, the number of pilots listed is the number required to execute a flight schedule of 4 T 2 T 2 with all pilots flying once per day. Some core plus skills are reduced based on percentage requirements of that core plus skill across the commensurate mission skills. Exceptions are FCLP/CQ, all pilots on board would be expected to be at least CQ(D) and where 5 pilots would be required to support two 2-plane waves and a current night LSO.

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

VMA AV-8B CMTS MATRIX									
CORE (2000 Phase)									
CORE SKILLS	SQUADRON		SQUADRON(-)		SQUADRON(-)		DETACHMENT		
	14 AIRCRAFT		10 AIRCRAFT		8 AIRCRAFT		6 AIRCRAFT		
FAM	18		9		9		9		
TCT	15		9		9		9		
AAR	15		9		8		6		
LAT	15		9		9		9		
INT	15		9		9		9		
AS	15		9		9		9		
NS	15		9		8		6		
AA	14		9		7		6		
MISSION (3000 Phase)									
MISSION SKILLS	SQUADRON		SQUADRON(-)		SQUADRON(-)		DETACHMENT		
	14 AIRCRAFT		10 AIRCRAFT		8 AIRCRAFT		6 AIRCRAFT		
CAS	14		8		7		6		
STK	14		8		7		6		
SCAR	14		8		7		6		
CORE PLUS SKILLS (4000-4499 Phase)									
CORE PLUS SKILLS	SQUADRON ¹		SQUADRON(-) ¹		SQUADRON(-)		DETACHMENT ¹		
	14 AIRCRAFT		10 AIRCRAFT		8 AIRCRAFT		6 AIRCRAFT		
CFF	2	2	1	1	0	1	0	1	
FCLP (D)	0	15	0	9	9	9	9	9	
FCLP (N)	0	8	0	6	6	6	6	6	
NS LAT	0	8	0	8	0	6	0	6	
LFE	5	11	3	6	2	5	2	5	
CQ (D)	0	17	0	12	0	10	9	9	
MISSION PLUS (4500-4999 Phase)									
MISSION PLUS	SQUADRON ¹		SQUADRON(-) ¹		SQUADRON(-)		DETACHMENT ¹		
	14 AIRCRAFT		10 AIRCRAFT		8 AIRCRAFT		6 AIRCRAFT		
CQ (N)	0	8	0	6	0	6	6	6	
FOB	0	17	0	12	0	10	0	9	
OAAW	4	8	2	8	2	6	2	6	
FAC(A)	2	2	1	1	1	1	0	1	
AAD	4	8	2	6	2	6	2	6	
AESC	4	15	2	9	2	7	2	6	
Note ¹ : For Core Plus Phase (4000) the first number (in blue font and highlighted in gray) represents the number of pilots the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET/Skill capable pilots the squadron should train if that MET/Skill becomes an Assigned/Directed Mission Set. For Core Plus Skills the commanding officer determines the number of pilots to train. The CMTS is based upon the community's collective recommendation.									

1.9 INSTRUCTOR DESIGNATIONS

1.9.1 VMA Tactical Squadrons

VMA AV-8B					
INSTRUCTOR DESIGNATIONS (5000 Phase)					
DESIGNATION	SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT	REMARKS
	14 AIRCRAFT	10 AIRCRAFT	8 AIRCRAFT	6 AIRCRAFT	
Basic LSO	2	1	1	1	
Advanced LSO	2	1	1	1	
Training LSO	1	0	0	1	
Basic LSS	2	1	1	1	SEE NOTE ¹
Advanced LSS	0	0	0	0	SEE NOTE ^{1,2,3}
WTO	6	4	3	2	INCLUDES WTI
LATI	3	2	1	1	INCLUDES WTI
NSI	2	1	1	1	INCLUDES WTI
NS LATI	0	0	0	0	SEE NOTE ³
ACTI	2	1	1	1	INCLUDES WTI
FAC(A)I	0	0	0	0	SEE NOTE ³
WTI	2	1	1	1	SEE NOTE ⁴
NATOPS	1	1	1	0	
ASST NATOPS	3	1	1	2	
INST	4	2	2	2	
FLSE	2	1	1	1	MAG DESIGNATION
NOTE ¹ : SHOULD BE BOTH DAY AND NIGHT DESIGNATED					
NOTE ² : MAY CONSIST OF ROAD, CAL SITE, OR BOTH					
NOTE ³ : ONE ADVANCED LSS, ONE NSLATI AND ONE FAC(A)I REQUIRED PER MAG					
NOTE ⁴ : ONE WTI IS A 2 ND OR 3 RD TOUR DEPT HEAD AND ONE WTI IS FILLING A PTO BILLET					

1.9.2 VMAT-203 Instructor Designations

VMAT-203 ¹ AV-8B/TAV-8B	
INSTRUCTOR DESIGNATIONS (5000 Phase)	
DESIGNATION	PILOTS
Basic LSO	5
Basic LSS	5
WTO	27
LATI	6
NSI	5
NSLATI	0
ACTI	4
FAC(A)I	0
WTI	2
FRSI	27
NATOPS	6
INSTRUMENT	6
FLSE	1
Note ¹ : VMA-223 will assume the Core Introduction Mission in FY-22 and will become the AV-8B Fleet Replacement Detachment (FRD), VMAT-203 will Stand-down.	
Note: ACTI includes Restricted ACTI.	

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

1.10.1 VMA Tactical Squadrons CQD

VMA AV-8B				
CQD				
QUALIFICATION	SQUADRON	SQUADRON(-)	SQUADRON(-)	DETACHMENT
	14 AIRCRAFT	10 AIRCRAFT	8 AIRCRAFT	6 AIRCRAFT
FCP	4	3	3	2

1.10.2 VMAT-203 CQD

VMAT-203 ¹ AV-8B/TAV-8B	
CQD	
DESIGNATION	PILOTS
SECTION LEAD	27
DIVISION LEAD	27
MISSION COMMANDER	0
AIR DEFENSE FLIGHT LEAD	0
QUALIFICATION	PILOTS
FCP	6
Note ¹ : VMA-223 will assume the Core Introduction Mission in FY-22 and will become the AV-8B Fleet Replacement Detachment (FRD), VMAT-203 will Stand-down.	

APPENDIX A

VMA AV-8B MET WORKSHEETs

Core

MCT 3.2.3.1.1	Conduct Close Air Support (CAS)
MCT 3.2.3.1.2.1	Conduct Strike (STK)
MCT 3.2.3.1.2.3	Conduct Strike Coordination and Reconnaissance (SCAR)

Core Plus

MCT 1.3.3.3.1	Conduct Aviation Operations From Expeditionary Sea-Based Sites (SEA)
MCT 1.3.3.3.2.1	Conduct Aviation Operations From Expeditionary Restricted Sites (FOB)
MCT 3.2.3.2	Conduct Antiair Warfare [Offensive Antiair Warfare (OAAW)]
MCT 3.2.5.4	Conduct Forward Air Control (Airborne) [FAC(A)]
MCT 6.1.1.8	Conduct Active Air Defense (AAD)
MCT 6.1.1.11	Conduct Aerial Escort (AESC)

MCT 3.2.3.1.1 **Conduct Close Air Support (CAS)**

Conditions:

C 2.7.2 Air Superiority

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

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 20/11/11/9 AV-8B Pilots MET-capable IAW T&R requirements

Advanced Capability:

- Conduct evaluated CAS mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities

Baseline Training Standard (70% CMMR):

- 14/7/7/6 AV-8B Pilots MET-capable IAW T&R requirements

Baseline Capability:

- Conduct CAS mission tasking in IAW T&R performance standards

Output Standards:

- 20/12/10/8 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.2.1 **Conduct Strike (STK)**

Conditions:

C 2.7.2 Air Superiority

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local; No.

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 14/6/6/6 AV-8B Pilots MET-capable IAW T&R requirements

Advanced Capability:

- Conduct evaluated STK mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities

Baseline Training Standard (70% CMMR):

- 9/4/4/4 AV-8B Pilots MET-capable IAW T&R requirements

Baseline Capability:

- Conduct STK mission tasking in IAW T&R performance standards

Output Standards:

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

MCT 3.2.3.1.2.3

Conduct Strike Coordination and Reconnaissance (SCAR)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 16/11/11/9 AV-8B Pilots MET-capable IAW T&R requirements

Advanced Capability:

- Conduct evaluated SCAR mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities

Baseline Training Standard (70% CMMR):

- 11/7/7/6 AV-8B Pilots MET-capable IAW T&R requirements

Baseline Capability:

- Conduct SCAR mission tasking in IAW T&R performance standards

Output Standards:

- 16/12/10/8 sorties daily sustained during contingency/combat operations

Core Plus

MCT 1.3.3.3.1

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

Conditions:

C 1.3.2.1 Light

Light available to illuminate objects from natural or manmade sources.

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

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 9/9/9/8 AV-8B Pilots CQ(N) Mission Skill Proficient (MSP) IAW T&R requirements.
 - 20/11/11/9 AV-8B Pilots CQ(D) Mission Skill Proficient (MSP) IAW T&R requirements

Advanced Capability:

- Conduct integrated operations aboard ship in support of Core/Assigned MET missions as dictated by the MAGTF commander. Typically, the unit achieves this capability via CERTEX during MEU workups.

Baseline Training Standard (70% CMMR):

- 6/6/6/5 AV-8B Pilots CQ(N) Mission Skill Proficient (MSP) IAW T&R requirements
 - 14/7/7/6 AV-8B Pilots CQ(D) Mission Skill Proficient (MSP) IAW T&R requirements

Baseline Capability:

- Conduct SEA mission tasking in IAW T&R performance standards.

Output Standards:

- 20/12/10/8 sorties daily sustained during contingency/combat operations

MCT 1.3.3.3.2.1

Conduct Aviation Operations From Expeditionary Restricted Sites

Conditions:

C 1.3.2.1 Light

Light available to illuminate objects from natural or manmade sources.

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

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 9/9/9/8 AV-8B Pilots FOB(N) Mission Skill Proficient (MSP) IAW T&R requirements
 - 20/11/11/9 AV-8B Pilots FOB(D) Mission Skill Proficient (MSP) IAW T&R requirements

Advanced Capability:

- Conduct integrated operations from shore-based expeditionary sites in support of Core/Assigned MET missions as dictated by the MAGTF commander.

Baseline Training Standard (70% CMMR):

- 6/6/6/5 AV-8B Pilots FOB(N) Mission Skill Proficient (MSP) IAW T&R requirements
 - 14/7/7/6 AV-8B Pilots Pilots FOB(D) Mission Skill Proficient (MSP) IAW T&R requirements

Baseline Capability:

- Conduct FOB mission tasking in IAW T&R performance standards

Output Standards:

- 20/12/10/8 sorties daily sustained during contingency/combat operations

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

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 4/1/1/1 AV-8B Pilots MET-capable IAW T&R requirements

Advanced Capability:

- Conduct evaluated CAS mission tasking as a FAC(A) in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities. Should include multiple T/M/S and indirect fires.

Baseline Training Standard (70% CMMR):

- 2/1/1/1 AV-8B Pilots MET-capable IAW T&R requirements

Baseline Capability:

- Conduct FAC(A) mission tasking in IAW T&R performance standards

Output Standards:

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

MCT 3.2.3.2

Conduct Antiair Warfare [Offensive Anti-Air Warfare (OAAW)]

Conditions:

C 2.7.2 Air Superiority

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local; No.

Standards:

[Squadron 14 Aircraft /Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/14/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/8/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 8/6/6/6 AV-8B Pilots MET-capable IAW T&R requirements

Advanced Capability:

- Conduct evaluated OAAW mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities

Baseline Training Standard (70% CMMR):

- 5/4/4/4 AV-8B Pilots MET-capable IAW T&R requirements

Baseline Capability:

- Conduct OAAW mission tasking in IAW T&R performance standards

Output Standards:

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

MCT 6.1.1.8

Conduct Active Air Defense (AAD)

Conditions:

C 2.7.2 Air Superiority

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local; No.

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 8/6/6/6 AV-8B Pilots MET-capable IAW T&R requirements

Advanced Capability:

- Conduct evaluated AAD mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes Adversary Level 3+ capabilities

Baseline Training Standard (70% CMMR):

- 5/4/4/4 AV-8B Pilots MET-capable IAW T&R requirements

Baseline Capability:

- Conduct AAD mission tasking in IAW T&R performance standards

Output Standards:

- 8/8/8/8 sorties daily sustained during contingency/combat operations

MCT 6.1.1.11

Conduct Aerial Escort (AESC)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

The extent to which operations in the air, over sea and/or, over land can be conducted with acceptable losses due to hostile air forces and air defense systems action. Descriptors: Full (Air Supremacy); General; Local; No.

Standards:

[Squadron 14 Aircraft / Squadron(-) 10 Aircraft / Squadron(-) 8 Aircraft / Detachment 6 Aircraft]

Personnel:

- 20/11/11/9 Pilots
- DRRS-MC personnel-level of 2 or better: $\geq 80\%$ personnel strength and $\geq 75\%$ critical MOS fill IAW MCO 3000.13

Equipment:

- 70% Mission Capable aircraft of PAA (10/7/5/4) with the associated aircraft survivability equipment, mission systems and mission sets required to conduct the MET.
- Operational support equipment fully supports MCT

Advanced Training Standard (CMMR):

- 8/4/4/4 AV-8B Pilots MET-capable IAW T&R requirements

Advanced Capability:

- Conduct evaluated AESC mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities

Baseline Training Standard (70% CMMR):

- 5/2/2/2 AV-8B Pilots MET-capable IAW T&R requirements

Baseline Capability:

- Conduct AESC mission tasking in IAW T&R performance standards

Output Standards:

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

Appendix B
REFERENCE SOURCES

VMA AV-8B	
ABBREVIATIONS	
CORE SKILLS	
AA	Air-to-Air
AAR	Air-to-Air Refueling
AS	Air-to-Surface
FAM	Familiarization
INT	Intercepts
LAT	Low Altitude Tactics
NS	Night Systems
TCT	Threat Countertactics
MISSION SKILLS	
STK	Strike
CAS	Close Air Support
SCAR	Strike Coordination and Reconnaissance
CORE PLUS SKILLS	
NSLAT	Night Systems Low Altitude Tactics
FCLP (D)	Field Carrier Landing Practice, Day
FCLP (N)	Field Carrier Landing Practice, Night
LFE	Large Force Exercise
CFF	Call For Fire
CQ (D)	Carrier Qualification, Day
MISSION PLUS SKILLS	
AAD	Active Air Defense
AESC	Aerial Escort
CQ (N)	Carrier Qualification, Night
FOB	Forward Operating Base Operations
OAAW	Offensive Anti-air Warfare
FAC(A)	Forward Air Controller (Airborne)

VMA AV-8B				
RANGE REQUIREMENTS				
Category	Abbreviation	Name	Description	Notes
CAT I	MOA	Special Use Airspace or MOA	Per Flight Information Publications	
CAT I	RSTD	Restricted/ Warning Area	Per Flight Information Publications	
CAT I	MTR	Military Training Route	Per Flight Information Publications	
CAT I	LAT	LAT Course	Approved LAT course. Normally preferred over an MTR for dedicated LAT sorties.	
CAT I	AA	Air-to-Air Range	Any airspace that can support BFM or ACM. May include Restricted Airspace, MOAs, or Warning Areas, for example.	For Intercepts/BVR, a minimum airspace of 40 nm is usually required.
CAT I	AA GUNS	Air-to-Air Gunnery Range	Any airspace that can support Air-to-Air Gunnery on a towed Banner. Implies Restricted Airspace or Warning Areas, for example.	
CAT I	MACH 1+	Supersonic	Any airspace that can support Supersonic Flight.	
CAT I	AAR	Air-to-Air Refueling	Any airspace that can support AAR.	
CAT II	TACTS	Tactical Air Combat Training System	TACTS range-capable. A sophisticated airspace tracking and display instrumentation system used primarily in ACM and threat WEZ recognition. All maneuvers are displayed real-time for a squadron Range Training Officer (RTO). All data is recorded to allow the aircrew to conduct post-mission analysis or “debriefs.”	TACTS usually includes ACM, NDBS, EW, NDWS, ARM, capabilities. Implies RSTD Airspace.
CAT II	EW	Electronic Warfare	Threat Emitters providing a dynamic red/or gray force threat environment to enhance threat recognition, self-protection, and defense-suppression techniques.	
CAT II	Hi Fi EW	High Fidelity EW	Hi Fidelity (live) Emitters. Live actual SAM systems with operators. Can provide feedback via tape debrief.	Often a desired substitute for EW, may be cost prohibitive.
CAT II	ACM	Air Combat Maneuvering	Supports training in A-A maneuvers and weapons employment under realistic conditions for manned high performance FW & RW aircraft. This includes weapon simulation (AIM-9, AIM-7, AIM-120) from launch to impact with kill & miss indications as well as Pk and reason for miss provided.	
CAT II	ARM	Anti-Radiation Missile	Supports training to ARM delivery with simulated missile fly-out and kill indications.	
CAT II	CEDS	Countermeasures Employments Detection System	Supports training to countermeasures by linking to the ALE via TACTS systems for EW training. Normally included in a TACTS EW range.	
CAT II	ATIS	Avenger TACTS Interface	Allows the LAAD Avenger team to plug into TACTS and evaluate control/scoring.	
CAT II	LSTSS	Large Scale Target Sensor System	A remote control scoring system capable of tracking LASER designator spots.	

VMA AV-8B				
RANGE REQUIREMENTS				
Category	Abbreviation	Name	Description	Notes
CAT II	IWTS	Imaging Weapons Training System	Virtual simulation to provide pilot uplink imagery of weapon seeker image through TOF to actual target.	Supports SLAM-ER.
CAT II	URBN WPNS	Urban Weapons Impact Range	Urban CAS range capable of JCAS, LT INERT, and LSR.	
CAT II	URBN TRG	Urban Training	Urban area with overlying Restricted or MOA training airspace. Does not imply authorized weapons release or LASER use.	Example is a town, such as Yuma, under the Dome MOA.
CAT II	RKD RNG	Raked Range	Concentric circle range, with WISS. LSR and RLSR a desired capability but must be specified. Night lighting capability implied.	
CAT II	LSR	LASER Safe Range	Supports airborne LASER firing.	
CAT II	RLSR	Remote LASER Capable	A remote-operated ground LASER may designate a target.	Should be standard on a RKD RNG
CAT II	WISS	Weapons Impact Scoring Set	Scores bombing to designated targets. Scores can be relayed via voice or fax.	Should be standard on a RKD RNG
CAT II	NDBS	No Drop Bomb Scoring	Scores simulated bombing to designated targets. Scores can be relayed via tape debrief.	Should be standard on TACTS
CAT II	STRAFE	Strafe Pit/Target	A scored Strafing Pit or Target.	Often located near a RKD RNG
CAT II	TGT	Target	Any point- target that is authorized for releasing INERT weapons on.	May include an unscored Raked Range
CAT II	IR TGT	IR-Significant Target	IR-Significant target.	
CAT II	RDR TGT	RADAR-Significant Target	RADAR-Significant target.	
CAT II	LINK	LINK 16	LINK 16 available.	
CAT III	HE	HE Impact Area	Supports live HE ordnance. Implies EXP.	
CAT III	JCAS	JCAS TTPs	Supports all three types of CAS in the range. Allows JTAC personnel on range. Implies LSR and either INERT or HE.	
CAT III	LT INERT	Light Inert	Light Inert impact area.	MK-76/LGTR/ BDU-48 /Gun/ Rockets
CAT III	HVY INERT	Heavy Inert	Heavy Inert impact area.	500 lb and above
CAT III	JDAM	JDAM Impact Area/Target	Supports JDAM release.	
CAT III	JSOW	JSOW Impact Area/Target	Supports JSOW release.	
CAT III	LGB	LGB Impact Area/Target	Supports LGB (HE or HVY INERT) release and LASER firing.	

VMA AV-8B				
RANGE REQUIREMENTS				
Category	Abbreviation	Name	Description	Notes
CAT III	AA MISSILE	AA Missile Firing Range	Supports AA missile firing.	AIM-9/ AIM-7/AIM-120
CAT III	AS MISSILE	A/S Missile Firing Range	Supports AS missile firing.	LMAV/ LGB/ Hellfire/TOW
CAT III	ARM MISSILE	ARM Missile Firing Range	Supports ARM missile firing. Requires an EW emitter.	AGM-88
CAT III	EXP	Expendables Authorized	Supports use of Chaff & Flares.	
CAT III	ICM	Improved Conventional Munitions	Supports ICM or Cluster munitions.	
CAT IV	IMC	Instrumented Multi-Spectral Cues	Full size replicas of actual AAA and SAM systems, IR-significant and normally linked to LSTSS and NDBS/WISS.	
CAT IV	MOCK	Mock-Up Targets	Full size replicas of Mechanized or Threat vehicles. IR-significant desired. Weapons release not implied.	
CAT IV	GWVS	Ground Warfare Visual Simulator	Provides enhanced battlefield realism via simulation of muzzle flashes for AAA and launch of SAMs.	
CAT IV	SST	Smokey SAM Team	Smoke Rockets to simulate MANPADs or RF SAMs.	
CAT IV	COMPLEX	Complex Target Array	Dispersed target array requiring sorting of targets and may include infrastructures such as runways, facilities, POL sites, etc. Implies INERT and LSR. WISS desired.	
CAT IV	TGT-FORM	Tactical Targets in Formation	Full size actual or replicas of Mechanized or Threat vehicles. IR-significant desired. Implies INERT and LSR. WISS desired.	
CAT IV	TGT-DISP	Tactical Targets Dispersed	Full size actual or replicas of Mechanized or Threat vehicles. IR-significant desired. Implies INERT and LSR. WISS desired.	
CAT IV	TGT-MOVE	Tactical Targets Moving	Full size actual or replicas of Mechanized or Threat vehicles. IR-significant desired. Implies LT INERT and LSR. WISS & LSTSS desired.	
CAT IV	RECCE ARRAY	Actual Tactical Targets in an Array for PID	Full size actual Mechanized or Threat vehicles. Organized in an array in order to allow PID. Weapons release not implied.	
CAT IV	STRUCTR	Structures	May include a building, bunker, or revetment. IR-significant desired. Inert weapons release authorized. LSR capable. WISS desired.	

VMA ORDNANCE REQUIREMENTS. Detailed Ordnance requirements are delineated in the AV-8B Ordnance Core Competency Resource Model (CCRM), developed and maintained by TECOM Aviation Training Division (ATD). Training Officers are encouraged to contact ATD for more information about Ordnance CCRM.

VMAT-203 Ordnance Requirement

ORDNANCE	RAC	SPT	IUT	Sqdn Total
25mm	300	0	0	11100
Mk-76	180	30	36	9102
Mk-82	4	0	0	148
BDU-45	4	0	0	148
Mk-83	0	0	0	0
Mk-83(I)	0	0	0	0
Mk-20/CBU-99/100	2	0	0	74
Mk-77	2	0	0	74
LUU-2	0	0	0	0
2.75" Rkt	7	0	0	259
5.0" Rkt	0	0	0	0
APKWS	4	0	0	148
AGM-65E	0	0	0	0
LGTR	2	0	0	74
GBU-12/16	.5	0	0	18
JDAM	.5	0	0	19
AIM-9	0	0	0	0
Self-Protect Chaff	70	0	0	2590
Self-Protect Flare	220	100	0	11840

Appendix C

Readiness Supplements

VMA Squadron 14 Aircraft

VMA SQUADRON 14 AIRCRAFT															
14 AV-8Bs															
MISSION ESSENTIAL TASK	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES} PER MET	ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	AIRCRAFT MAINTENANCE			TABLE OF ORGANIZATION	STAFFING GOAL	COLLECTIVE MAX DAILY SORTIE OUTPUT	SECTION LEADER (SL)	DIVISION LEADER (DL)	MISSION COMMANDER (MC)	AIR DEFENSE FLIGHT LEADER (ADFL)
						PAA	MC	# MC							
MCT 3.2.3.1.1	CAS	Conduct Close Air Support	20	20	14	14	70%	9	22	19	20	10	5	2	2
MCT 3.2.3.1.2.1	STK	Conduct Strike	8	14	9	14	70%	9							
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance	16	16	11	14	70%	9							
CORE PLUS															
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites	20	20(9)	14(6)	14	70%	9							
MCT 1.3.3.2.1	FOB	Conduct Aviation Operations From Expeditionary Restricted Sites	20	20(9)	14(6)	14	70%	9							
MCT 3.2.3.2	OAAW	Conduct Antiair Warfare [Offensive Antiair Warfare (OAAW)]	8	8	5	14	70%	9							
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)	4	4	2	14	70%	9							
MCT 6.1.1.8	AAD	Conduct Active Air Defense	8	8	5	14	70%	9							
MCT 6.1.1.11	AESC	Conduct Aerial Escort	8	8	5	14	70%	9							
PARA 1.3			PARA 1.6	PARA 1.7	MET WORKSHEET	PARA 1.2	MET WORKSHEET	PARA 1.2	PARA 1.6	PARA 1.7					
Critical MOS'S: 7509,6332,6252,6048,6212,6012,6016,6017.															
CORE METs ADVANCED CAPABILITY STATEMENTS															
MCT 3.2.3.1.1	CAS	Conduct evaluated CAS mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
MCT 3.2.3.1.2.1	STK	Conduct evaluated STK mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
MCT 3.2.3.1.2.3	SCAR	Conduct evaluated SCAR mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
CORE METs BASELINE CAPABILITY STATEMENTS															
MCT 3.2.3.1.1	CAS	Conduct CAS mission tasking IAW T&R performance standards.													
MCT 3.2.3.1.2.1	STK	Conduct STK mission tasking IAW T&R performance standards.													
MCT 3.2.3.1.2.3	SCAR	Conduct SCAR mission tasking IAW T&R performance standards.													
CORE PLUS METs ADVANCED CAPABILITY STATEMENTS															
MCT 1.3.3.3.1	SEA	Conduct integrated operations aboard ship in support of Core/Assigned MET missions as dictated by the MAGTF commander. Typically, the unit achieves this capability via CERTEX during MEU workups.													
MCT 1.3.3.2.1	FOB	Conduct integrated operations from shore-based expeditionary sites in support of Core/Assigned MET missions as dictated by the MAGTF commander.													
MCT 3.2.3.2	OAAW	Conduct evaluated OAAW mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
MCT 3.2.5.4	FAC(A)	Conduct evaluated CAS mission tasking as a FAC(A) in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities. Should include multiple T/M/S and indirect fires.													
MCT 6.1.1.8	AAD	Conduct evaluated AAD mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes Adversary Level 3+ capabilities.													
MCT 6.1.1.11	AESC	Conduct evaluated AESC mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
CORE PLUS METs BASELINE CAPABILITY STATEMENTS															
MCT 1.3.3.3.1	SEA	Conduct SEA mission tasking IAW T&R performance standards.													
MCT 1.3.3.2.1	FOB	Conduct FOB mission tasking IAW T&R performance standards.													
MCT 2.2.5.2.2	MIR	Conduct MIR mission tasking IAW T&R performance standards.													
MCT 3.2.3.2	OAAW	Conduct OAAW mission tasking IAW T&R performance standards.													
MCT 3.2.5.4	FAC(A)	Conduct FAC(A) mission tasking IAW T&R performance standards.													
MCT 6.1.1.8	AAD	Conduct AAD mission tasking IAW T&R performance standards.													
MCT 6.1.1.11	AESC	Conduct AE mission tasking IAW T&R performance standards.													

VMA SQUADRON(-)																
10 AV-8Bs																
MISSION ESSENTIAL TASK	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES} PER MET	ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	AIRCRAFT MAINTENANCE			TABLE OF ORGANIZATION	STAFFING GOAL	COLLECTIVE MAX DAILY SORTIE OUTPUT	SECTION LEADER (SL)	DIVISION LEADER (DL)	MISSION COMMANDER (MC)	AIR DEFENSE FLIGHT LEADER (ADFL)	
						PAA	MC	# MC								
MCT 3.2.3.1.1	CAS	Conduct Close Air Support	12	11	7	10	70%	7	13	11	12	6	4	2	2	
MCT 3.2.3.1.2.1	STK	Conduct Strike	4	6	4	10	70%	7								
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance	12	11	7	10	70%	7								
CORE PLUS																
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites	12	11(9)	7(6)	10	70%	7								
MCT 1.3.3.2.1	FOB	Conduct Aviation Operations From Expeditionary Restricted Sites	12	11(9)	7(6)	10	70%	7								
MCT 3.2.3.2	OAAW	Conduct Antiair Warfare [Offensive Antiair Warfare (OAAW)]	4	6	4	10	70%	7								
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)	2	1	1	10	70%	7								
MCT 6.1.1.8	AAD	Conduct Active Air Defense	8	6	4	10	70%	7								
MCT 6.1.1.11	AESC	Conduct Aerial Escort	4	4	2	10	70%	7								
PARA 1.3			PARA 1.6	PARA 1.7	MET WORKSHEET	PARA 1.2	MET WORKSHEET	PARA 1.2	PARA 1.6	PARA 1.7						
Critical MOS'S: 7509,6332,6252,6048,6212,6012,6016,6017.																
CORE METs ADVANCED CAPABILITY STATEMENTS																
MCT 3.2.3.1.1	CAS	Conduct evaluated CAS mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.														
MCT 3.2.3.1.2.1	STK	Conduct evaluated STK mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.														
MCT 3.2.3.1.2.3	SCAR	Conduct evaluated SCAR mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.														
CORE METs BASELINE CAPABILITY STATEMENTS																
MCT 3.2.3.1.1	CAS	Conduct CAS mission tasking IAW T&R performance standards.														
MCT 3.2.3.1.2.1	STK	Conduct STK mission tasking IAW T&R performance standards.														
MCT 3.2.3.1.2.3	SCAR	Conduct SCAR mission tasking IAW T&R performance standards.														
CORE PLUS METs ADVANCED CAPABILITY STATEMENTS																
MCT 1.3.3.3.1	SEA	Conduct integrated operations aboard ship in support of Core/Assigned MET missions as dictated by the MAGTF commander. Typically, the unit achieves this capability via CERTEX during MEU workups.														
MCT 1.3.3.2.1	FOB	Conduct integrated operations from shore-based expeditionary sites in support of Core/Assigned MET missions as dictated by the MAGTF commander.														
MCT 3.2.3.2	OAAW	Conduct evaluated OAAW mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.														
MCT 3.2.5.4	FAC(A)	Conduct evaluated CAS mission tasking as a FAC(A) in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities. Should include multiple T/M/S and indirect fires.														
MCT 6.1.1.8	AAD	Conduct evaluated AAD mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes Adversary Level 3+ capabilities.														
MCT 6.1.1.11	AESC	Conduct evaluated AESC mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.														
CORE PLUS METs BASELINE CAPABILITY STATEMENTS																
MCT 1.3.3.3.1	SEA	Conduct SEA mission tasking IAW T&R performance standards.														
MCT 1.3.3.2.1	FOB	Conduct FOB mission tasking IAW T&R performance standards.														
MCT 2.2.5.2.2	MIR	Conduct MIR mission tasking IAW T&R performance standards.														
MCT 3.2.3.2	OAAW	Conduct OAAW mission tasking IAW T&R performance standards.														
MCT 3.2.5.4	FAC(A)	Conduct FAC(A) mission tasking IAW T&R performance standards.														
MCT 6.1.1.8	AAD	Conduct AAD mission tasking IAW T&R performance standards.														
MCT 6.1.1.11	AESC	Conduct AE mission tasking IAW T&R performance standards.														

8 Aircraft

VMA SQUADRON(-)																					
8 AV-8Bs																					
MISSION ESSENTIAL TASK	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES} PER MET	ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	AIRCRAFT MAINTENANCE			TABLE OF ORGANIZATION	STAFFING GOAL	COLLECTIVE MAX DAILY SORTIE OUTPUT	SECTION LEADER (SL)	DIVISION LEADER (DL)	MISSION COMMANDER (MC)	AIR DEFENSE FLIGHT LEADER (ADFL)						
						PAA	MC	# MC													
MCT 3.2.3.1.1	CAS	Conduct Close Air Support	10	11	7	8	70%	5	11	10	10	5	3	1	1						
MCT 3.2.3.1.2.1	STK	Conduct Strike	4	6	4	8	70%	5													
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance	10	11	7	8	70%	5													
CORE PLUS																					
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites	10	11(9)	7(6)	8	70%	5													
MCT 1.3.3.2.1	FOB	Conduct Aviation Operations From Expeditionary Restricted Sites	10	11(9)	7(6)	8	70%	5													
MCT 3.2.3.2	OAAW	Conduct Offensive Anti-air Warfare	4	6	4	8	70%	5													
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)	2	1	1	8	70%	5													
MCT 6.1.1.8	AAD	Conduct Active Air Defense	8	6	4	8	70%	5	11	10	10	5	3	1	1						
MCT 6.1.1.11	AESC	Conduct Aerial Escort	4	4	2	8	70%	5													
PARA 1.3			PARA 1.6	PARA 1.7	MET WORKSHEET	PARA 1.2	MET WORKSHEET	PARA 1.2	PARA 1.6	PARA 1.7											
Critical MOS'S: 7509,6332,6252,6048,6212,6012,6016,6017.																					
CORE METs ADVANCED CAPABILITY STATEMENTS																					
MCT 3.2.3.1.1	CAS	Conduct evaluated CAS mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.																			
MCT 3.2.3.1.2.1	STK	Conduct evaluated STK mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.																			
MCT 3.2.3.1.2.3	SCAR	Conduct evaluated SCAR mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.																			
CORE METs BASELINE CAPABILITY STATEMENTS																					
MCT 3.2.3.1.1	CAS	Conduct CAS mission tasking IAW T&R performance standards.																			
MCT 3.2.3.1.2.1	STK	Conduct STK mission tasking IAW T&R performance standards.																			
MCT 3.2.3.1.2.3	SCAR	Conduct SCAR mission tasking IAW T&R performance standards.																			
CORE PLUS METs ADVANCED CAPABILITY STATEMENTS																					
MCT 1.3.3.3.1	SEA	Conduct integrated operations aboard ship in support of Core/Assigned MET missions as dictated by the MAGTF commander. Typically, the unit achieves this capability via CERTEX during MEU workups.																			
MCT 1.3.3.2.1	FOB	Conduct integrated operations from shore-based expeditionary sites in support of Core/Assigned MET missions as dictated by the MAGTF commander.																			
MCT 3.2.3.2	OAAW	Conduct evaluated OAAW mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.																			
MCT 3.2.5.4	FAC(A)	Conduct evaluated CAS mission tasking as a FAC(A) in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities. Should include multiple T/M/S and indirect fires.																			
MCT 6.1.1.8	AAD	Conduct evaluated AAD mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes Adversary Level 3+ capabilities.																			
MCT 6.1.1.11	AESC	Conduct evaluated AESC mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.																			
CORE PLUS METs BASELINE CAPABILITY STATEMENTS																					
MCT 1.3.3.3.1	SEA	Conduct SEA mission tasking IAW T&R performance standards.																			
MCT 1.3.3.2.1	FOB	Conduct FOB mission tasking IAW T&R performance standards.																			
MCT 2.2.5.2.2	MIR	Conduct MIR mission tasking IAW T&R performance standards.																			
MCT 3.2.3.2	OAAW	Conduct OAAW mission tasking IAW T&R performance standards.																			
MCT 3.2.5.4	FAC(A)	Conduct FAC(A) mission tasking IAW T&R performance standards.																			
MCT 6.1.1.8	AAD	Conduct AAD mission tasking IAW T&R performance standards.																			
MCT 6.1.1.11	AESC	Conduct AE mission tasking IAW T&R performance standards.																			

6 Aircraft

VMA Detachment															
6 AV-8Bs															
MISSION ESSENTIAL TASK	MISSION SKILL	DESCRIPTION	DAILY OUTPUT STANDARD {SORTIES} PER MET	ADVANCED TRAINING STANDARD CREWS TRAINED (CMMR)	BASELINE TRAINING STANDARD CREWS TRAINED (70% CMMR)	AIRCRAFT MAINTENANCE			TABLE OF ORGANIZATION	STAFFING GOAL	COLLECTIVE MAX DAILY SORTIE OUTPUT	SECTION LEADER (SL)	DIVISION LEADER (DL)	MISSION COMMANDER (MC)	AIR DEFENSE FLIGHT LEADER (ADFL)
						PAA	MC	# MC							
MCT 3.2.3.1.1	CAS	Conduct Close Air Support	8	9	6	6	70%	4	9	9	8	5	3	1	1
MCT 3.2.3.1.2.1	STK	Conduct Strike	4	6	4	6	70%	4							
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance	8	9	6	6	70%	4							
CORE PLUS															
MCT 1.3.3.3.1	SEA	Conduct Aviation Operations From Expeditionary Sea-Based Sites	8	9(8)	6(5)	6	70%	4							
MCT 1.3.3.2.1	FOB	Conduct Aviation Operations From Expeditionary Restricted Sites	8	9(8)	6(5)	6	70%	4							
MCT 3.2.3.2	OAAW	Conduct Offensive Anti-air Warfare	4	6	4	6	70%	4							
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)	2	1	1	6	70%	4							
MCT 6.1.1.8	AAD	Conduct Active Air Defense	8	6	4	6	70%	4							
MCT 6.1.1.11	AESC	Conduct Aerial Escort	4	4	2	6	70%	4							
PARA 1.3			PARA 1.6	PARA 1.7	MET WORKSHEET	PARA 1.2	MET WORKSHEET	PARA 1.2	PARA 1.6	PARA 1.7					
Critical MOS'S: 7509,6332,6252,6048,6212,6012,6016,6017.															
CORE METs ADVANCED CAPABILITY STATEMENTS															
MCT 3.2.3.1.1	CAS	Conduct evaluated CAS mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
MCT 3.2.3.1.2.1	STK	Conduct evaluated STK mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
MCT 3.2.3.1.2.3	SCAR	Conduct evaluated SCAR mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
CORE METs BASELINE CAPABILITY STATEMENTS															
MCT 3.2.3.1.1	CAS	Conduct CAS mission tasking IAW T&R performance standards.													
MCT 3.2.3.1.2.1	STK	Conduct STK mission tasking IAW T&R performance standards.													
MCT 3.2.3.1.2.3	SCAR	Conduct SCAR mission tasking IAW T&R performance standards.													
CORE PLUS METs ADVANCED CAPABILITY STATEMENTS															
MCT 1.3.3.3.1	SEA	Conduct integrated operations aboard ship in support of Core/Assigned MET missions as dictated by the MAGTF commander. Typically, the unit achieves this capability via CERTEX during MEU workups.													
MCT 1.3.3.2.1	FOB	Conduct integrated operations from shore-based expeditionary sites in support of Core/Assigned MET missions as dictated by the MAGTF commander.													
MCT 3.2.3.2	OAAW	Conduct evaluated OAAW mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
MCT 3.2.5.4	FAC(A)	Conduct evaluated CAS mission tasking as a FAC(A) in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities. Should include multiple T/M/S and indirect fires.													
MCT 6.1.1.8	AAD	Conduct evaluated AAD mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes Adversary Level 3+ capabilities.													
MCT 6.1.1.11	AESC	Conduct evaluated AESC mission tasking in support of LFE/CERTEX/Service Level or other Integrated Exercise that includes near-peer/peer threat capabilities.													
CORE PLUS METs BASELINE CAPABILITY STATEMENTS															
MCT 1.3.3.3.1	SEA	Conduct SEA mission tasking IAW T&R performance standards.													
MCT 1.3.3.2.1	FOB	Conduct FOB mission tasking IAW T&R performance standards.													
MCT 2.2.5.2.2	MIR	Conduct MIR mission tasking IAW T&R performance standards.													
MCT 3.2.3.2	OAAW	Conduct OAAW mission tasking IAW T&R performance standards.													
MCT 3.2.5.4	FAC(A)	Conduct FAC(A) mission tasking IAW T&R performance standards.													
MCT 6.1.1.8	AAD	Conduct AAD mission tasking IAW T&R performance standards.													
MCT 6.1.1.11	AESC	Conduct AE mission tasking IAW T&R performance standards.													

CHAPTER 2
AV-8B PILOT

	PARAGRAPH	PAGE
CREWMEMBER SYLLABUS T&R REQUIREMENTS	2.0	2-3
TRAINING PROGRESSION MODEL.....	2.1	2-3
PROGRAMS OF INSTRUCTION (POI).....	2.2	2-4
PROFICIENCY AND CURRENCY	2.3	2-4
CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATION (CQD) TABLES	2.4	2-5
SYLLABUS NOTES.....	2.5	2-6
CORE INTRODUCTION PHASE (1000)	2.6	2-8
CORE INTRODUCTION STAGES	2.7	2-8
CORE PHASE (2000)	2.8	2-34
CORE STAGES	2.9	2-34
MISSION PHASE (3000)	2.10	2-61
MISSION STAGES.....	2.11	2-61
CORE PLUS PHASE (4000-4499)	2.12	2-82
CORE PLUS STAGES.....	2.13	2-82
INSTRUCTOR TRAINING PHASE (5000).....	2.14	2-122
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RCQD)(6000) PHASE	2.15	2-132
MISSION ESSENTIAL TASK PHASE.....	2.16	2-175
AVIATION CAREER PROGRESSION MODEL (8000)	2.17	2-177
T&R SYLLABUS MATRIX.....	2.18	2-179
T&R RANGE AND ORDNANCE MATRIX.....	2.19	2-209
APPENDIX A.....		NATOPS CHECK

BLANK

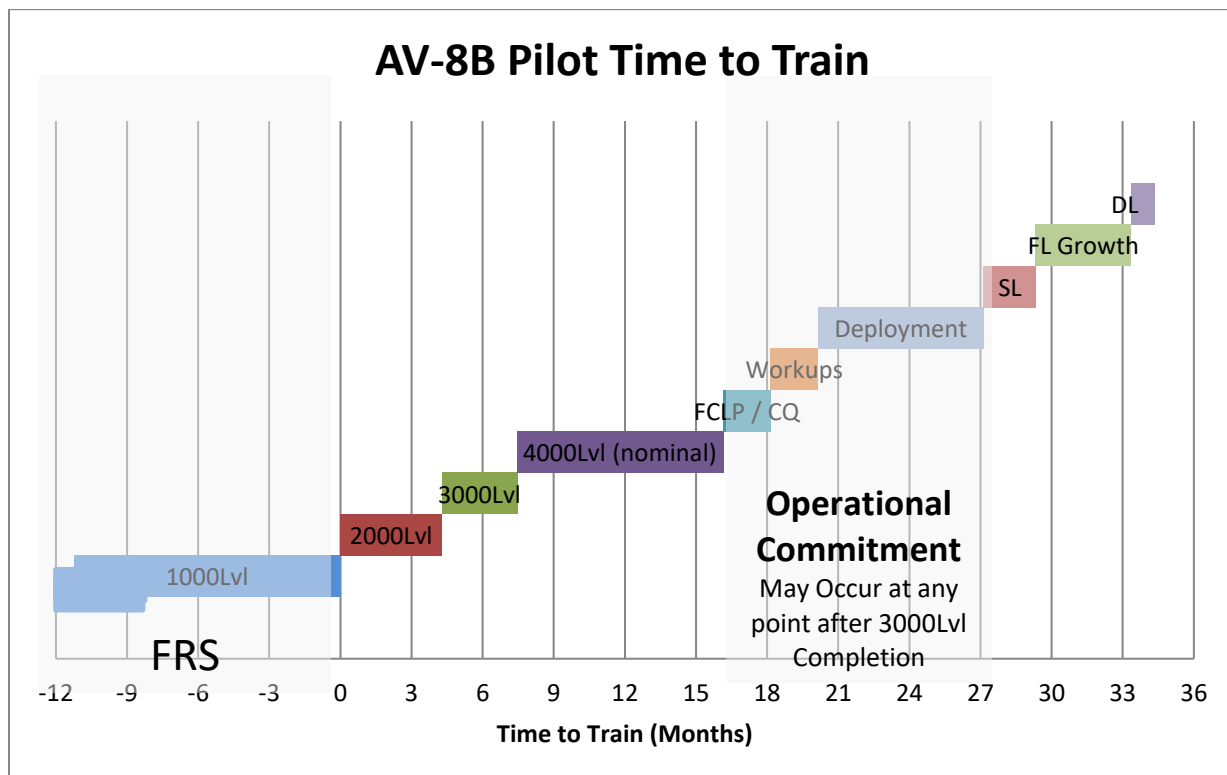
CHAPTER 2 AV-8B PILOT

2.0 **CREWMEMBER SYLLABUS T&R REQUIREMENTS.** This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core Introduction, Core, Mission, and Core Plus Skills. The goal of this chapter is to develop individual and unit war fighting capabilities.

2.1 **TRAINING PROGRESSION MODEL.** This model represents a planning factor for time to train (TTT) for the average AV-8B pilot in terms of Core Skill, Mission Skill, qualification, and designation attainment (see Figure 2-1). Units should use this model as a point of departure to generate individual training plans. The assumptions used to derive this model are as follows:

1. Three new syllabus events scheduled per week
2. 70% completion rate for flight syllabus events (which includes maintenance and weather cancellations as well as performance failures)
3. 90% completion rate for simulator syllabus events (which includes performance failures and simulator maintenance issues).

It is important to note that most pilots will not complete every code in the 4000 level syllabus such as FAC(A) or night advanced LAT. Any reduction in required events would decrease TTT by a similar factor. Below is a generic example. This chart is part of a larger database spreadsheet from which PTOs can put in their own planning assumptions to develop specific TTT estimates for their squadron depending on deployment schedules, amount of CAT I pilots, deployment for training opportunities, and the squadron instructor base. When combined with expected TEEP commitments and realistic maintenance readiness forecasts, this database provides a valuable tool for the PTO to develop accurate training plans. Contact MAWTS-1 for the digital copy of this database to develop individual squadron training plans.



2.2 AV-8B PILOT PROGRAMS OF INSTRUCTION (POI)

2.2.1 Basic (B) and Transition (T) POI. Transition pilots fly the entire Basic POI.

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-52	Core Introduction Training	Training Squadron
*1-12	Core Training	Tactical Squadron
13-48	Mission Training	Tactical Squadron

*Core skill training time begins at entry into tactical squadron

2.2.2 Refresher (R) POI

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-4	Core Introduction Training	Training Squadron
5-16	Core Training	Tactical Squadron
17-36	Mission Skill Training	Tactical Squadron

2.2.3 Modified Refresher (MR) POI

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-3	Core Introduction Training	Training Squadron
*	Core Training	Tactical Squadron
*	Mission Training	Tactical Squadron

* Modified Refresher stages are based upon the full Refresher syllabus modified at the discretion of the squadron commanding officer.

2.2.4 Safe-for-Solo (SS) POI

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-2	Core Skill Introduction Training	Training Squadron

2.2.6 Contract Instructor (CI) POI

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-2	2F150 Instructor Pilot (IP)	Training Squadron

2.2.7 Squadron Level Training. Ground training requirements are listed separately for each phase of flight training. Training may be completed earlier in stage but should be completed by the appropriate sortie(s).

2.3 PROFICIENCY & CURRENCY

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

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

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

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

Loss of Unit Skill Proficiency. If an entire unit loses proficiency in an Event, unit instructors shall regain proficiency by completing the Event with an instructor from a like unit. If not feasible, the instructor shall regain

proficiency by completing the Event with another instructor. For flying communities, if a unit has only one instructor and cannot complete the Event with an instructor from another unit, the instructor shall regain proficiency with another aircraft commander or as designated by the commanding officer.

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

2.3.3 Currency. Currency is a control measure used to provide an additional margin of safety based on exposure frequency to a particular skill and applies to all MOS’s that must comply with NATOPS and OPNAV requirements. It is a measure of time since the last event demanding that specific skill. For example, currency determines minimum altitudes in rules of conduct based upon the most recent low altitude fly date. Specific currency requirements for aircrew individual type mission profiles can be found in Chapter 3.

2.4 CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD) TABLES. The table below delineates events required to be completed to attain initial qualifications, re-qualifications, and designations. In addition to event requirements, all stage lectures, briefs, squadron training, and prerequisites shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the NATOPS and APR jackets. Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completion of all R-coded events associated with that qualification.

CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (CQD) AV-8B PILOT	
Qualifications	
NATOPS	IAW OPNAVINST 3710.7 and an annual qualification letter signed by the commanding officer, 6000, 6001, 6002, 6101, 6103
INST	IAW OPNAVINST 3710.7 and an annual qualification letter signed by the commanding officer, 6004, 6005, 6102
LAT	2400, 2401
NS	2600, 2601, 2602, 2603
AAR	2700
ACM	2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808
CQ(D)	4130, 4131, 4132
CQ(N)	4133, 4134, 4135, 4136
NSLAT	4300, 4301, 4302, 4303, 4304
FAC(A)	4800, 4801, 4802, 4803, 4804, 4805, 4806, 4807, 4808
FCP	6700, 6701, 6702, 6703
DEMO	6800, 6801
Designations	
SECTION LEAD	6200, 6201, 6202, 6203, 6204, 6205, 6206, 6207, 6208
DIVISION LEAD	6300, 6301, 6302, 6303
MISSION CMDR	6400, 6401, 6402
RTO	6500, 6501
ADFL	6600, 6601, 6602, 6603, 6604
FLSE	5900, 5901
FRSI	5800, 5801, 5802, 5803, 5804, 5805, 5806, 5807
NATOPS E	Annual designation letter signed by the commanding officer, 6101, 6103
INST E	Annual designation letter signed by the commanding officer, 6102
WTO	5100, 5101, 5102, 5103, 5104
LATI	5200, 5201, 5202, 5203, 5204
NSI	5300, 5301, 5302, 5303
NS LATI	5400, 5401, 5402
ACTI	5500, 5501, 5502, 5503, 5504
RACTI	5500, 5502, 5505
FAC(A)I	5600, 5601, 5602, 5603, 5604
WTI	IAW MAWTS WTI Course Catalog, 5677
Basic LSO	6750, 6751, 6752, 6753
Advanced LSO	6754
Training LSO	6755
LSI	6770, 6771
Basic LSS	6772, 6773
Advanced LSS	6774 or 6775

2.5 SYLLABUS NOTES

2.5.1 Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity. The following external ground training courses of instruction are required to complete the syllabus:

- SURVIVAL, EVASION, RESISTANCE, AND ESCAPE COURSE (PORTSMOUTH NAVAL SHIPYARD, KITTERY, ME OR NAS NORTH ISLAND, CA)
- NITE LAB (ANY MAWTS-1 APPROVED COURSE)
- ACPM (MAWTS-1)

2.5.2 Event Performance Requirements

2.5.2.1 A matrix will be put in the pilot's APR to track progression of all ground, academic, simulator, and flight events. As each training event is completed, the PTO will input the date of completion. It is highly recommended that MSHARP be used to create and maintain this matrix.

2.5.2.2 All events, to include simulators, shall begin with a brief emphasizing mission performance standards, administrative procedures, tactical employment, and CRM. All events shall end with a debrief emphasizing pilot performance utilizing all evaluation techniques available (e.g., TCTS, DAQ, tapes, participating aircrews, and AIC personnel).

2.5.2.3 An Aircrew Training Form (ATF) is required for any initial event completed by a Basic, Transition, Conversion, or Refresher pilot, or as recommended by the squadron Standardization Board.

2.5.2.4 The T&R manual is the Marine Corps pilot training document. It details the training requirements and standards. When operational commanders assign AV-8B squadrons to prolonged commitments where specific T&R training is not available (e.g., MEU deployments), it is expected that degradation in some mission areas will occur. Commanding officers are authorized and encouraged to employ the AV-8B in specific missions relating to their current situation and avoid those mission areas not relevant to their situation. It is not intended for squadrons to train to specific mission areas and avoid mission areas that the AV-8B is very capable of conducting but that are difficult to coordinate. This type of mission-specific training is granted only to squadron commanding officers deployed in austere conditions that prevent them from executing pilot training per the T&R manual.

2.5.3 T&R Phases

2.5.3.1 The 2000 phase (Core Skills) is skill-level training. Completion of this phase shall provide the pilot with the skills required to execute missions that directly support the unit METL.

2.5.3.2 The 3000 phase (Mission Skills) is mission-level training. Completion of this phase ensures the pilot is trained to execute missions that support the unit METL.

2.5.3.3 The 4000 phase (Core Plus) is Core Plus training. This phase contains training standards applicable to large-scale integrated missions, theater specific areas, or mission areas having a low probability of execution. This phase also trains pilots to be capable of leading/directing flights of numerous aircraft in a complex wartime scenario. Although Core Plus training events may provide valuable training opportunities, they are not part of the unit's readiness reporting.

2.5.3.4 The 5000 phase (Instructor Training) contains instructor syllabi and certification events and tracking codes for LSO/LSI controls.

2.5.3.5 The 6000 phase (R,C,Q,D) contains requirements, qualifications, and designations events. This phase also contains tracking codes for specific events useful to operations departments such as strategic tanking proficiency.

2.5.3.5 The 8000 phase contains ACPM events.

2.5.4 T&R Codes

2.5.4.1 In order to log a T&R code, pilots must complete all event requirements satisfactorily, achieving mission performance standards.

2.5.4.2 Pilots shall log the mission code and applicable tactic utilized (AS codes). Ordnance tracking codes have been removed but ordnance deliveries shall be logged in MSHARP. Aircrew must ensure that they select the proper ordnance in M-SHARP to ensure tracking. When scheduling sorties, training officers are allowed to schedule

additional training codes based on anticipated ordnance delivery profiles, if the performance standards are met for the ordnance employed. Chaining has been incorporated to the largest extent possible. However, codes will not chain if a pilot is not proficient in that code. For example, the SCAR-3301 would chain AR-3201; but, if the pilot is not proficient in AR-3201, he would have to manually enter that code in MSHARP to ensure proficiency is achieved and tracked.

2.5.4.3 If multiple syllabus events are to be accomplished during a single flight evolution, appropriate planning, briefing, and debriefing time must be allotted to ensure the training objectives are met.

2.5.4.4 In the event that ordnance or dissimilar adversary requirements are not available or the available training range does not fully support the syllabus event, these issues shall be logged in MSHARP as reasons for incompleting the event

2.5.5 **Number of Aircraft Required.** Some of the syllabus events in the T&R have 1+ or 2+ aircraft required. 1+ aircraft required implies that the flight may be flown as a single ship or greater. 2+ aircraft required implies that the flight may be flown as a section or greater.

2.5.6 **Sortie Requirements.** Sortie requirements state the minimum number of passes, engagements, or maneuvers required for completion. Sorties that do not complete all stated requirements in one sortie may complete the requirements of an event in multiple sorties, as long as the completion sorties are flown in succession and within normal currency windows. If a pilot's currency expires or the event requirements cannot be completed on the next scheduled sortie, then the event shall be re-flown in its entirety.

2.5.7 **Event Conditions.** The following table indicates the environmental (day or night) or night systems conditions required. Options include:

Code	Requirement
D	Shall be flown or conducted during day.
N	Shall be flown or conducted at night (using available night vision devices or flown unaided).
(N)	May be flown or conducted day or night; if at night, available night vision devices may be used or flown unaided.
NS	Shall be flown or conducted at night using available night vision devices.
(NS)	May be flown or conducted day or night; if at night, available night vision devices shall be used.
N*	Event Shall be flown or conducted at night unaided.
(N*)	Event may be flown or conducted at night; if at night, shall be flown unaided.

2.5.8 **Device.** The following table indicates the device in which the event is conducted. Any simulator event may be conducted in the aircraft if required.

DEVICE	
Symbol	Meaning
A	Conducted in Aircraft
S	Conducted in Simulator
A/S	Aircraft preferred/simulator optional
S/A	Simulator preferred/aircraft optional
G	Ground/academic training. May include Distance Learning, CBT, lectures and self paced training.
Note – If the event is to be flown in the simulator, the simulator instructor shall set the desired environmental conditions for the event.	

2.5.9 **Performance Standards.** Performance standards are listed for each T&R event description. These are training standards for individual pilot performance and should be utilized as guidelines to determine the satisfactory completion of each event. If the pilot did not satisfactorily attain the performance standards, the training code shall not be logged as a completed flight.

2.5.9.1 All simulator and flight events shall be planned, briefed, executed, and debriefed IAW AV-8B NATOPS, Air NTP, CNAFINST 3710, doctrinal publications, and applicable SOPs.

2.5.9.2 An ATF shall be completed for all basic or refresher syllabus events, flight leadership work-up events, and instructor work-up events.

2.5.9.3 Each pilot shall have an APR. The squadron PTO shall ensure each ATF is entered in section 3 of the APR.

2.5.9.4 Performance standards are listed for each simulator and flight event. Training objectives are provided for all 2000 level AS events in order to provided standardized instruction for core skill events.

2.5.10 Ordnance. In the Core Skill Introduction phase, specific ordnance requirements are delineated for each event. For simulator events, a specific ordnance loadout is mandated. For flight events, a desired ordnance loadout is provided with acceptable substitutes. This approach is designed to give commanders maximum flexibility when attempting to balance training effectiveness with logistical and operational constraints (i.e., NCEA, component availability, range restrictions, weather, etc.). The following list delineates categories of ordnance:

- Gun
- Free-fall (GP)
- Illumination
- Rockets
- Precision-Guided Munitions (PGMs)
- Expendables
- Air-Intercept Missiles (AIMs)

2.5.10.1 In the category of ordnance, there exists wide latitude with regard to the use of simulation modes, captive carry, practice, inert, and high explosive ordnance. The ordnance requirements to execute this T&R are based on the ordnance module of the AV-8B CCRM model.

2.5.10.2 For Basic and Refresher POI, the ordnance loadout specified in the sortie description is required to complete the event.

2.5.11 Range Requirements

2.5.11.1 Individual training event descriptions list a series of ranges required and/or available to support the training event goals and accurately assess mission performance standards.

2.5.11.2 Reference Table in paragraph 1.10. The range capabilities matrix depicts the types of operations that can be supported by each type range.

2.5.12 Aviation Training Rules of Conduct. Pilots shall adhere to aviation training rules of conduct for Low Altitude, Night Systems (NS), Air Combat Maneuvering (ACM), and Forward Air Control (Airborne) [FAC(A)] operations in accordance with NAVMC 3500.14 (Aviation Training and Readiness Program Manual).

Pilots conducting NS LAT training (other than NSQ Low training under the supervision of an NSLATI) shall be NS Low qualified.

2.6 CORE INTRODUCTION STAGES

Purpose. This stage introduces newly winged aviators to and refreshes pilots on the fundamental skills required to employ the AV-8B. Introduce/review all procedures, skills, and weapons requisite for AV-8B NATOPS qualification.

General Satisfactory performance metrics for Core Skill Introduction syllabus events are determined and maintained by VMAT-203. These performance standards are based on applicable publications (e.g., AV-8B NATOPS Manual, OPNAVINST 3710, etc.) but are tailored to fit adequate pilot performance that is commensurate with an acceptable level of progression. Additional performance standards are specified, when applicable, for each stage. The passing grade on written examinations is 80 percent.

2.7 CORE INTRODUCTION STAGES

2.7.1 Familiarization (FAM)

Purpose. Introduce systems management and normal and emergency procedures.

General

See VMAT-203 FSG for specific instructor requirements for FAM events.

An FRS Landing Site Instructor (LSI-5703) shall supervise all solos.

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000):
Chapter 1 Aircraft and Engine

Chapter 2 Systems
Chapter 4 Operating Limitations
Chapter 7 Shore-Based Procedures
Chapter 11 Flight Characteristics
Chapter 12 General Emergencies
Chapter 13 Ground Emergencies
Chapter 14 Takeoff Emergencies
Chapter 15 In-Flight Emergencies
Chapter 16 Landing Emergencies
Chapter 17 Emergency Egress
Chapter 18 Emergency Procedures Checklist Display
Chapter 19 Instrument Procedures
Chapter 20 Extreme Weather Operation
Chapter 21 Communications
Chapter 22 Navigation
Chapter 23 Crew Resource Management
Chapter 24 NATOPS Evaluation

AV-8B NATIP (NTRP 3-22.4-AV8):

Section 2.2 IFF
Section 2.4 Digital Mapping Sets
Section 2.5 Video Recording System
Section 2.6 Navigation
Section 2.12 NAVFLIR

Air NTTP 3-22.3-AV8B:

Chapter 2 Mission Planning, Briefing, and Debriefing Standards
Chapter 3 Tactical Administration

V/STOL Pilot's Book of Corporate Knowledge:

Lectures

AFAM-0001, Familiarization Stage Brief

Receive the following AV-8B Courseware lectures:

AFAM-0002 AV-8B Engine, Part 1 & 2
AFAM-0003 Electrical and Lighting Systems
AFAM-0004 Fuel System
AFAM-0005 Hydraulic Power and Landing Systems
AFAM-0006 Flight Control Systems
AFAM-0007 Life Support Systems
AFAM-0008 Hazard Indicating Systems
AFAM-0009 Advanced Multi-purpose Color Display
AFAM-0010 Standby Flight Instruments
AFAM-0011 Mission Systems Computer (MSC)
AFAM-0012 Up Front Control Set
AFAM-0013 Communication/Identifications Equipment Part 1&2
AFAM-0014 Heads Up Display
AFAM-0015 INS Theory
AFAM-0016 GPS Theory
AFAM-0017 Navigation Systems, Part 1
AFAM-0018 Navigation Systems, Part 2
AFAM-0019 Navigation Systems, Part 3
AFAM-0020 Navigation Systems, Part 4
AFAM-0021 Ejection Seat
AFAM-0022 Survival Equipment
AFAM-0023 Operating Limits
AFAM-0024 Video Recording System

AFAM-0025 Aerodynamics
AFAM-0026 AV-8B/TAV-8B Differences
AFAM-0027 AV-8B Engine Handling and Performance
AFAM-0028 AV-8B Preflight
AFAM-0029 Normal Procedures, Part 1
AFAM-0030 Normal Procedures, Part 2
AFAM-0031 Normal Procedures, Part 3
AFAM-0032 Normal Procedures, Part 4
AFAM-0033 Normal Procedures, Part 5
AFAM-0034 Normal Procedures, Part 6
AFAM-0035 Normal Procedures, Part 7
AFAM-0036 Ground Emergencies
AFAM-0037 Takeoff Emergencies
AFAM-0038 In-Flight Emergencies, Part 1
AFAM-0039 In-Flight Emergencies, Part 2
AFAM-0040 In-Flight Emergencies, Part 3
AFAM-0041 Landing Emergencies
AFAM-0042 Briefing/Debriefing
AFAM-0043 Instrument Procedures
AFAM-0044 Aircraft Service and Handling
AFAM-0045 AV-8B Flight Preparation
AFAM-0050 VMAT-203 Flight SOP
AFAM-0051 Course Rules

Chalk Talks/Practical Application

AFAM-0046 Engine and Fuel Systems Trainer
AFAM-0047 Airframe Systems Trainer
AFAM-0048 Seat Brief, Survival Equipment, Parachute Hang & Egress Drill
AFAM-0049 JMPS: Basic Mission Planning

Exams

AFAM-0052, FAM Ground School exam (Open & closed book NATOPS)

SFAM-1100 2.0 365 B,R,MR,SS D S RNAWST

Goal. Introduce the AV-8B cockpit and the after entering cockpit, pre-start, starting engine, and before taxi checks. Introduce MPCD, emphasizing DVMS modes, UFC/ODU, communication systems, HUD, emphasizing V/STOL and navigation master modes symbology.

Requirement. IAW VMAT-203 FSG.

Prerequisite. IAW VMAT-203 IUT FSG.

SFAM-1101 2.0 * B D S RNAWST

Goal. Review the AV-8B cockpit and the after entering cockpit, pre-start, starting engine, and before taxi checks. Introduce MPCD, emphasizing DVMS modes, UFC and ODU; communication systems; and HUD, emphasizing V/STOL and navigation master modes symbology.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1102 2.0 * B D S RNAWST

Goal. Introduce takeoff, in-flight, and landing checks and maneuvers. Practice normal cockpit check procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1103 2.0 365 B,R,MR,SS D S RNAWST

Goal. Introduce takeoff/in-flight/landing checks and maneuvers, PAR, and emergency procedures. Practice normal cockpit check procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1104 2.0 365 B,R,MR,SS D S RNAWST

Goal. Introduce takeoff/in-flight/landing checks and maneuvers, emergency procedures, and TACAN approach.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1105 2.0 * B D S RNAWST

Goal. Introduce takeoff/in-flight/landing checks and maneuvers, and emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1106 2.0 * B D S RNAWST

Goal. Introduce takeoff/in-flight/landing checks and maneuvers, and emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1107 2.0 * B D S RNAWST

Goal. Introduce takeoff/in-flight/landing checks and maneuvers, and emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1108 2.0 * B D S RNAWST

Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1109 2.0 * B D S RNAWST

Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1110 2.0 * B D S RNAWST

Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1111 2.0 365 B,R,MR,SS D S RNAWST

Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1112 2.0 365 B,R,MR,SS D S RNAWST

Goal. Introduce emergency procedures and progress check.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1113 1.3 365 B,R,MR,SS D A 1 TAV-8B

Goal. Introduce CTO, STOL flap STO, handling drills, STOL flap FNSL, and auto flap VNSL.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1114 1.3 365 B,R,MR,SS D A 1 TAV-8B

Goal. Introduce TACAN approach, roll-and-go landings, STOL flap VNSL, and press-up. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1115 1.3 365 B,R,MR,SS D A 1 TAV-8B

Goal. Introduce PAR, CL, and touch-and-go landings. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1116 1.3 * B D A 1 TAV-8B

Goal. Introduce RVL, VTO accel, decel-VL, and box pattern. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1117 1.3 * B D A 1 TAV-8B

Goal. Introduce RVTO and HSSL. Review takeoff/in-flight/landing checks and procedures.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1118 1.3 * B D A 1 TAV-8B

Goal. Introduce pedal turn. Practice takeoff/in-flight/landing checks and procedures.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1119 1.3 485 B,R,MR D A 1 TAV-8B

Goal. Introduce SAAHS-off RVL. Practice touch-and-go landing and takeoff/in-flight/landing checks and procedures.

Requirement. IAW VMAT-203 IUT FSG.

2.7.2 Familiarization/Instrument (FAM/INST)

Purpose. NATOPS instrument evaluation POI designed to evaluate the pilot's knowledge of and adherence to NATOPS instrument procedures.

General

NATOPS instrument evaluation events shall consist of those items delineated in CNAFINST M3710.7 series (NATOPS), NAVAIR 00-80T-112 (NATOPS Instrument Flight Manual), FAR/AIM, and other model manager lead community issues.

NATOPS instrument POI should not focus solely on the assessment of the individual but should also include an educational element.

The NATOPS instrument evaluator shall utilize the NATOPS model manager-generated NATOPS instrument Aviation Training Form (ATF) (see Appendix A of T&R Program Manual) and the evaluation metrics required for the accomplishment and performance of the standardized criteria to determine whether the aviator completed the sortie. A letter designating the pilot as NATOPS instrument qualified shall be placed in the aircrew's NATOPS jacket upon successful completion.

NATOPS instrument evaluatees shall ensure that annual instrument minimums are in accordance with CNAFINST M3710.7 series prior to commencement of the annual instrument evaluation flight.

A designated AV-8B NATOPS instrument check pilot will observe and certify that the PUI is qualified per OPNAVINST 3710.7 series.

2.7.2.1 Ground/Academic Training

Readings. Review OPNAVINST 3710.7 series.

Exams. AINST-6005, Annual Instrument Ground School exam.

AINST-6004 8.0 365 B,R,MR,SS,M Instrument Ground School (IGS)

Goal. The Instrument Ground School shall be an approved Commander Naval Air Forces (CNAF)-approved syllabus.

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

SFAM/INST-1120 2.0 * B D S RNAWST

Goal. Introduce instrument flight planning, instrument flight procedures, partial panel instrument procedures, unusual attitude flight, and approaches. Practice takeoff/in-flight/landing checks and procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM/INST-1121 2.0 485 B,R,MR D S RNAWST

Goal. Introduce airways navigation on a round-robin flight. Practice instrument flight procedures, instrument flight planning, and takeoff/in-flight/landing checks and procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM/INST-1122 2.0 * B D S RNAWST

Goal. Introduce minimum fuel PAR. Review instrument flight procedures, airways navigation, and instrument flight planning.

Requirement. IAW VMAT-203 IUT FSG.

FAM/INST-1123 1.5 * B D A 1 TAV-8B

Goal. Introduce instrument flight planning, instrument flight procedures, approach procedures, and missed approach procedures.

Requirement. IAW VMAT-203 IUT FSG.

FAM/INST-1124 1.5 730 B,R D A 1 TAV-8B

Goal. Introduce airways navigation, round-robin flight, and minimum fuel GCA.

Requirement. IAW VMAT-203 IUT FSG.

SFAM/INST-1125 1.5 485 B,R,MR D S RNAWST

Goal. Conduct an objective evaluation of the aviator's knowledge of and adherence to OPNAV instrument regulations mission planning, briefing, normal operating procedures, crew resource management, aircraft systems, performance criteria, emergency procedures, and debriefing.

Requirement. IAW VMAT-203 IUT FSG.

FAM-1126 1.3 * B D A 1 TAV-8B

Goal. Introduce VFR straight-in and SAAHS-off decel to VL. Review takeoff/in-flight/landing checks and procedures.

Requirement. IAW VMAT-203 IUT FSG.

SFAM-1127 2.0 485 B,R,MR D S RNAWST

Goal. Introduce compound emergencies.

Requirement. IAW VMAT-203 IUT FSG.

FAM/INST-1128 1.3 365 B,R,MR,SS D A 1 TAV-8B

Goal. Safe for solo check.

Requirement. IAW VMAT-203 IUT FSG.

FAM/INST-1129 1.3 365 B,R,MR,SS D A 1 AV-8B

Goal. Solo flight.

Requirement. IAW VMAT-203 IUT FSG.

2.7.3 Forward Operating Base Operations (FOB)

Purpose. Develop the requisite skills for FOB.

General. A FRS Landing Site Instructor (LSI-5705) shall supervise all events.

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Review Chapter 9, paragraph 9.3, Forward Operating Base

Air NTTP 3-22.3-AV8B, Review Chapter 13, Expeditionary Basing

Lectures

ACAD-0058, FOB Stage Brief

Receive the following AV-8B courseware lectures

ACAD-0059 V/STOL Concept of Operations

ACAD-0060 Forward Operating Base Procedures & Considerations

SFOB-1200	1.0	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce Forward Operating Base (FOB) and emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

FOB-1201	1.2	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce FOB operations.

Requirement. IAW VMAT-203 IUT FSG.

FOB-1202	0.8	*	B	D	A	1 AV-8B or TAV-8B
-----------------	------------	----------	----------	----------	----------	--------------------------

Goal. Practice FOB operations.

Requirement. IAW VMAT-203 IUT FSG.

2.7.4 Field Carrier Landing Practice (FCLP)

Purpose. Develop FCLP skills and qualify pilots FCLP(D).

General

A launch officer and FRS Landing Signal Officer (LSI-5706) are required for all events.

A minimum of 30 vertical landings is required for completion.

Completion of this stage constitutes FCLP(D) qualified.

Ground/Academic Training

Readings

V/STOL Shipboard and LSO NATOPS Manual (NAVAIR 00-80T-111):

Chapter 4 General Flight Procedures

Chapter 5 Flight Deck Procedures

Chapter 6 Launch and Departure Procedures

Chapter 7 Recovery Procedures

Chapter 9 Field Carrier Landing Practice

Chapter 10 Carrier Qualification Patterns

Chapter 11 V/STOL Communication Procedures

Chapter 12 Emergency Procedures

LHA/LHD NATOPS Manual (NAVAIR 00-80T-106):

Chapter 5 Launching Aircraft

Chapter 6 Recovering Aircraft

Air NTTP 3-22.3-AV8B

Chapter 13 Expeditionary Basing

Lectures

ACAD-0061, FCLP Stage Brief.

Receive the following AV-8B courseware lectures:

ACAD-0062 Field Carrier Landing Practice

ACAD-0063 MCALF Bogue Field FCLP Procedures

Exams. AFCLP-0064, FCLP Ground School exam.

SFCLP-1210 1.0 * B D S RNAWST

Goal. Introduce day FCLP normal and emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

FCLP-1211 1.0 * B D A 1 AV-8B

Goal. Introduce day FCLP.

Requirement. IAW VMAT-203 IUT FSG.

External Syllabus Support. Simulated L-Class ship with LSO and launch officer.

FCLP-1212 1.0 * B D A 1 AV-8B

Goal. Introduce simulated NORDO approach. Review day FCLP.

Requirement. IAW VMAT-203 IUT FSG.

External Syllabus Support. Simulated L-Class ship with LSO and launch officer.

FCLP-1213 1.0 * B D A 1 AV-8B

Goal. Review day FCLP.

Requirement. IAW VMAT-203 IUT FSG.

External Syllabus Support. Simulated L-Class ship with LSO and launch officer.

FCLP-1214 1.0 * B D A 1 AV-8B

Goal. Review day FCLP.

Requirement. IAW VMAT-203 IUT FSG.

External Syllabus Support. Simulated L-Class ship with LSO and launch officer.

FCLP-1215 1.0 * B D A 1 AV-8B

Goal. Review day FCLP.

Requirement. IAW VMAT-203 IUT FSG.

External Syllabus Support. Simulated L-Class ship with LSO and launch officer.

FCLP-1216 1.0 * B D A 1 AV-8B

Goal. Day FCLP qualification.

Requirement. IAW VMAT-203 IUT FSG.

External Syllabus Support. Simulated L-Class ship with LSO and launch officer.

2.7.5 Formation (FORM)

Purpose. Develop proficiency in section administrative formations.

General. A Fleet Replacement Squadron Instructor (FRSI) is required for all events.

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000)

Chapter 9 Paragraph 9.1, Formation Flight

Chapter 22 Paragraph 21.3, Visual Communications

Air NTTP 3-22.3-AV8B

Section 3.6 Tactical Formations and Maneuvering

Section 3.10.6 Battle Damage/Ordnance Checks

Lectures

AFORM-0066 FORM/TACFORM Stage Brief

Receive the following AV-8B courseware lectures

ACAD-0067 Administrative Formation

ACAD-0068 Section Tactical Formation

ACAD-0069 Division Tactical Formation

Exams. ACAD-0070, Formation Ground School exam.

FORM-1300 1.3 * B D A 2 TAV-8B

Goal. Introduce administrative section formation.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD.

FORM-1301 1.3 * B D A 2 AV-8B

Goal. Practice administrative section formation.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD.

2.7.6 Advanced Aircraft Handling (AAH)

Purpose. Introduce the handling characteristics of the AV-8 at slow speeds, with high G, and at medium altitude. Develop the requisite skills to fly in that regime.

General. Instructor shall be a FRS Advanced Aircraft Handling Instructor (AAHI).

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Review Chapter 11, Flight Characteristics.

AV-8B NATIP (NTRP 3-22.4-AV8B), Chapter 7, Aircraft Performance.

AV-8B McDonnell Aircraft Company Product Support Digest:

AV-8B High AOA & Spin Program, Part 1: Departure Resistance System.

AV-8B High AOA & Spin Program, Part 2: Spin Testing Phase.

Departure Resistance System.

Balancing Your DEPRES Account.

Aerodynamic and Flight Control Improvements.

Low Pressure Compressor Case Rub.

Lectures

ACAD-0072, AAH Stage Brief.

Receive the following AV-8B courseware lectures:

ACAD-0073, Aircraft Performance and Handling.

ACAD-0074, AV-8B Departure Avoidance.

Exams. AAAH-0075, Aircraft Handling and Departure Avoidance exam.

SAAH-1310 1.0 * B D S RNAWST

Goal. Introduce advanced aircraft handling.

Requirement. IAW VMAT-203 IUT FSG.

AAH-1311 1.0 * B D A 1 TAV-8B

Goal. Introduce advanced aircraft handling.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD.

AAH-1312 1.0 * B D A 2 AV-8B

Readings. AV-8B NATIP (NTRP 3-22.4-AV8B):
Section 2.6.1, Inertial Navigation System.
Section 2.6.2, Global Positioning System.

Lectures
ACAD-0082, NAV Stage Brief.

Receive the following AV-8B courseware lecture
ACAD-0083, Low Level Navigation.

Chalk Talks/Practical Application
ACAD-0084, JMPS Low Level Planning.

Exams. ACAD-0085, Navigation Ground School exam.

SNAV-1330	0.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce ingress/egress string and CST NAV system.

Requirement. IAW VMAT-203 IUT FSG.

SNAV-1331	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce navigation at low altitude.

Requirement. IAW VMAT-203 IUT FSG.

Prerequisite. SNAV-1330.

NAV-1332	1.3	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce navigation at low altitude.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MTR

2.7.9 Air-to-Air Refueling (AAR)

Purpose. Introduce day air-to-air refueling procedures.

General

An FRS Air-to-Air Refueling Instructor (AARI) is required for all events.
Completion of this stage constitutes day AAR qualified.

Ground/Academic Training

Readings
AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Chapter 9, Paragraph 9.2, Air Refueling.
Aerial Refueling NATOPS Manual.
ATP 3.3.4.2, Air-to-Air Refueling.

Lectures
ACAD-0087, AAR Stage Brief.
Receive the following AV-8B courseware lecture: ACAD-0088, Aerial Refueling.

Exams. ACAD-0089, Aerial Refueling Ground School exam.

AAR-1340	1.5	*	B	D	A	2+ AV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Day air-to-air refueling qualification.

Requirement. IAW VMAT-203 IUT FSG.

External Syllabus Support. Compatible tanker IAW ATP 3.3.4.2.

2.7.10 Radar Fundamentals (RAD)

Purpose. Introduce the APG-65 and basic employment.

General. A Radar Fundamentals Instructor shall instruct all events.

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Chapter 7, Paragraph 7.3.4.6, RADAR Trail Departure

AV-8B NATIP (NTRP 3-22.4-AV8B)

Section 1.1, Electromagnetic Theory

Section 1.2, RADAR Theory

Section 2.10, RADAR

Section 5.6, RADAR Attack Considerations

Air NTTP 3-22.1-AV8B

Chapter 6.9, All-Weather Intercepts

Chapter 7.4, Radar Set-Up/Optimization

ALSA Communication Brevity

Lectures

ACAD-0200, Radar Fundamentals Stage Brief

Receive the following AV-8B courseware lectures

ACAD-0201, Introduction to the RADAR

ACAD-0202, RADAR Theory

ACAD-0203, RADAR Display Interpretation and Prediction

ACAD-0204, Air-to-Surface RADAR Controls and Displays

ACAD-0205, Air-to-Surface RADAR Procedures

ACAD-0206, Air-to-Air RADAR Controls and Displays

ACAD-0207, Basic Intercept Geometry, Part 1

ACAD-0208, Basic Intercept Geometry, Part 2

ACAD-0209, Air-to-Air Search Techniques

ACAD-0210, Introduction to Air Intercept Control

Chalk Talks/Practical Application

ACAD-0211, Radar Set-Up and Optimization

ACAD-0212, Basic Intercepts.

Exams. ARAD-0213, Radar Fundamentals Stage Exam

SRAD-1350	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce Air-to-Air and Air-to-Surface radar controls and displays, radar trail departure, and search/sanitization techniques.

Requirement. IAW VMAT-203 IUT FSG.

SRAD-1351	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce radar All-Weather Intercepts.

Requirement. IAW VMAT-203 IUT FSG.

2.7.11 Threat Countertactics (TCT)

Purpose. Introduce the AV-8B EW suite and surface-to-air threat countertactics.

General

All flights should be flown on an EW range with TCTS coverage.

An RTO shall be used to the maximum extent possible.

A FRS Threat Countertactics Instructor (TCTI) shall instruct all events.

Ground/Academic Training

Readings

AV-8B NATIP (NTRP 3-22.4-AV8B) Chapter 3, Aircraft Survivability Equipment
Air NTTP 3-22.1-AV8B:
Review Chapter 3, Threat Countertactics
Review Appendix A, Standard Expendable Loads

User's Manual for AV-8B CY20XX EW Suite

ALSA Communication Brevity

Lectures

ACAD-0090, TCT Stage Brief.

Receive the following AV-8B courseware lectures

ATCT-0091, Introduction to ALE-47

ATCT-0227, ALE-39 Countermeasures Dispensing System

ATCT-0228, ALR-67 Radar Warning Receiver

ATCT-0229, ALQ-164 DECM Pod

ATCT-0230, Expendable Decoys

MAWTS-1 Academic Support Package

ATCT-0092, AV-8B Aircraft Survivability Equipment (MAWTS-1 ASP)

ATCT-0094, Non-RF Surface-to-Air Missiles and AAA

ATCT-0095, RF Surface-to-Air Missiles

ATCT-0096, MAWTS-1 Common Courseware, Threat Countertactics

Chalk Talks/Practical Application. ACAD-0093, Threat Analysis Lab

Exams. ATCT-0097, Threat Countertactics Ground School exam

STCT-1360	1.5	485	B,R,MR	D	S	RNAWST
------------------	------------	------------	---------------	----------	----------	---------------

Goal. Introduce EW suite and applicable communication and surface-to-air threat countertactics at medium altitude.

Requirement. IAW VMAT-203 IUT FSG.

TCT-1361	1.0	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Introduce surface-to-air threat countertactics at medium altitude.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 30 Chaff/30 Flares, TCTS Pod.

Range Requirement. TACTS Range, Electronic Warfare Range.

External Syllabus Support. TACTS, Hi Fi EW.

TCT-1362	1.0	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Introduce surface-to-air threat countertactics at medium altitude in section.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 30 Chaff/30 Flares, TCTS Pod.

Range Requirement. TCTS, Hi Fi EW.

External Syllabus Support. TACTS debrief facility.

2.7.12 Air-to-Surface (AS)

Purpose. Develop proficiency in Basic Conventional Weapons Delivery (BCWD) skills, section tactical formation, and ALSA communications.

General

Scored ranges will be used to the maximum extent possible. If unavailable, performance criteria will be IAW Air NTTP 3-22.3-AV8B.

A FRS Air-to-Surface Instructor (ASI) is required for all events.

Ground/Academic Training

Readings

AV-8B NATIP (NTRP 3-22.4-AV8B)

Section 2.5, Stores Management Control Set

Chapter 5, A/S Weapon Delivery

Chapter 8, Weaponneering

Air NTTP 3-22.3-AV8B, Chapter 6, Air to Surface Fundamentals.

Air NTTP 3-22.1-AV8B, Appendix C, Reactive Weaponneering.

ALSA Communication Brevity.

Lectures

ACAD-0102, AS Stage Brief

Receive the following AV-8B courseware lectures:

ACAD-0103, Introduction to Mission Publications

ACAD-0104, A/G Weapons Delivery Theory

ACAD-0105, Computed Delivery Theory

ACAD-0106, Suspension Equipment

ACAD-0107, GP Bombs

ACAD-0108, GP Bomb Fuzing

ACAD-0109, 25mm Gun

ACAD-0110, Rockets

ACAD-0111, Weapon Delivery Limits and Restrictions

ACAD-0112, Weaponneering

ACAD-0113, Multiple Weapons Release Weaponneering

ACAD-0114, Forward-Firing Ordnance and Weaponneering

ACAD-0115, WARP

ACAD-0116, Laser Theory

ACAD-0117, Angle Rate Bombing System (ARBS)

ACAD-0118, Height Above Target

ACAD-0119, Target Designation Methods

ACAD-0120, SMS & Weapon System Programming

ACAD-0121, Computed Weapons Delivery Modes

ACAD-0122, Degraded Weapons Delivery Modes

ACAD-0123, Weapon Delivery Procedures, Part 1

ACAD-0124, Weapon Delivery Procedures, Part 2

Chalk Talks/Practical Application. ACAD-0125, JMPS Advanced Mission Planning Lab.

Exams. ACAD-0126, Air-to-Surface Ground School exam.

SAS-1400	1.5	*	B	D	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce A/S stores programming and computed weapon delivery from medium altitude.

Requirement. IAW VMAT-203 IUT FSG.

Requirement. IAW VMAT-203 IUT FSG.

SAS-1401	1.0	*	B	D	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Review 30-degree and 20-degree computed deliveries.

Requirement. IAW VMAT-203 IUT FSG.

SAS-1402	1.0	*	B	D	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce 10-degree low drag deliveries.

Requirement. IAW VMAT-203 IUT FSG.

SAS-1403	1.0	*	B	D	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce 10-degree high drag deliveries.

Requirement. IAW VMAT-203 IUT FSG.

SAS-1404	1.0	*	B	D	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce GAU-12 and rocket deliveries.

Requirement. IAW VMAT-203 IUT FSG.

AS-1405	1.0	*	B	D	A	1 TAV-8B
----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce computed weapons deliveries.

Requirement. IAW VMAT-203 IUT FSG.

Ordinance. 6xMk-76.

Range Requirement. RGD RNG.

AS-1406 1.0 * B D A 2 AV-8B

Goal. Practice medium angle deliveries.

Requirement. IAW VMAT-203 IUT FSG.

Ordinance. 6xMk-76, 30 Flares.

Range Requirement. RKD RNG, EXP.

AS-1407	1.0	*	B	D	A	2 AV-8B
----------------	------------	----------	----------	----------	----------	----------------

Goal. Practice medium angle deliveries.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 6xMk-76, 30 Flares.

Range Requirement. RGD RNG, EXP.

AS-1408 1.0 * B D A 1TAV-8B

Goal. Introduce 10-degree deliveries with low drag ordnance.

Requirement. IAW VMAT-203 IUT FSG.

Ordinance. 6xMk-76, 30 Flares.

Range Requirement. RKD RNG.

AS-1409	1.0	*	B	D	A	2 AV-8B
----------------	------------	----------	----------	----------	----------	----------------

Goal. Introduce 10-degree high drag deliveries.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 4xBDU-45 HD, 30 flares.

Range Requirement. RKD RNG, EXP.

AS-1410 1.0 * B D A 2 AV-8B

Goal. Introduce GAU-12 and rocket employment.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 300x25mm TP, 7x2.75" Rockets, 30 Flares.

Range Requirement. STRAFE, RKD RNG, EXP.

2.7.13 Low Altitude Tactics (LAT)

Purpose. Introduce basic and advanced maneuvers in low altitude environment.

General

A FRS Low Altitude Tactics Instructor (FRSLATI) shall instruct all events.
2D MAW or 3D MAW LAT approved course shall be used.

Ground/Academic Training

Readings

Air NTTP 3-22.3-AV8B, Chapter 4, LAT.

NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, LAT Rules of Conduct.

Lectures

ACAD-0127, LAT Stage Brief

ACAD-0128, MAWTS-1 LAT ASP I-IV

Receive the following AV-8B courseware lectures:

ACAD-0129, 3D Maneuvering

ACAD-0130, Mission Crosscheck Time

Exams. ACAD-0131, LAT Stage exam.

SLAT-1420	1.0	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce basic LAT procedures and rules of conduct.

Requirement. IAW VMAT-203 IUT FSG.

SLAT-1421	1.0	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Review basic and introduce advanced LAT procedures.

Requirement. IAW VMAT-203 IUT FSG.

SLAT-1422	1.0	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce surface-to-air threat countertactics at low altitude.

Requirement. IAW VMAT-203 IUT FSG.

LAT-1423	1.0	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce basic and advanced LAT procedures.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD, LAT.

LAT-1424	1.0	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Practice basic and advanced LAT procedures.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD, LAT.

LAT-1425	1.0	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Introduce surface-to-air threat countertactics at low altitude.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. LAT, TACTS, EW.

External Syllabus Support. TACTS/EW debrief facility.

LAT-1426	1.0	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Introduce section surface-to-air threat countertactics at low altitude.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. LAT, TCTS, EW.

External Syllabus Support. TACTS/EW debrief facility.

2.7.14 Target Area Mechanics (MECH)

Purpose. Develop proficiency in target area tactics, section tactical formation, contract adherence, and communication. Introduce PGM employment.

General

Scored ranges will be used to the maximum extent possible. If unavailable, performance criteria will be IAW the MAWTS-1 Planning, Briefing, and Debriefing Guide.

A FRS Target Area Tactics (TATI) is required for all events.

A FRS LATI is required for MECH-1438 if executed in LAT.

Ground/Academic Training

Readings

AV-8B NATIP (NTRP 3-22.4-AV8B):
Section 4.2, Guided Bomb Units (GBUs).

Air NTTP 3-22.3-AV8B:
Chapter 6, A/S Fundamentals
Chapter 7, A/S Employment

Air NTTP 3-22.1-AV8B, Chapter 2, A/S Mission Planning

Lectures

ACAD-0132, MECH Stage Brief
ACAD-0133, Laser-Guided Weapons (LGW) (MAWTS-1 ASP)

Receive the following AV-8B courseware lectures

ACAD-0134, Target Acquisition/Detection/ID
ACAD-0135, Attack Profiles
ACAD-0136, Laser-Guided Training Rounds
ACAD-0137, JDAM
ACAD-0138, Standard Target Area Tactics
ACAD-0139, Air-to-Surface (A/S) Planning & Timeline Management
ACAD-0140, Reactive Weaponneering
ACAD-0141, JMEM / JAWS
ACAD-0142, AGM-65E Maverick
ACAD-0143, Cluster Weapons & Fuzing

Chalk Talks/Practical Application

ACAD-0144, Transition Profiles Planning Lab
ACAD -0145, PGM Planning Lab

Exams. ACAD-0146, Target Area Tactics Ground School exam

SMECH-1430	1.0	*	B	D	S	RNAWST
-------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce cruise climb, ramp-down, loft profiles, reactive weaponneering, and heavyweight aircraft handling.

Requirement. IAW VMAT-203 IUT FSG.

SMECH-1431	1.0	*	B	D	S	RNAWST
-------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce buddy LGB and LMAV employment.

Requirement. IAW VMAT-203 IUT FSG.

SMECH-1432	1.0	*	B	D	S	RNAWST
-------------------	------------	----------	----------	----------	----------	---------------

Scored ranges will be used to the maximum extent possible.
If unavailable, performance criteria will be IAW Air MAWTS-1 Planning, Briefing, and Debriefing Guide.
A FRS Close Air Support Instructor (CASI) is required for all events.
Ground FACs or FAC(A) should be used when external support is available.

Ground/Academic Training

Readings

Joint Publication 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support
Executive Summary
Chapter I, Introduction, Organization and Fundamentals
Chapter III, Planning and Requesting
Close Air Support Planning Considerations
Integrating Close Air Support with Surface Fire Support
Requesting Close Air Support
Chapter IV, Preparation
Chapter V, Execution
Appendix C, Sample Close Air Support Aircrew Mission Planning Guide
Appendix D, Risk-Estimate Distances
AV-8B NATIP (NTRP 3-22.4-AV8B), 2.11.3, The CAS Display
Air NTTP 3-22.3-AV8B, Chapter 8, Close Air Support.

Lectures

ACAD-0147, CAS Stage Brief

Receive the following AV-8B courseware lectures

ACAD-0148, OAS Overview
ACAD-0149, Joint TTP for Close Air Support (CAS)
ACAD-0150, CAS Execution

Chalk Talks/Practical Application. ACAS-0151, CAS Planning Lab

Exams. ACAD-0152, CAS Ground School exam

SCAS-1440	0.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce CAS page programming.

Requirement. IAW VMAT-203 IUT FSG.

SCAS-1441	1.0	730	B,R	D	S	RNAWST
------------------	------------	------------	------------	----------	----------	---------------

Goal. Introduce CAS at medium altitude.

Requirement. IAW VMAT-203 IUT FSG.

SCAS-1442	1.0	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Perform CAS attacks at medium altitude. Type 2/3 control shall be in effect.

Requirement. IAW VMAT-203 IUT FSG.

SCAS-1443	1.0	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce CAS at low altitude.

Requirement. IAW VMAT-203 IUT FSG.

CAS-1444	1.0	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce CAS at medium altitude.

Requirement. IAW VMAT-203 IUT FSG.

Ordinance. 6xMk-76. Support aircraft allocated 3x5in rockets.

Range Requirement. TGT.

External Syllabus Support. FAC, FAC(A), or simulated FAC(A) with marking capability.

CAS-1445 1.0 * B D A 1 TAV-8B

Goal. Introduce Type 2 control.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 1xLGTR, sim GBU-12 and sim GBU-38.

Range Requirement. TGT.

External Syllabus Support. FAC, FAC(A), or simulated FAC(A) with marking capability.

CAS-1446 1.0 * B D A 2 AV-8B

Goal. Review CAS at medium altitude.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 6xMk-76, 20 Flares. Support aircraft allocated 3x5in rockets.

Range Requirement. TGT, EXP.

External Syllabus Support. FAC, FAC(A), or simulated FAC(A) with marking capability.

CAS-1447 1.0 * B D A 2 AV-8B

Goal. Introduce CAS at low altitude.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. 6xMk-76, 20 Flares. Support aircraft allocated 3x5in rockets.

Range Requirement. TGT, EXP.

External Syllabus Support. FAC, FAC(A), or simulated FAC(A) with marking capability.

2.7.16 Strike (STK)

Purpose. Introduce systems management during ingress to target attack.

General. A Fleet Replacement Squadron Instructor (FRSI) shall supervise all events.

Ground/Academic Training

Readings

Air NTTP 3-22.1-AV8B, Chapter 4, Air Interdiction/Strike
MAWTS-1 Mission Commander's Handbook

Lectures

ACAD-0153, Air Interdiction Stage Brief

Receive the following AV-8B courseware lectures

ACAD-0154, AI Planning

Chalk Talks/Practical Application. ACAD-0155, AI Planning Lab

SSTK-1450 1.5 * B D L 2 RNAWST

Goal. Introduce air interdiction/strike.

Requirement. IAW VMAT-203 IUT FSG.

2.7.17 Air-to-Surface Sensor Fundamentals (SEN)

Purpose. Introduce TPOD employment & integration with day and night weapons deliveries.

General

Scored ranges will be used to the maximum extent possible.
If unavailable, performance criteria will be IAW MAWTS-1 Briefing and Debriefing Guide.
A FRS Air-to-Surface Sensor Fundamentals Stage Instructor is required for all events.
SEN-1467, SEN-1468, and SEN-1472 should each be completed using aircraft as the training device, but may be completed in the simulator.

Ground/Academic Training Readings

AV-8B NATIP (NTRP 3-22.4-AV8B), 4.4.2, LITENING Targeting Pod.

Air NTTP 3-22.3-AV8B:

Chapter 3, TACADMIN

Chapter 5, Night Systems

Chapter 6, Air-to-Surface Fundamentals

Chapter 7, Air-to-Surface Employment

Appendix B, JDAM LAR Depictions

Lectures

ACAD-0220, Air-to-Surface Sensor Fundamentals Stage Brief

ACAD-0222, TPOD Optimization (MAWTS-1 ASP)

ACAD-0223, JDAM Employment (MAWTS-1 ASP)

ACAD-0224, Dual Mode Weapons (MAWTS-1 ASP)

Receive the following AV-8B courseware lectures

ACAD-0221, Introduction to LITENING Advanced Targeting Pod.

Chalk Talks/Practical Application

ACAD-0225, TPOD Employment Chalk Talk

Exams. ACAD-0226, Air-to-Surface Sensor Fundamentals ground school exam.

SSEN-1460	0.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce TPOD controls and displays.

Requirement. IAW VMAT-203 IUT FSG.

SSEN-1461	1.0	485	B,R,MR	D	S	RNAWST
------------------	------------	------------	---------------	----------	----------	---------------

Goal. Introduce relative JDAM and Laser JDAM deliveries and review A/S radar employment.

Requirement. IAW VMAT-203 IUT FSG.

SSEN-1462	1.5	730	B,R	D	S	RNAWST
------------------	------------	------------	------------	----------	----------	---------------

Goal. Introduce Self-Lase LGB and LMAV Deliveries

Requirement. IAW VMAT-203 IUT FSG.

SSEN-1463	1.5	730	B,R	D	S	RNAWST
------------------	------------	------------	------------	----------	----------	---------------

Goal. Introduce ramp GP and FF ordnance deliveries with the TPOD.

Requirement. IAW VMAT-203 IUT FSG.

SSEN-1464	1.0	485	B,R,MR	D	S	RNAWST
------------------	------------	------------	---------------	----------	----------	---------------

Goal. Introduce computed deliveries from medium and low altitude with the TPOD.

Requirement. IAW VMAT-203 IUT FSG.

SEN-1465	1.3	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Introduce TPOD employment, and relative JDAM and Laser JDAM deliveries.

Requirement. IAW VMAT-203 IUT FSG.

2.7.18 Air-to-Air (AA)

Purpose. Introduce Basic Fighter Maneuvers (BFM), Section Engaged Maneuvering, forward-quarter All-Weather Intercepts, and air-to-air weapons employment.

General

An FRS Air-to-Air Instructor (AAI) is required for all events.

All training will be conducted IAW Air Combat Maneuvering Training Rules (ACMTR).

Every sortie brief shall include applicable ACMTR, detail, aircraft handling characteristics, pertinent aircraft limitations, and departure avoidance techniques.

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000)

Chapter 4, Operating Limitations

Chapter 11, Flight Characteristics

AV-8B NATIP (NTRP 3-22.4-AV8B)

Chapter 6, Air-to-Air Weapon Delivery

Chapter 7, Aircraft Performance Data

Appendix A, Aircraft and Stores Limitations

Air NTTP 3-22.1-AV8B

Chapter 6, A/A Fundamentals

Chapter 7, A/A Mission Planning

Chapter 8, A/A Employment

Air NTTP 3-22.3-AV8B, Appendix A, BFM/ACM Training

NATOPS General Flight and Operating Instructions (OPNAVINST 3710.7), Chapter 5, Flight Rules

NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Aviation Training Rules of Conduct

Lectures

ACAD-0160, Air-to-Air Stage Brief

Receive the following AV-8B courseware lectures

ACAD-0161, Departure Avoidance review

ACAD-0162, Air Combat Maneuvering (ACM) Safety

ACAD-0163, Air-to-Air Drills and Procedures

ACAD-0164, AIM-9 Sidewinder

ACAD-0165, Combat Gunnery

ACAD-0166, Shot Validation

ACAD-0167, Combat Thrust Vector Control (CTVC)

ACAD-0168, Threat Aircraft

ACAD-0169, 1V1 Basic Fighter Maneuvers (BFM)

ACAD-0170, Section Engaged Maneuvering.

Chalk Talks/Practical Application

ACAD-0171, 2v1 Section Engaged Maneuvering

Exams. ACAD-0172, AA Ground School exam.

SAA-1500 1.5 * B D S RNAWST

Goal. Introduce air-to-air weapons programming and basic functions. Introduce aircraft Thrust Vector Control (TVC). Practice high and slow speed departure recovery.

Requirement. IAW VMAT-203 IUT FSG.

AA-1501 1.0 * B D A 2 AV-8B

Goal. Introduce BFM procedures and drills, aircraft handling, and TVC.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9.

Range Requirement. AA.

AA-1502 1.0 * B D A 2 AV-8B

Goal. Introduce 1V1 offensive BFM.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9, 30 Flares. TCTS pod desired.

Range Requirement. AA, TCTS, EXP.

External Syllabus Support. TACTS debrief facility.

AA-1503 1.0 * B D A 2 AV-8B

Goal. Review 1V1 offensive BFM.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9, 30 Flares. TCTS pod desired.

Range Requirement. AA, TCTS, EXP.

External Syllabus Support. TACTS debrief facility.

AA-1504 1.0 * B D A 2 AV-8B

Goal. Introduce 1V1 defensive BFM.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9, 30 Flares. TCTS pod desired.

Range Requirement. AA, TCTS, EXP.

External Syllabus Support. TACTS debrief facility.

AA-1505 1.0 * B D A 2 AV-8B

Goal. Review 1V1 defensive BFM.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9, 30 Flares. TCTS pod desired.

Range Requirement. AA, TCTS, EXP.

External Syllabus Support. TACTS debrief facility.

AA-1506 1.0 * B D A 2 AV-8B

Goal. Introduce 1V1 high aspect BFM.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9, 30 Flares. TCTS pod desired.

Range Requirement. AA, TCTS, EXP.

External Syllabus Support. TACTS debrief facility.

AA-1507 1.0 * B D A 2 AV-8B

Goal. Review 1V1 high aspect BFM.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9, 30 Flares. TCTS pod desired.

Range Requirement. AA, TCTS, EXP.

External Syllabus Support. TACTS debrief facility.

AA-1508	1.3	*	B	D	A	2+ AV-8B
----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce 2 V 1 section engaged maneuvering.

Requirement. IAW VMAT-203 IUT FSG.

Ordnance. CATM-9, 30 Flares. TCTS pod desired.

Range Requirement. AA, TCTS, EXP.

External Syllabus Support. 1 Adversary, TACTS debrief facility.

SAA-1509	1.0	*	B	D	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Review forward-quarter AWI against an air-to-air threat.

Requirement. IAW VMAT-203 IUT FSG.

SAA-1510	1.0	*	B	D	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce air-to-air timeline and Harrier Standard Game Plan (HSGP).

Requirement. IAW VMAT-203 IUT FSG.

SAA-1511	1.0	730	B,R	D	S	RNAWST
-----------------	------------	------------	------------	----------	----------	---------------

Goal. Review HSGP.

Requirement. IAW VMAT-203 IUT FSG.

2.7.19 Night Systems (NS)

Purpose. Introduce Night Vision Devices (NVDs) and night systems formation using NVDs.

General

All flights shall be led by a designated FRS Night Systems Familiarization Instructor (NSFI) who must be an Night Systems Instructor (NSI).
For NS-1606, an FRS Landing Site Instructor (LSI-5704) shall supervise all landings.

Ground/Academic Training

Readings

MAWTS-1 NVD Manual
AV-8B NATIP (NTRP 3-22.4-AV8B): Section 2.12, NAVFLIR
Air NTTP 3-22.3-AV8B, Chapter 5, Night Systems.

Lectures

ACAD-0180, NS Stage Brief.

Receive the following AV-8B courseware lectures
ACAD-0181, Night Flying Environment and Physiology
ACAD-0182, Infrared Theory
ACAD-0183, Navigation FLIR
ACAD-0184, Night Flying Procedures
ACAD-0185, Aided Night Flying Procedures

Chalk Talks/Practical Application. ACAD-0186, NITE Lab.

Exams. ACAD-0187, NS Ground School exam.

SNS-1600	1.0	*	B	N	S	RNAWST
-----------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce night V/STOL procedures.

Requirement. IAW VMAT-203 IUT FSG.

SNS-1601	1.0	*	B	NS	S	RNAWST
-----------------	------------	----------	----------	-----------	----------	---------------

Goal. Introduce night V/STOL procedures with NVDs.

Requirement. IAW VMAT-203 IUT FSG.

NS-1602	1.3	*	B	N	A	1 TAV-8B
----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce night V/STOL procedures.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD.

NS-1603	1.3	*	B	N	A	2 TAV-8B
----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce night administrative formation.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD.

NS-1604	1.3	*	B	NS	A	1 TAV-8B
----------------	------------	----------	----------	-----------	----------	-----------------

Goal. Night system V/STOL consolidation.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD.

NS-1605	1.3	*	B	NS	A	2 TAV-8B
----------------	------------	----------	----------	-----------	----------	-----------------

Goal. Introduce NS formation.

Requirement. IAW VMAT-203 IUT FSG.

Range Requirement. MOA, RSTD.

NS-1606	1.3	*	B	NS	A	1 AV-8B
----------------	------------	----------	----------	-----------	----------	----------------

Goal. Night systems solo. Review night systems procedures and V/STOL.

Requirement. IAW VMAT-203 IUT FSG.

2.7.20 V/STOL Consolidation (VCON)

Purpose. V/STOL consolidation flights are to maintain/regain proficiency of all takeoff and landing procedures after Threat Countertactics, Air-to-Surface, and Air-to-Air ground/academic training.

General. A qualified FRS Landing Site Instructor (LSI-5703) shall supervise all solos.

VCON-1220	1.3	*	B	D	A	1 AV-8B
------------------	------------	----------	----------	----------	----------	----------------

Goal. V/STOL consolidation.

Requirement. IAW VMAT-203 IUT FSG.

SVCON-1221	1.0	*	B	(NS)	S	RNAWST
-------------------	------------	----------	----------	-------------	----------	---------------

Goal. Review emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

VCON-1222	1.3	*	B	D	A	1 AV-8B
------------------	------------	----------	----------	----------	----------	----------------

Goal. V/STOL consolidation.

Requirement. IAW VMAT-203 IUT FSG.

VCON-1223	1.3	*	B	(NS)	A	1 AV-8B
------------------	------------	----------	----------	-------------	----------	----------------

Goal. V/STOL consolidation.

Requirement. IAW VMAT-203 IUT FSG.

SNTPS-1700	1.5	*	B	D	S	RNAWST
-------------------	------------	----------	----------	----------	----------	---------------

Goal. FRS NATOPS Evaluation.

Requirement. IAW VMAT-203 IUT FSG.

2.8 CORE PHASE

2.8.1 Core Skill Training

Purpose. This stage develops a wingman who is proficient in all fundamental skills required to employ the AV-8B. This stage focuses on air-to-surface and air-to-air skill development in:

- System management and sensor employment.
- Weapon employment.
- Threat countertactics.
- Section and division tactical fundamentals.
- Operating under day and night conditions.

General

- Initial POI events are tailored to a wingman's role.
- Passing grade on written examinations is 80 percent.
- Training objectives are provided for all stages with the exception of FAM, AAR and AA.
- All training objectives must be met for initial sorties.
- Training objectives are at the discretion of the instructor for refresh and maintain sorties.

2.9 CORE STAGES

2.9.1 Familiarization (FAM)

Purpose. Maintain proficiency in normal and emergency procedures, navigation, and instrument flight procedures.

General. Flight with NVDs is authorized if current and proficient in the Night Systems Core Skill.

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000)

- Chapter 2, Systems
- Chapter 4, Operating Limitations
- Chapter 7, Shore-Based Procedures
- Chapter 12, General Emergencies
- Chapter 13, Ground Emergencies
- Chapter 14, Takeoff Emergencies
- Chapter 15, In-Flight Emergencies
- Chapter 16, Landing Emergencies
- Chapter 17, Emergency Egress
- Chapter 18, Immediate Action Items

Air NTP 3-22.3-AV8B

- Chapter 2, Mission Planning, Briefing, and Debriefing Standards
- Chapter 3, Tactical Administration

Wing and MAG Standard Operating Procedures
Applicable range regulations and course rules

SFAM-2100 1.5 60 B,R,M (N) S RNAWST/DMRT

Goal. Review normal, instrument and emergency procedures.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Instrument Departure

Instrument Enroute

Precision Approach

Non-precision Approach

Fixed Nozzle Slow Landing
Variable Nozzle Slow Landing
Conventional Landing
Rolling Vertical Landing
Vertical Landing

Plan. Develop a plan for a local instrument and area range familiarization flight.

Brief. Brief will focus on introducing local area procedures and reviewing instrument procedures. A detailed discussion on emergency procedures and CRM will be conducted.

Execution. Review emergency procedures and checklists. Review takeoffs and landings with simulated emergencies during shore operations. The sortie may be conducted utilizing shipboard procedures as dictated by operational requirements. Review CRM associated with these emergencies.

Practice. Instrument procedures to include departure, enroute, and terminal approach procedures. At a minimum conduct one precision and one non-precision approach.

Review. Cockpit HOTAS and displays for the RADAR aircraft.

Debrief. Review adherence to procedures and parameters. Utilize DAQ video, if available, for debrief points.

Performance Standard. Demonstrate proficient and expeditious conduct of preflight, start, taxi, takeoff, enroute, descent, and landing checklists. Demonstrate familiarity with local procedures. Execute all normal and emergency procedures IAW NATOPS.

Prerequisite. Complete ground/academic training. (NS-2603~NS).

FAM-2101 1.3 60 B,R,M (N) A 1+AV-8B

Goal. Review familiarization, navigation, and/or instrument flight.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Instrument Departure

Instrument Enroute

Precision Approach

Non-precision Approach

Fixed Nozzle Slow Landing
Variable Nozzle Slow
Landing
Conventional Landing
Rolling Vertical Landing
Vertical Landing

Plan. Develop a plan that supports a familiarization, navigation and/or instrument flight.

Brief. Brief will cover applicable admin and procedures for the flight. For navigation flights a detailed route review, to include structure and obstacles, shall be conducted. Emphasis shall be on sensor usage including the RADAR.

Execution. Review normal procedures and checklists, instrument flight procedures, and/or navigation procedures. Incorporate NAVFLIR and RADAR usage into sortie.

Review. Adherence to procedures and parameters.

Debrief. Conduct HUD tape debrief of all landings.

Performance Standard. Execute all normal and emergency procedures IAW NATOPS, CNAFM 3710, and applicable directives.

Prerequisite. SFAM-2100, (NS-2603~NS).

2.9.2 Intercepts (INT)

Purpose. Review and maintain proficiency utilizing the APG-65 RADAR and conducting intercepts.

General. All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, and ACM Rules of Conduct. A Section Lead shall conduct the event. INT-2200 may be conducted in the simulator or DMRT vice the aircraft for the Maintain POI.

Ground/Academic Training

Readings

Air NTTP 3-22.1-AV8B

Chapter 6, Air-to-Air Fundamentals.

Chapter 7, Air-to-Air Mission Planning.

Chapter 8, Air-to-Air Employment.

NTRP 3-22.4-AV8B

Chapter 2.10, RADAR.

NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual

Chapter 4, ACM Rules of Conduct.

ALSA

MTTP Air Control Communication

Lectures

Review the following AV-8B courseware lectures:

AINT-2020, ACM Safety.

AINT-2021, Aircraft Performance and Handling.

AINT-2022, AV-8B RADAR Controls and Displays.

AINT-2023, AV-8B Basic Intercept Geometry Parts 1 & 2.

AINT-2024, Air-to-Air Search Techniques.

AINT-2025, Air Intercept Control.

Receive the following AV-8B courseware lectures:

AINT-2026, APG-65 Optimization (MAWTS-1 ASP).

INT-2200	1.3	180	B,R,M	(N)	A/S	1+ AV-8B/RNAWST/DMRT
----------	-----	-----	-------	-----	-----	----------------------

Goal. Review forward quarter and stern conversion intercepts.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Radar Trail Departure

Tac Admin Execution

On Deck A/A Setup
Airborne A/A Setup
FENCE Check Procedures
Mission Execution
Forward Quarter
Forward Quarter

Stern Conversion
Stern Conversion
AWI Timeline Adherence
Radar Management
Training Rule Adherence
C3 / AIC Integration / Comm

Plan. Develop plan for an All Weather Intercept (AWI) sortie that includes a Bullseye. Plan should include GCI or AIC if available. Non-maneuvering HSGP intercepts may be conducted if desired and PUI is current and proficient in the Air to Air Core Skill.

Brief. Will include a review of AWI forward and rear quarter intercept timeline. RADAR optimization, setup, BFM modes and HOTAS shall be reviewed. Departure avoidance and intercept safety shall be covered.

Execution. Conduct a RADAR trail departure. Execute two forward quarter AWIs to arrive in the beam, and two stern conversion intercepts against a single non-maneuvering contact. Forward quarter intercepts shall be against a contact at tactical airspeeds. Stern conversion intercepts shall simulate a tanker rendezvous. Instruction shall be focused on RADAR mechanics, and geometry to include managing aspect, airspeed, and altitude when evaluating target Mach, altitude, closure, and aspect cues. Review GCI/AIC integration. Weapon employments will not be executed unless PUI is current and proficient in the Air to Air Core Skill.

Debrief. TACTS debrief should be used for initial sorties. Review RADAR tape for radar mechanics and intercept geometry. Review aircraft parameters.

Performance Standard. Execute procedures IAW Air NTTP. Adhere to RADAR timeline, contracts, and criteria.

Training Objectives

Arrive in beam +/- 10 deg for forward quarter AWI.

Arrive in trail within 1-2nm for stern conversions AWI.

Properly evaluate target parameters and arrive WVR with 0-100 KCAS Vc of closure and a minimum of 1000 feet of vertical separation.

Prerequisite. Complete ground/academic training. FAM-2101, (NS-2603~NS).

Ordnance. TCTS Pod.

Range Requirement. RSTD, MOA.

External Syllabus Support. AIC/GCI, TACTS facility.

2.9.3 Threat Countertactics (TCT)

Purpose. Review Surface-to-Air threat countertactics.

General. A Section Lead shall conduct the event. All flights should be flown on an EW range with TCTS coverage. Basic and Refresh POI shall be flown in the aircraft. Maintain POI may be conducted in the simulator or DMRT.

Ground/Academic Training

Readings

Air NTTP 3-22.1-AV8B

Chapter 3, Threat Countertactics

AFTTP 3-1.Threat Guide

Chapter 5, Adversary Surface-to-Air Missile Systems

AV-8B NATIP (NTRP 3-22.2-AV8B)

Chapter 2, ALE-47, ALR-67 and ALQ-164.

CY-20XX User's Manual

Currnet CY User's Manual

ALSA

MTTP Communication Brevity

MTTP Air Control Communication

Lectures

Review the following AV-8B courseware lectures:

ATCT-2030, TACAIR Surface to Air Threat Countertactics (MAWTS-1 Common Courseware)

ATCT-2031, AV-8B Aircraft Survivability Equipment (MAWTS-1 ASP)

Chalk Talks/Practical Application.

ATCT-2032, Surface-to-air threat countertactics gameplans against range-known and range-unknown threats with a WTO.

TCT-2300	1.3	180	B,R,M	(N)	A/S	2 AV-8B/RNAWST/DMRT
-----------------	------------	------------	--------------	------------	------------	----------------------------

Goal. Review surface-to-air threat countertactics.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

Lean

Notch

Level S

Hot Weave

Cold Weave

Deck Transition

Pre-emptive ADA

Reactive ADA

Expendable Usage

Threat Reaction Comm

Plan. Develop a plan for a medium altitude TCT sortie that includes an AV-8B baseline range known strategic SAM, a range unknown tactical SAM and ADA.

Brief. Will include an in-depth discussion of the threat layout, capabilities and indications as well as the TCT game plan to address threats. Conduct a review of TCT mechanics and ALQ setup.

Execution. Perform preemptive and reactive threat countertactics to include notch, level-S, hot and cold weaves, and deck transitions against range-known and range-unknown RF SAM threats. Perform preemptive and reactive medium altitude ADA threat countertactics.

Debrief. TACTS debrief should be used for initial sorties. HUD tape debrief should be incorporated. Utilize DAQ when conducted in the simulator. Review adherence to game plan, and correct execution of maneuvers.

Performance Standard. Execute IAW Air NTTP. Demonstrate proficient setup and use of ALQ, ALE, and ALR. Execute briefed jettison gameplan if conducted in simulator. Communication IAW ALSA Communication Brevity, Air NTTP and ACC.

Training Objectives

Maneuvers and expendable usage IAW Air NTTP.

Correct analysis of threat and execution of TCT game plan.

Communication IAW ALSA, Air NTTP and ACC.

Prerequisite. Complete ground/academic training, FAM-2101 (NS-2603~NS).

Ordinance. TPOD or ALQ-164, Expendables.

External Syllabus Support. Emitters, TACTS facility.

2.9.4 Low Altitude Tactics (LAT)

Purpose. Complete LAT qualification.

General. All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, LAT Rules of Conduct. All mission planning and flight briefs shall include BAM/BASH data and current route obstruction considerations. Completion of this stage constitutes LAT qualification. A LATI shall instruct all Basic and Refresh POI events.

Ground/Academic Training

Readings

Air NTTP 3-22.3-AV8B

Chapter 2, Mission Planning, Briefing, and Debriefing

Chapter 3, Tactical Administration

Chapter 4, Low Altitude Tactics

Air NTTP 3-22.1-AV8B

Chapter 3, Threat Countertactics

NAVMC DIR 3500.14

Aviation Training and Readiness Program Manual, Review LAT Training Rules of Conduct

Lectures

Review the following MAWTS-1 courseware lectures:

ALAT-2040, TACAIR LAT, Part 1

ALAT-2041, TACAIR LAT, Part 2

ALAT-2042, TACAIR LAT, Part 3

ALAT-2043, TACAIR LAT, Part 4

Exams. ALAT-2044, LAT stage exam.

SLAT-2400	1.5	365	B,R	D	S	RNAWST/DMRT
------------------	------------	------------	------------	----------	----------	--------------------

Goal. Review advanced LAT and low altitude threat countertactics.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Basic and Advanced LAT

Execution

Straight and Level

Turns

Ridgeline Crossing

Terrain Masking

Climb to Cope

Vertical Jink

Straight Oblique Jink

Turning Oblique Jink

Reverse Oblique Jink

Section Turns

LAT TCT Execution

Notch

Level S

Hot Weave

Cold Weave

Guns Jink

Deck Transition

Plan. Develop a plan for an advanced LAT and TCT that includes a range known and range unknown SAM and ADA threat in a mountainous database.

Brief. Will include a review of basic and advanced LAT maneuvers. Emphasis will be placed on adherence to the 10-degree rule, 50-percent rule, and dive recovery rules. Review low altitude TCT and TCT transitions from medium to low altitude.

Execution. Practice straight and level, turns, ridgeline crossings, terrain masking, and climb-to-cope. Practice vertical jinks, SOJ, TOJ, and ROJ. Conduct low altitude surface-to-air TCT at comfort level. Perform preemptive and reactive threat countertactics to include notch, level-S, and hot or cold weaves against range-known and range-unknown RF SAM threats. Perform preemptive and reactive low altitude ADA threat countertactics. Perform one medium altitude to low altitude deck transition.

Debrief. Utilize DAQ video if available. Review adherence to procedures and LAT ROC. Review aircraft parameters to include altitude, velocity vector and airspeed control. Review adherence to TCT game plan, and correct execution of maneuvers.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Execute procedures IAW Air NTTP. Adhere to surface-to-air threat countertactics gameplan. Adhere to LAT ROC. Proficient TCT and MCT.

Training Objectives

Maneuvers and expendable usage IAW Air NTTP.

Correct analysis of threat and execution of TCT gameplan.

Communication IAW ALSA and Air NTTP.

Prerequisite. Complete ground/academic training, TCT-2300.

LAT-2401 1.3 365 B,R,M D A 2 AV-8B

Goal. Review LAT at comfort level.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Vertical Jink
Admin Execution	Straight Oblique Jink
Tac Admin Execution	Turning Oblique Jink
On Deck Setup	Reverse Oblique Jink
Airborne Setup	Section Turns
FENCE Check Procedures	LAT TCT Execution
Basic and Advanced LAT	Notch
Execution	Level S
Straight and Level	Hot Weave
Turns	Cold Weave
Ridgeline Crossing	Guns Jink
Terrain Masking	Deck Transition
Climb to Cope	

Plan. Develop a plan to conduct a LAT flight at comfort level.

Brief. Shall include a review of basic and advanced LAT maneuvers. Emphasis will be placed on adherence to the 10-degree rule, 50-percent rule, dive recovery rules. Conduct a review of TCT mechanics. Review deconfliction game plan. Emphasize threat recognition, identification and assessment, decision points based on threat matrix, and reactions versus threat engagement timelines.

Execution. Conduct a section LAT flight. Chase may be conducted based on the proficiency of PUI. Practice straight and level, turns, ridgeline crossings, terrain masking, and climb-to-cope. Conduct section turns (called and uncalled). Practice low altitude section surface-to-air TCT at comfort level.

Debrief. Conduct HUD debrief. TACTS debrief should be used for initial sorties when available. Review adherence to procedures and LAT ROC. Review aircraft parameters to include altitude, velocity vector and airspeed control. Review adherence to game plan, and correct execution of maneuvers.

Performance Standard. Maintain a minimum 300-foot clearance of all obstructions. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Correct ALSA Communication Brevity. Proficient cockpit management including TCT and MCT.

Training Objectives

Maneuvers and expendable usage IAW ANTP.

Correct analysis of threat and execution of TCT gameplan.

Communication IAW ALSA and ANTP.

Prerequisite. LAT-2400.

Ordnance. TCTS Pod, 30 Chaff, 30 Flares.

Range Requirement. RSTD, EXP.

External Syllabus Support. TACTS facility.

2.9.5 Air-to-Surface (AS)

Purpose. Review surface-to-air threat countertactics. Review air-to-surface sensors and timelines, the employment of free-fall, forward-firing, and precision guided munitions from medium and low altitude, and section target area tactics.

General. A WTO shall instruct all Basic POI events. A LATI should instruct SAS-2501 and AS-2503. For the Refresh POI, a Section Lead shall conduct all events; a WTO should instruct SAS-2500, AS-2502, and AS-2504; a LATI should instruct SAS-2501 and AS-2503; AS-2502 and AS-2504 may be combined for a Refresh POI.

Ground/Academic Training

Readings

AV-8B NATIP (NTRP 3-22.4-AV8B)

Chapter 4, External Stores.

Chapter 5, Air-to-Ground Weapon Delivery Munitions.

Air NTTP 3-22.3-AV8B

Chapter 6, Air-to-Surface Fundamentals

Chapter 7, Air-to-Surface Employment.

Air NTTP 3-22.1-AV8B

Chapter 2, Air-to-Surface Mission Planning

Lectures

Review the following AV-8B courseware lectures:

AAS-2050, Height Above Target.

AAS-2051, GP Bombs.

AAS-2052, 25mm Gun.

AAS-2053, Rockets.

AAS-2055, Cluster Weapons and Fuzing.

Receive the following AV-8B courseware lectures from a WTO or WTI:

AAS-2054, Forward-Firing Ordnance Employment (MAWTS-1 ASP).

AAS-2056, Inertially Aided Munitions (MAWTS-1 ASP).

AAS-2057, LASER-Guided Weapons (MAWTS-1 ASP).

Chalk Talks/Practical Application

ACAD-2058, JMEMS Air-to-Surface Weaponneering System (JAWS) Lab including Paveway
Mission Planning Tool and SLIC planning tool for safe escape

SAS-2500 1.5 365 B,R D S RNAWST/DMRT

Goal. Introduce advanced PGM deliveries against static and moving targets.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Medium Altitude Mission Execution

LGB Employment / AS Timeline

JDAM Employment / AS Timeline

GBU-54 Employment / AS Timeline

LMAV Employment / AS Timeline

Gun Employment / AS Timeline

Rocket Employment / AS Timeline

APKWS Employment / AS Timeline

Low Drag Employment / AS Timeline

Section Target Area Tactics

Plan. Develop a plan to conduct LGB, JDAM, dual-mode weapon, LMAV and gun attacks against static and moving targets.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Introduce laser hand-offs IP inbound from the cover aircraft maintaining track. Introduce moving target support for PGM and LMAV fast moving target (FMT) as both the shooter and designator. Introduce gun attacks against a moving target. Introduce JDAM dive delivery.

Execution. Conduct a minimum of two level PGM, one LMAV FMT self attack as the shooter, one LMAV FMT buddy attack as the designator, and two gun attacks against moving targets. Execute one JDAM dive attack against a static target.

Debrief. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW Air NTTP. Correct weaponneering utilizing JWS, WARP, eSLIC, and NATIP. Proper use of TPOD and systems to optimize and support weapons. Comply with tactical abort parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.

Optimized weapon, system and sensor for delivery.

Valid weapons delivery IAW the Air NTTP.

Prerequisite. Ground and academic events. SFAM-2100.

Ordnance. TPOD, 1xGBU-54, 1xGBU-38, 1xGBU-12, 1xAGM-65E2, 300x25mm, Expendables.

SAS-2501 1.5 365 B,R D S 2 RNAWST/2 DMRT

Goal. Review low altitude target area tactics utilizing GP and forward firing ordnance deliveries.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures

Low Altitude Mission Execution
High Drag Employment / AS Timeline
Low Drag Employment / AS Timeline
Gun Employment / AS Timeline
Rocket Employment / AS Timeline
Section Target Area Tactics

Plan. Linked simulator. PUI flies as wingman, LATI will either fly as flight lead or instruct from simulator console. If LATI instructs from the console a section lead shall fly as flight lead. Develop a plan to conduct a low altitude target area tactics sortie utilizing pop-up attacks.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Emphasis should be placed on visual acquisition of the target in the pop and dive. Review low altitude target area tactics.

Execution. Conduct a RADAR trail departure. Conduct a minimum of four low altitude target area attacks utilizing free-fall and forward firing ordnance.

Debrief. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JWS, WARP, eSLIC, and NATIP. Proper use of TPOD and systems to optimize and support weapon. Comply with tactical abort parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.
Optimized weapon, system and sensor for delivery.
Valid weapons delivery IAW the Air NTTP.

Prerequisite. LAT-2400.

Ordnance. TPOD, 4xMK-82 HD, 300x25mm, Expendables.

AS-2502 1.3 90 B,R,M D A 2+ AV-8B

Goal. Review medium altitude target area tactics, forward firing ordnance, and computed deliveries.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures

Medium Altitude Mission Execution
Gun Employment / AS Timeline
Rocket Employment / AS Timeline
Low Drag Employment / AS Timeline
Section Target Area Tactics

Plan. Develop a plan to conduct a medium altitude target areas tactics sortie utilizing the TPOD as the HAT source.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Review TPOD utilization as the HAT source and cascade gameplan. Review medium altitude target area tactics.

Execution. Conduct a minimum of four section medium altitude target attacks with free-fall and forward firing ordnance using the TPOD as the HAT source.

Debrief. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization, and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JWS, WARP, eSLIC, and NATIP. Proper use of TPOD and systems to optimize weapon employments. Comply with tactical abort parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.
Optimized weapon, system, and sensor for delivery.
Valid weapons delivery IAW Air NTTP.

Prerequisite. FAM-2101, SAS-2500.

Ordnance. Desired: TPOD, 4xMK-82, 100x25MM, 30 Flares.

Acceptable substitutes: 4xGP LD (HE/Inert), Un-guided Rockets.

Range Requirement. RSTD, EXP, STRAFE, HE.

AS-2503 1.3 365 B,R,M D A 2+ AV-8B

Goal. Review low altitude target area tactics and forward firing ordnance deliveries.

Requirement

Plan / Brief	
Mission Planning	
Brief Preparation	
Execution	
Standardization	Low Altitude Mission Execution
Admin Execution	High Drag Employment / AS Timeline
Tac Admin Execution	Low Drag Employment / AS Timeline
On Deck Setup	Gun Employment / AS Timeline
Airborne Setup	Rocket Employment / AS Timeline
FENCE Check Procedures	Section Target Area Tactics

Plan. Develop a plan to conduct a low altitude target area tactics sortie utilizing pop-up attack profiles.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Emphasis should be placed on terrain clearance tasks, mission critical tasks, and visual acquisition of the target in the pop and dive. Review low altitude target area tactics.

Execution. Conduct a minimum of three low altitude target area attacks utilizing free-fall and forward firing ordnance.

Debrief. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization, and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JWS, WARP, eSLIC, and NATIP. Proper use of TPOD and systems to optimize and support weapon. Comply with tactical abort parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.
Optimized weapon, system, and sensor for delivery.
Valid weapons delivery IAW Air NTTP.

Prerequisite. LAT-2401, AS-2501, AS-2502.

Ordnance. Desired: TPOD, 4xMK-82 HD, 100x25mm, 30 Flares.

Acceptable substitutes: 4xGP HD/LD (HE/Inert), Un-guided Rockets.

Range Requirement. RSTD, EXP, STRAFE, HE.

AS-2504 1.3 90 B,R,M D A 2+ AV-8B

Goal. Review target area tactics using medium altitude standoff delivery profiles.

Requirement

Plan / Brief	
Mission Planning	
Brief Preparation	
Execution	
Standardization	JDAM Employment / AS Timeline
Admin Execution	GBU-54 Employment / AS Timeline
Tac Admin Execution	LMAV Employment / AS Timeline
On Deck Setup	Gun Employment / AS Timeline
Airborne Setup	Rocket Employment / AS Timeline
FENCE Check Procedures	APKWS Employment / AS Timeline
Medium Altitude Mission Execution	Low Drag Employment / AS Timeline
LGB Employment / AS Timeline	Section Target Area Tactics

Plan. Develop a plan to conduct level PGM profiles, JDAM dive, and LMAV/APKWS ramp profiles. The sortie should execute a moving target attack if available.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Review weapon set-up and support optimization.

Execution. Conduct a minimum of two level PGM profiles, one JDAM dive, and one ramp or fast moving target LMAV/APKWS profile. If available, at least one attack should be conducted against a moving target.

Debrief. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JWS, WARP, eSLIC, and NATIP. Proper use of TPOD and systems to optimize and support weapon. Comply with tactical abort parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.
Optimized weapon, system, and sensor for delivery.
Valid weapons delivery IAW Air NTTP.

Prerequisite. AS-2502.

Ordnance. Desired: TPOD, 1xAPKWS, 1xGBU-54, 1xGBU-12, 30 Flares.

Acceptable substitutes: 2xPGM (HE/Inert), CATM-65E/E2.

Range Requirement. RSTD, EXP, HE, TGT-MOVE.

2.9.6 Night Systems (NS)

Purpose. Complete NSQ qualification.

General. All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, and NS Rules of Conduct. Completion of this stage constitutes NS Qualification. A NSI shall instruct all Basic and Refresh POI events.

Ground/Academic Training

Readings

AV-8B NATOPS, Review Chapter 15, In-Flight Emergencies, Electrical Malfunctions.
Air NTTP 3-22.3-AV8B, Review Chapter 5, Night Systems.
MAWTS-1 NVD Manual.

NAVMC 3500.14, Aviation Training and Readiness Program Manual, Review Night Systems
Rules of Conduct.

Lectures

Review the following AV-8B courseware lectures:

ANS-2060, Infrared Theory.

ANS-2061, NAVFLIR.

ANS-2062, LUU-2 / LUU-19 Parachute Flare Employment.

Chalk Talks/Practical Application

ANS-2063, NITE Lab. (If not current.)

ANS-2064, MAWTS Night Systems Mishap Anthology given by an NSI.

SNS-2600	1.5	180	B,R	NS	S	RNAWST
----------	-----	-----	-----	----	---	--------

Goal. Review free fall and forward firing ordnance attack profiles at night.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

Gun Employment / AS Timeline

Low Drag Employment / AS Timeline

Section Target Area Tactics

Plan. Develop a plan to conduct ramp and roll-in GP attacks and ramp forward firing ordnance attacks at night on tactical targets.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Brief will include a discussion of night roll-in and ramp delivery safety considerations. Emphasize environmental effects and Mission Crosscheck Time (MCT).

Execution. Conduct a minimum of 2 ramp GP attacks, 2 30 degree roll-in GP attacks, and 2 forward firing ordnance ramp attacks. PUI should execute at least one off target rendezvous with lead using the RADAR. Review NS procedures and landings.

Debrief. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JWS, WARP, eSLIC, and NATIP. Proper use of TPOD to designate targets. Comply with tactical abort parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.

Optimized weapon, system, and sensor for delivery.

Valid weapons delivery IAW with the Air NTTP.

Prerequisite. Complete ground/academic training, AS stage complete.

Ordnance. TPOD, 4xMK-82, 300x25mm, Expendables.

SNS-2601	1.5	*	B	NS	S	2 RNAWST
----------	-----	---	---	----	---	----------

Goal. Introduce medium altitude NS target area attack profiles using PGM and GP ordnance.

Requirement

Plan / Brief	
Mission Planning	
Brief Preparation	
Execution	
Standardization	LGB Employment / AS Timeline
Admin Execution	JDAM Employment / AS Timeline
Tac Admin Execution	GBU-54 Employment / AS Timeline
On Deck Setup	LMAV Employment / AS Timeline
Airborne Setup	Low Drag Employment / AS Timeline
FENCE Check Procedures	Section Target Area Tactics
Mission Execution	

Plan. Linked simulator. PUI flies as wingman. NSI will either fly as flight lead or instruct from the simulator console. If NSI instructs from the console a section lead shall fly as flight lead. Develop a plan to conduct level JDAM and LGB deliveries, as well as LMAV and GP ordnance attacks at night on tactical targets.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Brief will include a discussion of night LMAV delivery safety considerations and night off target rejoin considerations. Emphasize environmental effects and Mission Crosscheck Time (MCT).

Execution. Conduct a minimum of 1 JDAM or LJDAM, 1 LGB, 1 LMAV (buddy or self), and one GP section attack. Two of the PGM or LMAV attacks shall be from a buddy profile with PUI executing the roll of designator once and then as the shooter once. The flight should rejoin after each attack.

Debrief. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline. Review of target geometry and rejoin procedures.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JWS, eSLIC, WARP, and NATIP. Proper use of TPOD to designate targets. Comply with Tactical Abort Parameters. Execute briefed air-to-surface timeline. Achieve briefed attack geometry and timing. Correct off target sensor and system usage to expedite the off target rejoin. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.
Optimized weapon, system and sensor for delivery.
Valid weapons delivery IAW with the Air NTTP.

Prerequisite. SNS-2600.

Ordnance. TPOD, 1xGBU-54, 1xGBU-12, 1xLMAV, 1xMK-82, Expendables.

NS-2602 1.3 180 B,R NS A 2 AV-8B

Goal. Introduce computed deliveries from medium and low altitude at night.

Requirement

Plan / Brief	
Mission Planning	
Brief Preparation	
Execution	
Standardization	FENCE Check Procedures
Admin Execution	Mission Execution
Tac Admin Execution	Low Drag Employment / AS Timeline
On Deck Setup	
Airborne Setup	

Plan. Develop a plan to conduct multiple medium (20 or 30 degree) and low (10 degree) LCIP and LAUT deliveries on a scored raked range at night.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Brief will include a discussion of night dive delivery safety considerations. Emphasize environmental effects and MCT.

Execution. Conduct 4 medium altitude deliveries and 2 low altitude deliveries on a scored raked range. At least two attacks should be from a roll-in.

Debrief. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance impacts. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing , JWS, eSLIC, and NATIP. Execute briefed air-to-surface timeline. Proper use of TPOD to generate target coordinates. Comply with Tactical Abort Parameters. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.

Optimized weapon, system and sensor for delivery.

Valid weapons delivery IAW with the Air NTTP.

Prerequisite. NS-2601.

Ordnance. Desired: TPOD, 6xMK-76, 30 Flares

Acceptable substitutes: 4xGP.

Range Requirement. RSTD, EXP.

NS-2603 1.3 180 B,R,M NS A 2 AV-8B

Goal. Introduce section target area tactics at night.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

LGB Employment / AS Timeline

JDAM Employment / AS Timeline

GBU-54 Employment / AS Timeline

LMAV Employment / AS Timeline

Gun Employment / AS Timeline

Rocket Employment / AS Timeline

APKWS Employment / AS Timeline

Low Drag Employment / AS Timeline

Section Target Area Tactics

Plan. Develop a plan to conduct section ramp GP attacks and PGM attacks at night.

Brief. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Brief will include a discussion of night dive delivery safety considerations and off target rejoin considerations. Emphasize environmental effects and MCT.

Execution. Conduct 2 ramp free-fall or forward firing ordnance deliveries and 2 PGM attacks.

Debrief. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance impacts. Review adherence to air-to-surface timeline and off target rejoin execution.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, eSLIC, and NATIP. Proper use of TPOD to designate targets. Comply with Tactical Abort Parameters. Execute briefed air-to-surface timeline. Achieve briefed attack geometry and timing. Correct off target sensor and system usage to expedite the off target rejoin. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Training Objectives

Execute briefed air-to-surface timeline.
Optimized weapon, system and sensor for delivery.
Valid weapons delivery IAW with the Air NTTP.

Prerequisite. NS-2602.

Ordnance. Desired: TPOD, 1xGBU-38, 1xGBU-12, 1xMK-82, 100x25mm or 4 2.75/5 inch rockets, 30 Flares.

Acceptable substitutes: 2xGP, 2xPGM, Forward Firing, Expendables.

Range Requirement. RSTD, EXP, STRAFE, HE.

2.9.7 Air-to-Air Refueling (AAR)

Purpose. Complete night AAR qualification.

General. Currency requirements IAW ATP 3.3.4.2). Initial AAR qualifications shall be conducted IAW ATP 3.3.4.2. AAR training may be executed in conjunction with ferry missions or as part of a tactical sortie, provided all prerequisites are met. Section leads shall conduct all Basic and Refresh POI events. This stage assumes completion of the day AAR qualification in the FRS within the previous 365 days. If that refly window is exceeded, the fleet will be responsible for completing the 1000 level day AAR sortie requirements.

Ground/Academic Training

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000)

Chapter 9, Paragraph 9.2, Air Refueling.

ATP 3.3.4.2 Parts I and II.

Lectures

Review the following AV-8B courseware lectures:

AAAR-2070, Aerial Refueling

AAR-2700	1.3	365	B,R,M	NS	A	2+ AV-8B
----------	-----	-----	-------	----	---	----------

Goal. Introduce night AAR.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Night Tanker Rendezvous

Tanker Communications

Tanker Formation Position-

keeping

Night Tanking

Emergency Breakaway

NORDO Tanking

AR Checklists

Plan. Develop a plan for a night aerial refueling sortie.

Brief. Address tanker join and positions as well as specific tanker procedures. Review tanker emergencies.

Execution. Perform all AAR procedures at night (aided and/or unaided). Perform 1 tanker rendezvous and establish observation and astern positions. Execute successful engagements on refueling drogue with 1 engagement under

simulated NORDO conditions with an emergency breakaway. Perform tanker departure. This event shall be flown in section or division for an initial or refresher qualification.

Debrief. Conduct HUD debrief. Review adherence to procedures.

Performance Standard. Execute all procedures IAW ATP 3.3.4.2 and AV-8B NATOPS.

Prerequisite. Complete ground/academic training, AAR-1340, FAM-2101, NS-2603.

Range Requirement. MOA.

External Syllabus Support. Compatible tanker IAW ATP 3.3.4.2.

2.9.8 Air-to-Air (AA)

Purpose. Conduct ACM qualification.

General

All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, ACM Rules of Conduct.

An AV-8B ACTI shall instruct all Basic and Refresh POI events.

A Restricted ACTI may instruct any academic requirements and SAA-2800, SAA-2801, AA-2803, AA-2804, AA-2805, and AA-2806.

A VMFT-401 ATI, formerly certified as an AV-8B ACTI, may instruct 2804, 2805, and 2806.

Adversaries may be similar or dissimilar, provided instructor requirements are met.

Completion of all 2800 level events constitutes an ACM qualification.

Maintain of AA-2808 may be accomplished in the simulator or DMRT.

Ground/Academic Training

Required Readings

ALSA Air Control Communications

Review Chapter 2, Tactical Administration Communications

Review Chapter 4, Air-to-Air Communication Fundamentals

Review Chapter 5, Air-to-Air Intercept Communication

Air NTTP 3-22.1-AV8B

Review Chapter 6, Air-to-Air Fundamentals.

Review Chapter 7, Air-to-Air Mission Planning.

Review Chapter 8, Air-to-Air Employment.

Air NTTP 3-22.3-AV8B

Review Appendix A, BFM/ACM Training.

Air NTTP 3-22.7-AV8B

Review Appendix C, Shot Validation and RTO Procedures.

TOPGUN Manual

Review Chapter 40, 1v1.

Review Chapter 41, Section Engaged Maneuvering.

NTRP 3-22.2-AV8B

Review Chapter 4.1, AIM-9M-8.

Review Chapter 4.2, AIM-120 AMRAAM.

NTRP 3-22.4-AV8B

Review Chapter 2.10, RADAR.

Review Chapter 2.13, Link-16.

Review Chapter 6, Air-to-Air Weapon Delivery.

Review Chapter 7.1, E-M Diagrams.

NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual
Review ACM Rules of Conduct.

AFTTP 3-1.Shot Kill

Review Chapter 2, Debrief and Range Training Officer/Non-Range Training Officer Procedures.

AFTTP 3-1.Threat Guide

Review Chapter 6, Adversary Fighter Aircraft and Armament.

Lectures

Receive the following AV-8B courseware lectures:

- AAA-2080, AV-8B Departure Avoidance.
- AAA-2081, AIM-120 (MAWTS-1 ASP).
- AAA-2082, APG-65 Optimization (MAWTS-1 ASP).
- AAA-2083, AV-8B Air-to-Air Employment (MAWTS-1 ASP).

Receive the following AV-8B Chalktalks:

- AAA-2084, Offensive Basic Fighter Maneuvers Chalktalk.
- AAA-2085, Defensive Basic Fighter Maneuvers Chalktalk.
- AAA-2086, High-Aspect Basic Fighter Maneuvers Chalktalk.
- AAA-2087, 2v1 Section Engaged Maneuvering Chalktalk.

Review the following AV-8B courseware lectures:

- AAA-2088, Air Combat Maneuvering (ACM) Safety.
- AAA-2089, Combat Gunnery.
- AAA-2090, Combat Thrust Vector Control (CTVC).
- AAA-2091, 1v1 Basic Fighter Maneuvers
- AAA-2092, 2v1 Basic Fighter Maneuvers.
- AAA-2093, Energy Maneuverability.
- AAA-2094, AIM-9M-8.
- AAA-2095, Air-to-Air RADAR Controls and Displays.
- AAA-2096, Air-to-Air Search Techniques.
- AAA-2097, Introduction to Link-16.
- AAA-2098, TACTS Debriefing Lab

Recommended Additional Readings

TOPGUN Manual

- Review Chapter 2 Briefing and Debriefing.
- Review Chapter 4 Radar Theory.
- Review Chapter 13 Threat Pilot and Tactics.
- Review Chapter 14 Threat Aircraft.
- Review Chapter 17 Threat Air-to-Air Missiles.
- Review Chapter 18 Rule of Thumb.
- Review Chapter 25 Aerial Gunnery.
- Review Chapter 26 AIM-9 Sidewinder.
- Review Chapter 28 AIM-120 AMRAAM.
- Review Chapter 31 APG-65.

SAA-2800	1.0	365	B,R	D	S	NAWST/DMRT
----------	-----	-----	-----	---	---	------------

Goal. Review TVC procedures, air-to-air TACADMIN, and air-to-air communications standards.

Requirement.

Plan / Brief

- Mission Planning
- Brief Preparation

Execution

- Standardization
- Admin Execution

Tac Admin Execution
On Deck A/A Setup
Airborne A/A Setup

FENCE Check Procedures
Mission Execution
High Speed Departure
Low Speed Departure
ACM HOTAS Drill
Turn Rate Drill

TVC Turn Drill
Break Turns
Slow Speed / High AOA Drill
HSPO
HSWO
Nozzle Flop

Plan. Develop a plan to review TVC and advanced aircraft handling. Review air-to-air TACADMIN and basic drills.

Brief. Instruction shall include TVC utilization and departure avoidance, ACM training rules application, AIM-9M-8 and AIM-120 weapon set-up and TACADMIN checks, HOTAS commanded ACM modes, weapons employment, and scan techniques. Shot, kill, and timeout communications shall be reviewed. Review performance numbers and apply maneuvering characteristics chart and EM diagram to maneuvers.

Execution. Perform ACM drills IAW planning guidance. Complete 1 high speed departure recovery, 1 slow speed departure recovery, 1 ACM mode/Air-to-Air weapons HOTAS drill, 2 turn rate drills, 1 TVC-assisted turn drill, 2 break turns (at least one with a deck transition), 1 slow speed/high AOA drill, 1 HSPO, 1 HSWO, and 1 nozzle flop. Recognize AIM-9M-8, AIM-120, and GAU-12 WEZ. For the ACM mode/Air-to-Air weapons drills, a co-speed bandit will be placed in front of the PUI.

Debrief. Utilize Simulator DAQ video if available. Review aircraft parameters (airspeed/AOA/Altitude) for each maneuver while relating to maneuvering characteristics chart and EM diagram. Validate weapons employments. Review both the RADAR and HUD for systems management.

Performance Standard. Execute IAW Air NTTP. Demonstrate proficient aircraft handling. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP.

Training Objectives.

Maneuvers and geometry IAW Air NTTP.
Valid weapons employments.
TCT and expendables IAW Air NTTP.
Communication IAW ALSA and Air NTTP.

Prerequisite. Complete with ground and academic training, INT-2200.

Ordinance. 2xAIM-9M-8, 2xAIM-120, SEL 5A.

SAA-2801	1.5	*	B	(N)	S	RNAWST/DMRT
----------	-----	---	---	-----	---	-------------

Goal. Introduce Harrier Standard Game Plan (HSGP) as a single.

Requirement.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck A/A Setup
Airborne A/A Setup
FENCE Check Procedures
Mission Execution
CAP Setup/Maintenance
Meld Mechanics
Sort Mechanics
VID Mechanics
Valid Weapons Employment

Shot and Post-Shot Mechanics
Intercept Geometry
Actions at DR
Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Merge Mechanics
Expendables Usage / TCT
C3 / AIC Integration
Training Rule Adherence
Shot and Status Comm

Plan. Develop a plan to execute HSGP as a single. Plan for a single, sortable group. Striker profiles will replicate an IR-2 threat. Sweeper profiles will replicate a SAR-1/IR-3 threat.

Brief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include intercept geometry, RADAR mechanics, and AIM-120/AIM-9M employment. Review timeline from CAP to SRR through the merge; then mission rehearse, to include comm, for each line. The structure of the sortie is line training. Exercise control is Single Shot Employment with Real-Time Non-RTO Assessment.

Execution. Perform 5 intercepts. Line 1 will be a VID against a single, unaware, IR-2+ Bogey group. Line 2 will employ an exit attack against a single, aware Hostile group. Line 3 will employ a notch attack against a single, aware Hostile group. Lines 4 and 5 will employ launch and leave tactics against a single, aware Hostile group. One line should result in a notchback and one line should result in a staggerback.

Debrief. Execute IAW the MAWTS-1 brief/debrief guide. Utilize simulator DAQ video and AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction and fighter scrub. Validate all shots. Debrief should focus on: RADAR mechanics, weapons employment, intercept geometry, communications, and TCT.

Performance Standard. Execute IAW Air NTTP. Demonstrate proficient execution of HSGP. Execute briefed communication IAW ALSA Communication Brevity and AFTTP 3-1. Shot Kill. Valid A/A weapons employment. PUI executes commit checks, maintains geometry that allows for a merge, shoots IAW owner contracts, cranks in correct direction, executes BVR/WVR transition with proper A/A weapon selected and conducts appropriate TCT IAW launch and decide or launch and leave tactics.

Training Objectives

Detect, Shoot, and Kill all Factor Groups.

Valid A/A Weapons Employment.

S/A Enhancing Communications IAW ALSA and ACC.

TCT and Expendable Usage IAW Air NTTP.

Prerequisite. SAA-2800.

Ordinance. 2xAIM-9M-8, 2xAIM-120, TPOD, SEL 5A.

External syllabus support. GCI desired.

SAA-2802 1.0 365 B,R D S 2 RNAWST/2 DMRT

Goal. Introduce 2v1+1 short range intercepts to section engaged maneuvering.

Requirement.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck A/A Setup

Airborne A/A Setup

FENCE Check Procedures

Mission Execution

CAP Setup/Maintenance

Sanitization Mechanics

Sort Mechanics

Valid Weapons Employment

Split-Plane Maneuvering

Role Establishment

Engaged/Supporting Contract

Adherence

Shot and Post-Shot Mechanics

Flow Decision-Making

Merge Mechanics

VID Mechanics

Staggerback / Notchback

Expendables Usage

C3 / AIC Integration

Training Rule Adherence

Plan. Linked simulator, PUI as wingman. Develop a plan for a tap-the-cap setup IOT perform short range intercepts against a single, aware IR-2+ Category II-III adversary. ACTI may fly as the lead with a section lead operating the bandits at the console, provided DAQ video is available. PHID via VID is required on all lines except

the rear quarter. Pre-merge kills allowed only on the rear quarter entry. Expect the rear quarter entry to be managed as a notchback or staggerback. GCI utilization is encouraged, but only contacts inside 15nm will be called. Sortie construct will be modeled as a continuous VUL. Instructor shall manage Bandits IOT generate required intercepts. Exercise control is Single Shot Employment with Real-Time Aircrew assessment.

Brief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include SRR mechanics, RADAR and visual bracket geometry, sweep geometry, post-merge game-plans, engaged and supporting fighter contracts, ACM training rules application, applicable ALSA and ACC communications, and air-to-air TCT.

Execution. Perform at least 6 short range intercepts. Conduct 2 forward quarter, 2 beam, and 2 rear quarter engagements without PHID. Execute procedures IAW Air NTTP. Utilize short-range RADAR mechanics, GCI, and RWR to target threat groups.

Debrief. Execute IAW the MAWTS-1 brief/debrief guide. Utilize simulator DAQ video and AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction and fighter scrub. Validate all shots. Debrief should focus on: RADAR mechanics, weapons employment, intercept geometry, communications, and TCT.

Performance Standard. Execute IAW Air NTTP. Demonstrate proficient employment of short range radar mechanics, mutual support, and engaged/supporting contracts. Execute briefed communication IAW ALSA and ACC Communications. PUI turns aggressively towards the threat with appropriate RADAR set. Arrive at merge with WID and VID. Establishes and adheres to roles and contracts. TTK < 90 seconds post merge. Valid A/A weapons deliveries. Execute appropriate air-to-air TCT game plan.

Training Objectives.

Detect, Shoot, and Kill all Factor Groups.

Valid A/A Weapons Employment.

S/A Enhancing Communications IAW ALSA and ACC.

TCT and Expendable Usage IAW Air NTTP.

Prerequisite. SAA-2801.

Ordinance. 2xAIM-9M-8, 2xAIM-120, SEL best.

External syllabus support. GCI desired.

SAA-2803	1.5	365	B,R	(N)	S	2 RNAWST/2 DMRT
-----------------	------------	------------	------------	------------	----------	------------------------

Goal. Review Harrier Standard Game Plan (HSGP) in section.

Requirement.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck A/A Setup

Airborne A/A Setup

FENCE Check Procedures

Mission Execution

CAP Setup/Maintenance

Actions at MAR

Staggerback / Notchback

Merge Mechanics

Expendables Usage / TCT

Meld Mechanics

Sort Mechanics

VID Mechanics

Valid Weapons Employment

Shot and Post-Shot Mechanics

Intercept Geometry

Actions at DR

Targeted/Abort Assessment at MAR

C3 / AIC Integration

Training Rule Adherence

Shot and Status Comm

Plan. Linked simulator, PUI as wingman. Plan for a single, sortable group. Striker profiles will replicate an IR-2 threat. Sweeper profiles will replicate a SAR-1/IR-3 threat.

Brief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include intercept geometry, RADAR mechanics, and AIM-120/AIM-9M employment. Review timeline from CAP to SRR through the merge; then mission rehearse, to include comm, for each line. The structure of the sortie is line training. Exercise control is Single Shot Employment with Real-Time Non-RTO Assessment.

Execution. Perform 6 intercepts. Line 1 will be a VID against a single, unaware, IR-2+ Bogey group. Line 2 will be a VID against a single, unaware, SAR-1 Bogey group. Line 3 will employ an exit attack against a single, aware Hostile group. Line 4 will employ a notch attack against a single, aware Hostile group. Lines 5 and 6 will employ launch and leave tactics against a single, aware Hostile group. One line will result in a notchback and one line will result in a staggerback.

Debrief. Execute IAW the MAWTS-1 brief/debrief guide. Utilize simulator DAQ video and AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction and fighter scrub. Validate all shots. Debrief should focus on: RADAR mechanics, weapons employment, intercept geometry, communications, and TCT.

Performance Standard. Execute IAW Air NTTP. Demonstrate proficient execution of HSGP. Execute briefed communication IAW ALSA Communication Brevity and AFTTP 3-1. Shot Kill. Valid A/A weapons employment. PUI executes commit checks, maintains geometry that allows for a merge, shoots IAW owner contracts, cranks in correct direction, executes BVR/WVR transition with proper A/A weapon selected and conducts appropriate TCT IAW launch and decide or launch and leave tactics.

Training Objectives

Detect, Shoot, and Kill all Factor Groups.

Valid A/A Weapons Employment.

S/A Enhancing Communications IAW ALSA and ACC.

TCT and Expendable Usage IAW Air NTTP.

Prerequisite. SAA-2802.

Ordinance. 2xAIM-9M-8, 2xAIM-120, TPOD, SEL 5A.

External syllabus support. GCI desired. SL to conduct Red Air profiles at console and during debrief.

AA-2804 1.3 * B D A 1+ AV-8B

Goal. Review 1 V 1 offensive BFM.

Requirement.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck A/A Setup

Airborne A/A Setup

FENCE Check Procedures

Mission Execution

PADS Setup / TACADMIN

Heat-to-Guns

Snap-Shot Drill

Rolling Scissors Drill

9k' Perch Set

6k' Perch Set

3k' Perch Set

Attack Window Entry Timing

Break Turn Mechanics

Merge Mechanics

Valid Weapons Employment

Shot and Post-Shot Mechanics

Rate Band Management

Radius Band Management

Sensor Nose Recognition

A/A Gameplan Adherence

Expendables Usage

C3 / AIC Integration

Training Rule Adherence

Plan. Develop a plan to review offensive BFM. Exercise control is Single Shot Employment with Real-Time Aircrew Assessment.

Brief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include ACM training rules, departure avoidance and prevention, energy management and assessment, turn circle entry recognition, WEZ recognition, deck awareness, and shot opportunities.

Execution. Review 1 snap shot drill, 1 heat-to-guns drill, and 1 x 9,000-foot, 1 x 6,000-foot, and 1 x 3,000-foot offensive perch engagements. IP will execute a ditch maneuver on the 6K set, PUI executes a proper ditch follow and maintains an offensive position through the maneuver. Fuel and time permitting, instructor will demonstrate a deck transition.

Debrief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Beginning with TACADMIN, aircrew will review tapes to evaluate timing and performance (turn rate, AOA management, airspeed, g, etc) in order to evaluate PUIs energy management during each maneuver. Introduce shot validation and validate all shots; debrief any missed shot opportunities. Whiteboard or TACTS will be used to define geometry (range, angle, and closure) during the maneuvers.

Performance Standard. Adhere to ACM training rules. Execute IAW Air NTTP. Demonstrate proficiency in Offensive Objectives and Axioms. Efficiently manage energy and systems. On HTG PUI employs valid weapons, maneuvers OOP greater than 15 degrees, and employs a tracking guns shot inside 2400'/0.4NM. On 9K set PUI executes a proper attack window entry (not late, within briefed performance tolerances) and maintains an offensive position for 60 seconds. On 6K set PUI executes a proper attack window entry. On 3K set PUI executes a proper attack window entry and avoids being neutralized. Recognize AIM-9M-8, AIM-120, and GAU-12 WEZ. Correct use of HOTAS commanded ACM modes. PUI takes at least 1 post offensive break turn shot during perch sets.

Training Objectives

Per Air NTTP Offensive BFM priorities.

Prerequisite. SAA-2800, Offensive BFM Chalk Talk.

Ordinance.

Desired: 1xCATM-9, 1xTCTS Pod, 30 Chaff, 30 Flares.

Required: 1xCATM-9, 1xTCTS Pod, 30 flares.

Range Requirement. RSTD, EXP, TCTS.

External syllabus support. TCTS facility.

AA-2805	1.3	*	B	D	A	1+ AV-8B
----------------	------------	----------	----------	----------	----------	-----------------

Goal. Review 1 V 1 defensive BFM.

Requirement.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck A/A Setup

Airborne A/A Setup

FENCE Check Procedures

Mission Execution

PADS Setup

Heat-to-Guns

Snap-Shot Drill

Rolling Scissors Drill

9k' Perch Set

6k' Perch Set

3k' Perch Set

Attack Window Entry Timing

Break Turn Mechanics

Merge Mechanics

Valid Weapons Employment

Shot and Post-Shot Mechanics

Rate Band Management

Radius Band Management

Sensor Nose Recognition

A/A Gameplan Adherence

Expendables Usage

C3 / AIC Integration

Training Rule Adherence

Plan. Develop a plan to review defensive BFM. Exercise control is Single Shot Employment with Real-Time Aircrew Assessment.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include ACM training rules application, departure avoidance, energy management and assessment, deck awareness, and denying adversary WEZ entry. Departure prevention shall be briefed with specific attention paid to the break turn and the ditch. Attempt to neutralize adversary and/or disengage successfully while utilizing air-to-air threat countertactics.

Execution. Review 1 heat-to-guns drill, 1 rolling scissors drill and 1 x 9,000-foot, 1 x 6,000-foot, and 1 x 3,000-foot defensive perch engagements (with 1 perch set ending in a horizontal scissors). PUI must conduct a ditch and a deck transition. On one set IP will demonstrate an overshoot.

Debrief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Beginning with TACADMIN, aircrew will review tapes to evaluate timing and performance (turn rate, AOA management, airspeed, g, etc) in order to evaluate PUIs energy management during each maneuver. Review shot validation and validate all shots; debrief any missed shot opportunities. Whiteboard or TACTS will be used to define geometry (range, angle, and closure) during the maneuvers.

Performance Standard. Adhere to ACM training rules. Execute IAW Air NTTP. Demonstrate proficiency in Defensive Objectives and Axioms. Efficiently manage energy and systems. On 9K set PUI executes a proper DBT with expendables and prevents attacker from obtaining a WEZ for 60 seconds. On 6K set PUI executes a proper DBT with expendables, then executes proper ditch mechanics. On overshoot, PUI recognizes high track crossing angle and LOS rates and neutralizes with a reversal into the horizontal or rolling scissors.

Training Objectives.

Per Air NTTP Defensive BFM priorities.

Prerequisite. SAA-2800, Defensive BFM Chalk Talk.

Ordnance

Desired: 1xCATM-9, 1xTCTS Pod, 30 Chaff, 30 Flares.

Required: 1xCATM-9, 1xTCTS Pod, 30 flares.

Range Requirement. RSTD, EXP, TCTS.

External syllabus support. TCTS facility.

AA-2806 1.3 365 B,R D A 1+ AV-8B

Goal. Review 1 V 1 high aspect BFM against a Category II+ adversary.

Requirement.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck A/A Setup

Airborne A/A Setup

FENCE Check Procedures

Mission Execution

PADS Setup

Heat-to-Guns

Snap-Shot Drill

Rolling Scissors Drill

9k' Perch Set

6k' Perch Set

3k' Perch Set

High-Aspect Butterfly Set

High-Aspect Abeam Set

Attack Window Entry Timing

Break Turn Mechanics

Merge Mechanics

Valid Weapons Employment

Shot and Post-Shot Mechanics

Rate Band Management

Radius Band Management

Sensor Nose Recognition

A/A Gameplan Adherence

Expendables Usage

C3 / AIC Integration

Training Rule Adherence

Plan. Develop a plan to review high aspect BFM and decision making for 1-circle and 2-circle game plans. Exercise control is Single Shot Employment with Real-Time Aircrew Assessment.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include ACM training rules application, energy management and assessment, game-plans, pre-merge considerations, weapons employment, deck awareness, and air-to-air threat countertactics. Departure prevention shall be briefed.

Execution. Review 1 snap shot drill, 1 heat-to-guns drill, and a minimum of 3 high aspect engagements: 2 butterfly and 1 abeam. Execute game plans IAW Air NTTP.

Debrief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. PUI will conduct shot validation and validate all shots while instructor queues the tapes; debrief missed shot opportunities. Debrief will focus on aircraft performance (relate to EM diagram) to assess which fighters were managing their energy according to the briefed game plan. Whiteboard or TACTS debrief to assess actual geometry between fighters.

Performance Standard. Adhere to ACM training rules. Execute IAW Air NTTP. Demonstrate proficiency in Offensive/Defensive Objectives and Axioms. Efficiently manage energy and control merges. PUI maintains sight and flies appropriate performance numbers for 1 circle or 2 circle gameplan. PUI utilizes out of plane maneuvers (at least 20 degrees) while executing game plan.

Training Objectives.
Per Air NTTP HABFM priorities.

Prerequisite. AA-2804, AA-2805, HABFM Chalk Talk.

Ordnance.
Desired: 1xCATM-9, 1xTCTS Pod, 30 Chaff, 30 Flares.
Required: 1xCATM-9, 1xTCTS Pod, 30 flares.

Range Requirement. RSTD, EXP, TCTS.

External syllabus support. TCTS facility.

AA-2807	1.3	180	B,R,M	D	A	2 AV-8B
---------	-----	-----	-------	---	---	---------

Goal. Review 2v1 short range intercepts to section engaged maneuvering.

Requirement.

Plan / Brief	
Mission Planning	
Brief Preparation	
Execution	
Standardization	Split-Plane Maneuvering
Admin Execution	Role Establishment
Tac Admin Execution	Engaged/Supporting Contract
On Deck A/A Setup	Adherence
Airborne A/A Setup	Shot and Post-Shot Mechanics
FENCE Check Procedures	Flow Decision-Making
Mission Execution	Merge Mechanics
CAP Setup/Maintenance	VID Mechanics
Sanitization Mechanics	Staggerback / Notchback
Sort Mechanics	Expendables Usage
Valid Weapons Employment	C3 / AIC Integration
	Training Rule Adherence

Plan. Develop a plan to review 2v1 short range intercepts. Plan a CAP location that permits bandit freedom of movement outside of 15nm. Sortie construct is continuous VUL, with bandit managing geometry to provide at least one of each required intercept. PHID via VID is required on all lines except the rear quarter. Pre-merge kills

allowed only on the rear quarter entry. Expect the rear quarter entry to be managed as a notchback or staggerback. GCI utilization is encouraged, but only contacts inside 15nm will be called. Exercise control is Single Shot Employment with Real-Time Aircrew Assessment.

Brief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include SRR mechanics, RADAR and visual bracket geometry, sweep geometry, post-merge game plans, engaged and supporting fighter contracts, ACM training rules application, applicable ALSA and ACC communications, departure avoidance, and air-to-air threat countertactics.

Execution. From a tap-the-cap setup, perform at least 3 intercepts between 10 nm and 15 nm against an IR-2+ Category II-III adversary: 1 forward quarter entry, 1 beam entry, and 1 rear quarter entry (i.e. staggerback or notchback). Execute procedures IAW Air NTTP. Utilize short-range RADAR mechanics, GCI, and RWR to target threat groups.

Debrief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. TACTS debrief should be utilized if available, otherwise whiteboard debrief required. Review tapes for game plan adherence and aircraft performance. Validate all shots and debrief missed shot opportunities, intercept geometry, communications, radar mechanics, and threat countertactics.

Performance Standard. Adhere to ACM training rules. Execute IAW Air NTTP. PUI effectively contributes to section mutual support. PUI turns aggressively towards the threat with appropriate RADAR set. Arrive at merge with WID and VID. Adhere to briefed contracts and game plans. Establishes and adheres to roles. TTK < 90 seconds post merge. Valid A/A weapons employments. Execute appropriate air-to-air TCT game plan.

Training Objectives

Detect, Shoot, and Kill all Factor Groups.

Valid A/A Weapons Employment.

S/A Enhancing Communications IAW ALSA and ACC.

TCT and Expendable Usage IAW Air NTTP.

Prerequisite. SAA-2802, AA-2806.

Ordnance

Desired: 1xCATM-9, 2xCATM-120, 1xTCTS Pod, 30 Chaff, 30 Flares.

Required: 1xCATM-9, 1xTCTS Pod, 30 flares.

Range Requirement. RSTD, EXP, TACTS, AA.

External Syllabus Support. TCTS facility, minimum 1 RADAR-equipped adversary (dissimilar preferred). GCI/AIC desired.

AA-2808 1.3 180 B,R,M (N) A/S 2 AV-8B/RNAWST/DMRT

Goal. Review HSGP in section against a single group.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck A/A Setup

Airborne A/A Setup

FENCE Check Procedures

Mission Execution

CAP Setup/Maintenance

Meld Mechanics

Sort Mechanics

VID Mechanics

Valid Weapons Employment

Shot and Post-Shot Mechanics

Intercept Geometry

Actions at DR

Targeted/Abort Assessment at MAR

Actions at MAR

Staggerback / Notchback

Merge Mechanics

Expendables Usage / TCT

C3 / AIC Integration

Training Rule Adherence

Shot and Status Comm

Plan. Develop a plan to review the HSGP against a single, sortable group. Adversaries shall be medium altitude and unaware or direct confrontation. One profile will require a VID, the rest will be hostile-at-the-commit scenarios. Actions at DR/MAR shall be briefed and executed. One line will require fighters to split for notch or exit attack. Section engaged maneuvering is encouraged, but not required. Exercise control is Single Shot Employment with either Real-Time Non-RTO Assessment or Real-Time RTO Assessment.

Brief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. Instruction shall include air-to-air timeline, GCI/AIC integration, Air NTTP required communications, contracts, departure avoidance, and air-to-air threat countertactics. Review AIM-120 and AIM-9 employment. ACTI should demonstrate a bandit and GCI brief to the PUI.

Execution. Perform a minimum of 3 intercepts against a single group, both aware and unaware, SAR-1-capable adversary. Execute intercept procedures IAW Air NTTP. Adhere to air-to-air timeline, contracts, and ID criteria. Line 1, bandits will be unaware strikers; fighters will conduct a VID with the PUI as shooter. Line 2, bandits will fly a sweeper profile in a single sortable group, hostile at the commit. Fighters will execute launch and decide tactics, resulting in either a notch or exit attack. Line 3, bandits will fly a sweeper profile in a single sortable group, hostile at the commit. Fighters will execute launch and leave tactics and execute a staggerback or notchback.

Debrief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. TACTS debrief required. If TACTS debrief unavailable, a whiteboard debrief shall be conducted. ACTI will conduct a fighter scrub, mass debrief and fighter debrief validating all shots, missed shot opportunities, intercept geometry, communications, radar mechanics, and threat countertactics. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction. ACAD-2051, TACTS Debriefing Lab to be logged in conjunction with Mass Debrief.

Performance Standard. Adhere to ACM training rules. Execute IAW Air NTTP. Demonstrate proficient employment of HSGP. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP. For VID, PUI generates appropriate separation, gains RADAR SA to group, and takes valid BVR shots with hostile declaration. For all other lines, PUI executes proper meld/sort mech with valid weapons employment on timeline. PUI executes TCT game plan IAW brief and Air NTTP. PUI arrives at merge with radar or visual SA and proper weapon selected.

Training Objectives

Detect, Shoot, and Kill all Factor Groups.

Valid A/A Weapons Employment.

S/A Enhancing Communications IAW ALSA and ACC.

TCT and Expendable Usage IAW Air NTTP.

Prerequisite. AA-2807.

Ordnance

Desired: 1xCATM-9, 2xCATM-120, 1xTCTS Pod, 30 Chaff, 30 Flares.

Required: 1xCATM-9, 1xTCTS Pod, 30 flares.

Range Requirement. RSTD, EXP, TACTS, AA.

External syllabus support. TACTS facility, GCI/AIC, RADAR-equipped adversaries. Dissimilar preferred.

Aviation Career Progression Model (ACPM)

Purpose. To enhance professional understanding of Marine Aviation and the MAGTF and to ensure that aviators possess the requisite skills to fill battle command and battle staff positions in support of the ACE and the MAGTF in a joint environment.

General. ACPM academic training requirements will be embedded in all tactical T/M/S T&R manuals within the progressive training phases to include the 2000, 3000, and 6000 phases of training. These training requirements will be tracked and managed in M-SHARP. Commanding officers shall ensure that the requisite ACPM training requirements have been met prior to designating flight leaders.

ACPM Core Skill Training Events

ACPM-8200, MACCS Agencies, Functions and Control of Aircraft and Missiles
ACPM-8201, MWCS Brief
ACPM-8202, ACA & Airspace
ACPM-8210, Aviation Ground Support
ACPM-8230, ACE Battle Staff
ACPM-8231, Battle Command Display
ACPM-8240, Six Functions of Marine Aviation
ACPM-8241, JTAR/ASR Introduction and Practical Application
ACPM-8242, Site Command Primer
ACPM-8250, Theater Air Ground System (TAGS)

2.10 MISSION PHASE

2.10.1 Mission Skill Training

Purpose. Develop proficiency in OAS from expeditionary shore-based sites.

General. Initial POI events shall be tailored to a wingman's role.

2.11 MISSION STAGES

2.11.1 Close Air Support (CAS)

Purpose. Develop proficiency in CAS execution during day and night, low and medium altitudes, at all threat levels.

General.

For Basic POI events, a WTO shall instruct SCAS-3100, SCAS-3103, CAS-3104, CAS-3105, CAS-3106, and CAS-3108; a LAT(I) should instruct SCAS-3101; a LAT(I) shall instruct CAS-3105; a NSI or WTI shall instruct SCAS-3102 and CAS-3107.

For Refresh POI events, a Section Lead shall conduct all events; a minimum of a WTO should instruct all events; a LATI should instruct SCAS-3101 and CAS-3105; a NSI or WTI should instruct SCAS-3102 and CAS-3107.

CAS-3105 may be conducted in the simulator or DMRT for the Maintain POI.

CAS-3106 and CAS-3107 may be conducted on the same sortie for Refresh (R) and Maintain (M) POIs.

CAS-3108 may be conducted in the simulator or DMRT for Refresh and Maintain POIs.

Ground/Academic Training

Readings

Review Joint Publication 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support(JCAS).

MCRP 3-16B Multiservice Tactics Techniques and Procedures for Joint Application of Firepower (JFIRE).

AV-8B NATIP (NTRP 3-22.4-AV8B), Review Section 2.11.3, CAS Display.

Air NTTP 3-22.3 AV-8B, Review Chapters 8 and 9.
Tactical Air Control Party (TACP) Tactical Standard Operation Procedures, MAWTS-1.

Lectures

Receive the following AV-8B courseware from a WTO:

ACAS-3010 Urban CAS (MAWTS-1 ASP)

Review the following AV-8B courseware lectures:

ACAS-3011, CAS Execution

SCAS-3100 1.5 * B D S RNAWST/DMRT

Goal. Introduce day, medium altitude Close Air Support (CAS) with Precision Guided Munitions(PGM), General Purpose (GP), and Forward Firing (FF) ordnance.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

1. Routing/SOF/Holding

2. CAS Check-In

3. SITREP Update

4. Game Plan

5. Attack Brief

6. Remarks/Restrictions

System Entry

MAW-T

7. Readback

8. Correlation

CAS Timing Setup/Geometry

9. Attack/Weapons

Employment

TOT Assessment

10. Assess

11. BDA

12. Routing/SOF

Mutual Support

IFREP

TPOD / VDL Usage

Threat Reactions

Urban CAS Considerations

Low CAS Considerations

Digital CAS Usage

Plan. Use Pilot Training Officer (PTO) and Squadron S-2 to develop ROE, SPINS, updated tablet imagery and software, ground scheme of maneuver (SOM), and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM to achieve commander's intent. Have a threat countertactics (TCT) game plan to defeat the threat system IAW the allowable risk. The event shall introduce tablet integration for CAS execution. Optimize JMPS plan and tablet for efficient cockpit management.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template, focusing on system management, communications, correlation, corrections from the mark, tablet usage, and specific attack templates. Mission Rehearse the CAS execution template, covering Type I, II, III attacks using PGM, GP, FF ordnance, and TCT.

Execution. Conduct two Type I, two Type II, and one Type III attack with PGM, GP, and FF ordnance. Execute, at a minimum, one Bomb on Target(BOT) and one Bomb on Coordinate(BOC) attack.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW with JCAS and ANTPP. Optimize tablet during cockpit management. Locate the correct target. Make the appropriate correction from the mark. Achieve desired level of destruction IAW the

Ground Combat Element (GCE) intent and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. Complete ground/academic training, NS-2603.

Ordnance. TPOD, 2xMK-82 LD, 1xGBU-12, 1xGBU-54, 300x25mm, Expendables.

SCAS-3101 1.5 365 B,R D S RNAWST/DMRT

Goal. Introduce low altitude day CAS with GP and FF ordnance.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

1. Routing/SOF/Holding

2. CAS Check-In

3. SITREP Update

4. Game Plan

5. Attack Brief

6. Remarks/Restrictions

System Entry

MAW-T

7. Readback

8. Correlation

CAS Timing Setup/Geometry

9. Attack/Weapons

Employment

TOT Assessment

10. Assess

11. BDA

12. Routing/SOF

Mutual Support

IFREP

TPOD / VDL Usage

Threat Reactions

Urban CAS Considerations

Low CAS Considerations

Digital CAS Usage

Plan. Use PTO and Squadron S-2 to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the GCE intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize JMPS plan and tablet for efficient cockpit management. Generate weaponeering for low altitude employment, and conduct low altitude analysis of the objective area with a 1:50,000 map.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template, system management, communications, correlation, corrections from the mark, and low altitude air to surface timeline/geometry. Mission rehearsal should emphasize systems management, terrain clearance tasking, mission critical tasking, holding, attack transition, TCT, visual mutual support, and egress.

Execution. Conduct a minimum of three attacks from the low altitude environment. PUI shall conduct at least one BOC and one BOT attack.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW with JCAS and ANTTP. Optimize tablet during cockpit management. Maintain terrain clearance tasking and execute all mission critical tasks. Locate the correct target. Make the appropriate corrections from the mark. Achieve desired level of destruction IAW GCE intent and ROE via a valid weapons release on time (+/-15 sec) and in accordance with assigned geometry. Survive against the threat IAW the TCT game plan.

Prerequisite. SCAS-3100.

Ordnance. 2xMK-82 HD/LD, 8x5" HE Rockets, GBU-12, 300x25MM, Expendables.

External Syllabus Support. None.

SCAS-3102 1.5 365 B,R NS S RNAWST

Goal. Introduce medium altitude night CAS with GP, FF, and PGM ordnance.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
1. Routing/SOF/Holding
2. CAS Check-In
3. SITREP Update
4. Game Plan
5. Attack Brief
6. Remarks/Restrictions
System Entry
MAW-T
7. Readback

8. Correlation
CAS Timing Setup/Geometry
9. Attack/Weapons
Employment
TOT Assessment
10. Assess
11. BDA
12. Routing/SOF
Mutual Support
IFREP
TPOD / VDL Usage
Threat Reactions
Urban CAS Considerations
Low CAS Considerations
Digital CAS Usage

Plan. Utilize PTO and Squadron S-2 to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the GCE intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk standards. Optimize JMPS plan and tablet for efficient cockpit management at night.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template, focus on system management, communications, correlation, IR marker considerations, and specific attack templates. Mission rehearsal should introduce night considerations for systems management, target PID, target coordinate generation, weapons employment, TCT, and communications.

Execution. Conduct three type II, and one type III attack. One attack must use the IR marker for target correlation. Execute, at a minimum, one BOT and one BOC attack.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW with JCAS and ANTTP. Optimize tablet during cockpit management. Locate the correct target. Make the appropriate correction from the mark. Achieve desired level of destruction IAW GCE intent and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. SCAS-3100.

Ordnance. TPOD, 2xMK-82, 1xGBU-12, 1xGBU-54, 300x25MM, Expendables.

External Syllabus Support. None.

SCAS-3103 1.5 * B NS S 2 RNAWST

Goal. Linked Simulator. Introduce medium altitude night CAS in an urban environment as the wingman in a linked simulator.

Requirement

Plan / Brief	Mission Planning Brief Preparation	
Execution	Standardization Admin Execution Tac Admin Execution On Deck Setup Airborne Setup FENCE Check Procedures Mission Execution 1. Routing/SOF/Holding 2. CAS Check-In 3. SITREP Update 4. Game Plan 5. Attack Brief 6. Remarks/Restrictions System Entry MAW-T 7. Readback	8. Correlation CAS Timing Setup/Geometry 9. Attack/Weapons Employment TOT Assessment 10. Assess 11. BDA 12. Routing/SOF Mutual Support IFREP TPOD / VDL Usage Threat Reactions Urban CAS Considerations Low CAS Considerations Digital CAS Usage

Plan. Use Squadron S-2 and PTO to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM to achieve commander's intent. Have a TCT game plan to defeat the threat system while meeting allowable risk. Optimize JMPS plan and tablet for efficient cockpit management. Conduct weaponeering with consideration for collateral damage estimate (CDE) and risk estimation distances (RED), and proper weapon to target match. Develop game plans to address urban targeting challenges.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the TACP TACSOP CAS execution template, focus on system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize systems management at night, urban canyon, podium, target PID, collateral damage and danger close considerations, GRG usage, target coordinate generation accuracy, PGM employment, TCT, and standardized communications. Focus on target correlation and the requirement for precise fires in the urban environment.

Execution. Conduct three attacks against targets in the urban environment. One attack shall be against a moving target. Execute at a minimum, one BOT and one BOC attack. The WTO will run the console while a current Section Lead leads the event in the linked simulator.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW with JCAS and ANTP. Optimize tablet during cockpit management. Locate the correct target. Make the appropriate correction from the mark. Achieve desired level of destruction IAW GCE intent and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. SCAS-3102.

Ordnance. TPOD, 1xGBU-12, 2xGBU-54, 7xAPKWS, 300x25mm, Expendables.

External Syllabus Support. Linked Simulator.

CAS-3104 1.3 180 B,R,M D A 2 AV-8B

Goal. Introduce medium altitude day CAS with PGM, GP, and FF ordnance.

Requirement

Plan / Brief
Mission Planning

Execution	Brief Preparation	
	Standardization	8. Correlation
	Admin Execution	CAS Timing Setup/Geometry
	Tac Admin Execution	9. Attack/Weapons
	On Deck Setup	Employment
	Airborne Setup	TOT Assessment
	FENCE Check Procedures	10. Assess
	Mission Execution	11. BDA
	1. Routing/SOF/Holding	12. Routing/SOF
	2. CAS Check-In	Mutual Support
	3. SITREP Update	IFREP
	4. Game Plan	TPOD / VDL Usage
	5. Attack Brief	Threat Reactions
	6. Remarks/Restrictions	Urban CAS Considerations
	System Entry	Low CAS Considerations
	MAW-T	Digital CAS Usage
	7. Readback	

Plan. Use PTO and Squadron S-2 to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM to achieve commander's intent. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize JMPS plan and tablet for efficient cockpit management.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template. Focus on system management, communications, correlation, and specific attack templates. Mission Rehearse the CAS execution template, covering Type I, II, III attacks using PGM, GP, FF ordnance, and TCT.

Execution. Conduct, at a minimum, two attacks with PGM and/or GP/FF ordnance.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance impacts. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW with JCAS and ANTTP. Optimize tablet during cockpit management. Locate the correct target. Make the appropriate correction from the mark. Achieve desired level of destruction IAW the GCE intent and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. SCAS-3100.

Ordnance

Desired: TPOD, 2xMk-82, 1xGBU-12, 1xGBU-38, 300x25mm, Expendables.

Acceptable substitutes: TPOD, 2xGP, 2xPGM, FF.

Range Requirement. RSTD, HE, EXP.

External Syllabus Support. JTAC or FAC(A).

CAS-3105 1.3 365 B,R,M (NS) A/S 2 AV-8B/RNAWST/DMRT

Goal. Introduce low altitude CAS with GP and FF ordnance.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution	CAS Timing Setup/Geometry
On Deck Setup	9. Attack/Weapons
Airborne Setup	Employment
FENCE Check Procedures	TOT Assessment
Mission Execution	10. Assess
1. Routing/SOF/Holding	11. BDA
2. CAS Check-In	12. Routing/SOF
3. SITREP Update	Mutual Support
4. Game Plan	IFREP
5. Attack Brief	TPOD / VDL Usage
6. Remarks/Restrictions	Threat Reactions
System Entry	Urban CAS Considerations
MAW-T	Low CAS Considerations
7. Readback	Digital CAS Usage
8. Correlation	

Plan. Use PTO and Squadron S-2 to develop ROE, SPINS, updated tablet imagery and files, SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize JMPS plan and tablet for efficient cockpit management. Generate weaponeering for low altitude employment and conduct low altitude analysis of the objective area with a 1:50,000 map.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template, system management, communications, correlation, and specific attack templates in the low altitude environment. Mission rehearsal should emphasize systems management, terrain clearance tasking, mission critical tasking, holding, attack transition, attack geometry, TCT, and target egress.

Execution. Conduct, at a minimum, two attacks from the low altitude environment. Sortie may be conducted at 500' due to range restrictions, currency, or local SOP.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance impacts. Review adherence to air-to-surface timeline.

Performance Standard. Execute all tactics IAW with JCAS and ANTP. Optimize tablet during cockpit management. Maintain terrain clearance tasking and execute all mission critical tasks. Locate the correct target. Make the appropriate corrections from the mark. Achieve desired level of destruction IAW GCE intent and ROE via a valid weapons release on time (+/-15 sec) and in accordance with assigned geometry. Survive against the threat IAW the TCT game plan.

Prerequisite. CAS-3104.

Ordnance

Desired: 3xMK-82(HD), 4x5" Rockets, 300x25mm, Expendables.

Acceptable substitutes: 1 TPOD, 4xGP(HD), FF.

Range Requirement. RSTD, HE, EXP, STRAFE.

External Syllabus Support. JTAC or FAC(A). Maintain POI may be conducted in the simulator.

CAS-3106 1.3 180 B,R,M NS A 2 AV-8B

Goal. Introduce medium altitude night CAS in a permissive environment with PGM ordnance

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization	8. Correlation
Admin Execution	CAS Timing Setup/Geometry
Tac Admin Execution	9. Attack/Weapons
On Deck Setup	Employment
Airborne Setup	TOT Assessment
FENCE Check Procedures	10. Assess
Mission Execution	11. BDA
1. Routing/SOF/Holding	12. Routing/SOF
2. CAS Check-In	Mutual Support
3. SITREP Update	IFREP
4. Game Plan	TPOD / VDL Usage
5. Attack Brief	Threat Reactions
6. Remarks/Restrictions	Urban CAS Considerations
System Entry	Low CAS Considerations
MAW-T	Digital CAS Usage
7. Readback	

Plan. Use PTO and Squadron S-2 to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM to achieve commander's intent. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize JMPS plan and tablet for efficient cockpit management.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template. Focus on system management, communications, correlation, IR marker considerations, and specific attack templates. Mission rehearsal should review night considerations for systems management, target PID, target coordinate generation accuracy, PGM employment, TCT, and standardized communications.

Execution. Conduct at a minimum, two attacks using GP ordnance.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance impacts. Review adherence to air-to-surface timeline.

Performance Standard. Execute tactics IAW with JCAS and ANTP. Locate the correct target. Achieve desired level of destruction IAW GCE intent and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. CAS-3103, CAS-3104.

Ordnance

Desired: TPOD1xGBU-12, 1xGBU-16, 1xGBU-38, 1xGBU-32, Expendables.

Acceptable substitutes: TPOD, 4xPGM.

Range Requirement. RSTD, HE, EXP, STRAFE, LSR.

External Syllabus Support. JTAC or FAC(A).

CAS-3107 1.3 180 B,R,M NS A 2 AV-8B

Goal. Introduce medium altitude night CAS in a permissive environment with GP and FF ordnance

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution	CAS Timing Setup/Geometry
On Deck Setup	9. Attack/Weapons
Airborne Setup	Employment
FENCE Check Procedures	TOT Assessment
Mission Execution	10. Assess
1. Routing/SOF/Holding	11. BDA
2. CAS Check-In	12. Routing/SOF
3. SITREP Update	Mutual Support
4. Game Plan	IFREP
5. Attack Brief	TPOD / VDL Usage
6. Remarks/Restrictions	Threat Reactions
System Entry	Urban CAS Considerations
MAW-T	Low CAS Considerations
7. Readback	Digital CAS Usage
8. Correlation	

Plan. Use PTO and Squadron S-2 to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM to achieve commander's intent. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize JMPS plan and tablet for efficient cockpit management.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template. Focus on system management, communications, correlation, IR marker considerations, and specific attack templates. Mission rehearsal should cover night considerations for systems management, target PID, target coordinate generation accuracy, weapons employment, TCT, and communications.

Execution. Conduct, at a minimum, two attacks.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance impacts. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW with JCAS and ANTPP. Locate the correct target. Make the appropriate correction from the mark. Achieve desired level of destruction IAW GCE intent and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. CAS-3103, CAS-3104.

Ordnance:

Desired: TPOD, 3xMk-82, 2xAPKWS, 300x25mm, Expendables.

Acceptable substitutes: TPOD, 4xGP,FF.

External Syllabus Support. JTAC or FAC(A).

CAS-3108	1.3	365	B,R,M	(N)	A/S	2 AV-8B/RNAWST/DMRT
-----------------	------------	------------	--------------	------------	------------	----------------------------

Goal. Introduce medium altitude CAS in an urban environment.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

1. Routing/SOF/Holding

2. CAS Check-In

3. SITREP Update

4. Game Plan	10. Assess
5. Attack Brief	11. BDA
6. Remarks/Restrictions	12. Routing/SOF
System Entry	Mutual Support
MAW-T	IFREP
7. Readback	TPOD / VDL Usage
8. Correlation	Threat Reactions
CAS Timing Setup/Geometry	Urban CAS Considerations
9. Attack/Weapons	Low CAS Considerations
Employment	Digital CAS Usage
TOT Assessment	

Plan. Use Squadron S-2 and PTO to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM to achieve commander's intent. Have a TCT game plan to defeat the threat system while meeting allowable risk. Optimize JMPS plan and tablet for efficient cockpit management. Conduct weaponeering with consideration for collateral damage estimate (CDE) and risk estimation distances (RED), and proper weapon to target match. Develop game plans to address urban targeting challenges.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the TACP TACSOP CAS execution template, focus on system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize systems management, urban canyon, podium, target PID, collateral damage and danger close considerations, GRG usage, target coordinate generation accuracy, PGM employment, TCT, and standardized communications. Focus on target correlation and the requirement for precise fires in the urban environment.

Execution. Conduct two attacks against targets in the urban environment. One attack should be against a moving target.

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Conduct HUD and TPOD video debrief. Review aircraft parameters, system optimization and all ordnance impacts. Review adherence to air-to-surface timeline. If conducted in simulator, utilize DAQ video if available.

Performance Standard. Execute all tactics IAW with JCAS and ANTTP. Optimize tablet during cockpit management. Execute tactics IAW with JCAS and ANTTP. Locate the correct target. Make the appropriate correction from the mark. Locate the correct target. Achieve desired level of destruction IAW the GCE intent, CDE, and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. CAS-3104, (SCAS-3103~NS).

Ordnance. Ordnance may be simulated if operating in an urban range complex that does not permit live or inert ordnance.

Desired: TPOD, 2xMk-82, 1xGBU-54/12, 2xAPKWS, 300x25mm, Expendables.

Acceptable Substitutes: TPOD, 2xGP, 2xPGM, FF.

Range Requirement. RSTD, HE, EXP, STRAFE, LSR, Moving Target.

External Syllabus Support. JTAC or FAC(A). RSTD, HE, EXP, STRAFE, Moving Target. Refresh and Maintain POIs may be conducted in the simulator.

SCAS-3109 1.5 365 B,R,M NS S 2 RNAWST

Goal. Introduce medium altitude night CAS in a non-permissive environment.

Requirement

Plan / Brief
Mission Planning
Brief Preparation
Execution

Standardization	8. Correlation
Admin Execution	CAS Timing Setup/Geometry
Tac Admin Execution	9. Attack/Weapons
On Deck Setup	Employment
Airborne Setup	TOT Assessment
FENCE Check Procedures	10. Assess
Mission Execution	11. BDA
1. Routing/SOF/Holding	12. Routing/SOF
2. CAS Check-In	Mutual Support
3. SITREP Update	IFREP
4. Game Plan	TPOD / VDL Usage
5. Attack Brief	Threat Reactions
6. Remarks/Restrictions	Urban CAS Considerations
System Entry	Low CAS Considerations
MAW-T	Digital CAS Usage
7. Readback	

Plan. Use Squadron S-2 and PTO to develop ROE, SPINS, updated tablet imagery and files, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM to achieve commander's intent. Have a TCT game plan to defeat the threat system IAW the allowable risk. Plan for airborne or ground-based suppression of threats to support the TACP's objectives. Optimize JMPS plan and tablet for efficient cockpit management.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief around the CAS execution template. Focus on system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize systems management at night, urban canyon, podium, target PID, collateral damage and danger close considerations, GRG usage, target coordinate generation accuracy, PGM employment, TCT, and standardized communications. Focus on target correlation and the requirement for precise fires in the urban environment. Incorporate methods to minimize the threat during holding, correlation, and attack. Incorporate airborne or ground-based suppression, utilized by the TACP, into the mission rehearsal.

Execution. Conduct three attacks. Conduct two attacks that are supported by suppression,

Debrief. Conduct IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize DAQ video if available. Review aircraft parameters, system optimization and all ordnance hits. Review adherence to air-to-surface timeline.

Performance Standard. Execute IAW with JCAS and ANTP. Optimize tablet during cockpit management. Locate the correct target. Make the appropriate correction from the mark. Achieve desired level of destruction IAW GCE intent and ROE via a valid weapons release on time (+/-15 sec). Survive against the threat IAW the TCT game plan.

Prerequisite. SCAS-3103.

Ordnance. TPOD, 2xGBU-38, 1xGBU-54, 1xAGM-65E2, Expendables.

External Syllabus Support. None.

2.11.2

Strike Coordination and Reconnaissance (SCAR)

Purpose. Develop proficiency in SCAR execution during day and night missions at medium altitude in a low to medium threat environment.

General.

For the Basic POI, a NSI or WTI shall instruct the SSCAR-3300
A WTO shall instruct the SSCAR-3200, SCAR-3201, SCAR-3301 and SCAR-3302.
For the Refresh POI, a WTO shall instruct all events
SCAR-3302 may be conducted in the simulator for the Maintain POI.

SSCAR-3300 shall be conducted in conjunction with a SCAR planning lab.

Ground/Academic Training

Readings

ALSA MTTP, SCAR
ALSA MTTP, Killbox Employment
ALSA MTTP, Dynamic Targeting
Air NTTP 3-22.3-AV8B, Chapter 11

Review the following AV-8B courseware:

ASCAR-3030, Armed Reconnaissance

Receive the Following Lecture

ASCAR-3031, TACAIR SCAR (MAWTS-1 ASP)

Planning Lab

ASCAR-3032 SCAR Mission Rehearsal (MAWTS-1 ASP)

SSCAR-3200 1.5 * B D S 2 RNAWST/2 DMRT

Goal. Conduct day medium altitude AR.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
Find
TPOD Usage
Visual Search
Minimize Time to
Acquire/Detect
Fix / Assignment to TPL
Catalog Procedures

Track / Maintain PID
Target IAW Assets
Available/PTL/ROE
Engage
GP Employment / AS Timeline
PGM Employment / AS
Timeline
FF Employment / AS Timeline
Assess (BDA)
TPOD Usage
IFREP Passage
Threat Reactions
SEAD Usage

Plan. Linked simulator. PUI flies as wingman. Squadron WTI/PTO works with squadron Intel to develop relevant scenario Prioritized Target List (PTL), ROE, SPINS, and threats. Develop a plan to locate, ID, catalog, and kill enemy targets IAW PTL. Have a game plan to defeat the threat system while meeting allowable risk standards. Ensure JMPS plan facilitates find and kill gameplan. Generate target area imagery, sensor profiles, EOTDA/TAWS data, and cockpit maps or updated tablet imagery and software that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief to target audience and ensure brief meets assigned training/mission objectives. Mission Rehearse most likely scenarios based on mission, weather, weapons, and threats. Wingman will brief tactical SAM and 3rd Generation MANPAD threat as assigned by IP.

Execution. Conduct at least two attacks IAW PTL. PUI must locate and catalogue targets, pass section attack brief, and facilitate target attacks within briefed allowable risk. RSEAD will be coordinated as required. Communicate IFREP to a simulated C2 agency.

Debrief. The sortie will be debriefed using simulator DAQ. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Search and locate PTL targets IAW plan and brief. Conduct at least two successful attacks on PTL target sets. Conduct IFREP to a C2 agency.

Prerequisite. AS-2504.

Ordnance. TPOD, 1xLJDAM/DMLGW, 1xGBU-12, 2xMK-82s, 300x25mm, Expendables.

SCAR-3201 1.3 365 B, R (N) A 2+ AV-8B

Goal. Conduct medium altitude AR with PGM and GP.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
Find
TPOD Usage
Visual Search
Minimize Time to
Acquire/Detect
Fix / Assignment to TPL
Catalog Procedures

Track / Maintain PID
Target IAW Assets
Available/PTL/ROE
Engage
GP Employment / AS Timeline
PGM Employment / AS
Timeline
FF Employment / AS Timeline
Assess (BDA)
TPOD Usage
IFREP Passage
Threat Reactions
SEAD Usage

Plan. Squadron WTI/PTO works with squadron Intel to develop relevant scenario, Prioritized Target List (PTL) ROE, SPINS, and threats. Develop a plan to locate, ID, catalog, and kill enemy targets IAW PTL. Have a gameplan to defeat the threat system while meeting allowable risk standards. Ensure JMPS plan facilitates find and kill gameplan. Generate target area imagery, sensor profiles, EOTDA/TAWS data, and cockpit maps or updated tablet imagery and software that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief to target audience and ensure brief meets assigned training/mission objectives. Mission Rehearse most likely scenarios based on mission, weather, weapons, and threats. Wingman will brief tactical SAM and 3rd Generation MANPAD threat as assigned by IP.

Execution. Conduct at least two attacks IAW PTL target sets. AR section must locate targets, pass section attack brief, and facilitate target attacks within briefed allowable risk. RSEAD will be coordinated as required. Communicate IFREP to a simulated or actual C2 agency.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Search and locate PTL targets IAW plan and brief. Conduct at least two successful attacks on PTL target sets. Conduct IFREP to an actual or simulated MACCS agency.

Prerequisite. SSCAR-3200

Ordnance

Desired: TPOD, 2xMK-82/83, 1xJDAM, 1xLGB, 30 Flares, 30 Chaff.

Acceptable substitutes: 2xGP, 2xPGM, Forward Firing ordnance, Expendables.

Range Requirement. RSTD, HE, EXP, STRAFE, LSR, MOA acceptable for R, M

SSCAR-3300 1.5 180 B,R,M NS S 2 RNAWST

Goal. Introduce NS SCAR in a linked simulator.

Requirement

Plan / Brief	
Mission Planning	
Brief Preparation	
Execution	
Standardization	Visual Search
Admin Execution	Minimize Time to Acquire/Detect
Tac Admin Execution	Fix / Assignment to TPL
On Deck Setup	Catalog Procedures
Airborne Setup	Track / Maintain PID
FENCE Check Procedures	Target IAW Assets Available/TPL/ROE
Strike Coordination Execution	Engage
Deconfliction	GP Employment / AS Timeline
Minimize Time to Acquire/Detect	PGM Employment / AS Timeline
Minimize Time to Kill	FF Employment / AS Timeline
Engage IAW Assets Available/TPL/ROE	Assess (BDA)
Cataloging	TPOD Usage
Battlefield Handover	IFREP Passage
AR / AI Execution	Threat Reactions
Find	SEAD Usage
TPOD Usage	

Plan. Linked simulator. PUI flies as wingman. NSI/WTI will either fly as flight lead or instruct from the simulator console. If NSI/WTI instructs from the console a section lead shall fly as flight lead. Squadron WTI/PTO works with squadron Intel to develop relevant scenario, Prioritized Target List (PTL) ROE, SPINS, and threats. Develop a plan to locate, ID, catalogue, and kill enemy targets IAW PTL. Have a gameplan to defeat the threat system while meeting allowable risk standards. Ensure JMPS plan facilitates find and kill gameplan. Generate target area imagery, sensor profiles, EOTDA/TAWS data, and cockpit maps or updated tablet imagery and software that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief to target audience and ensure brief meets assigned training/mission objectives. Mission Rehearse most likely scenarios based on mission, weather, weapons, and threats.

Execution. Conduct at least two attacks IAW PTL target sets. Conduct at least one integrated attack between multiple striker sections. Conduct RSEAD with a notional SEAD asset in general support. SCAR must locate targets, pass SCAR attack brief, and facilitate target attacks within briefed allowable risk.

Debrief. The sortie will be debriefed using simulator DAQ. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Search and locate PTL targets IAW plan and brief. Conduct at least two successful attacks on PTL target sets. Conduct a SCAR BHO with a striker asset. Conduct IFREP to an actual or simulated MACCS agency. At least one integrated attack between multiple striker sections is required. SCAR shall locate targets, pass SCAR attack brief, and facilitate target attacks within briefed allowable risk. RSEAD shall be coordinated against a threat with notional SEAD asset in general support.

Prerequisite. NS-2603, SSCAR-3200.

Ordnance. TPOD, 2xLJDAM, 1xGBU-12, 1xLMAV, Expendables. Strikers will arrive with a mix of PGM and GP or Forward Firing ordnance.

External Syllabus Support. Linked simulator.

SCAR-3301 1.3 * B D A 2+ AV-8B

Goal. Conduct day SCAR.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Strike Coordination Execution
Deconfliction
Minimize Time to Acquire/Detect
Minimize Time to Kill
Engage IAW Assets Available/TPL/ROE
Cataloging
Battlefield Handover
AR / AI Execution
Find
TPOD Usage

Visual Search
Minimize Time to Acquire/Detect
Fix / Assignment to TPL
Catalog Procedures
Track / Maintain PID
Target IAW Assets Available/TPL/ROE
Engage
GP Employment / AS Timeline
PGM Employment / AS Timeline
FF Employment / AS Timeline
Assess (BDA)
TPOD Usage
IFREP Passage
Threat Reactions
SEAD Usage

Plan. Squadron WTI/PTO works with squadron Intel to develop relevant scenario, Prioritized Target List (PTL)), ROE, SPINS, and threats. Develop a plan to locate, ID, catalogue, and kill enemy targets IAW PTL. Have a gameplan to defeat the threat system while meeting allowable risk standards. Ensure JMPS plan facilitates find and kill gameplan. Generate target area imagery, sensor profiles, EOTDA/TAWS data, and cockpit maps or updated tablet imagery and software that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief to target audience and ensure brief meets assigned training/mission objectives. Mission Rehearse most likely scenarios based on mission, weather, weapons, and threats. Wingman will brief tactical SAM and 3rd Generation MANPAD threat as assigned by IP.

Execution. Conduct at least two attacks IAW PTL target sets. At least one integrated attack between multiple striker sections is desired. SCAR must locate targets, pass SCAR attack brief, and facilitate target attacks within briefed allowable risk. Coordinate RSEAD as required.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Search and locate PTL targets IAW plan and brief. Conduct at least two successful attacks on PTL target sets. Conduct a SCAR BHO with a striker asset. Conduct IFREP to a actual or simulated C2 agency. SCAR should conduct at least one integrated attack with striker section. SCAR shall locate targets, pass SCAR attack brief, and facilitate target attacks within briefed allowable risk. SCAR should coordinate RSEAD as required.

Prerequisite. SCAR-3201, SSCAR-3300.

Ordnance

Desired: TPOD, 2xMK-82/83, 1xJDAM, 1xLGB, 30 Flare, 30 Chaff.
Acceptable substitutes: 2xGP, 2xPGM, Forward Firing ordnance, Expendables.

Range Requirement. RSTD, HE, EXP, LSR, MOA acceptable for R,M codes.

External External Syllabus Support. Minimum of one section AR assets.

SCAR-3302 1.3 365 B,R,M NS A/S 2+ AV-8B/RNAWST

Goal. Conduct NS SCAR.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Strike Coordination Execution

Deconfliction

Minimize Time to Acquire/Detect

Minimize Time to Kill

Engage IAW Assets Available/TPL/ROE

Cataloging

Battlefield Handover

AR / AI Execution

Find

TPOD Usage

Visual Search

Minimize Time to Acquire/Detect

Fix / Assignment to TPL

Catalog Procedures

Track / Maintain PID

Target IAW Assets Available/TPL/ROE

Engage

GP Employment / AS Timeline

PGM Employment / AS Timeline

FF Employment / AS Timeline

Assess (BDA)

TPOD Usage

IFREP Passage

Threat Reactions

SEAD Usage

Plan. Squadron WTI/PTO works with squadron Intel to develop relevant scenario, Prioritized Target List (PTL) ROE, SPINS, and threats. Develop a plan to locate, ID, catalogue, and kill enemy targets IAW PTL. Have a gameplan to defeat the threat system while meeting allowable risk standards. Ensure JMPS plan facilitates find and kill gameplan. Ensure JMPS plan facilitates find and kill gameplan. Generate target area imagery, sensor profiles, EOTDA/TAWS data, and cockpit maps or updated tablet imagery and software that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Tailor brief to target audience and ensure brief meets assigned training/mission objectives. Mission Rehearse most likely scenarios based on mission, weather, weapons, and threats. Wingman will brief tactical SAM and 3rd Generation MANPAD threat as assigned by IP.

Execution. Conduct at least two attacks IAW PTL target sets. One striker section shall be of a different T/M/S. At least one integrated attack between multiple striker sections is desired. SCAR must locate targets, pass SCAR attack brief, and facilitate target attacks within briefed allowable risk. Coordinate RSEAD as required.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Search and locate PTL targets IAW plan and brief. Conduct at least two successful attacks on TPL target sets. Conduct a SCAR BHO with a striker asset. Conduct IFREP to a actual or simulated C2 agency. One striker section shall be of a different T/M/S. SCAR should conduct at least one integrated attack with striker section. SCAR shall locate targets, pass SCAR attack brief, and facilitate target attacks within briefed allowable risk. SCAR should coordinate RSEAD as required.

Prerequisite. SCAR-3301.

Ordnance

Desired: TPOD, 2xMK-82/83, 1xJDAM, 1xLGB, 30 Flare, 30 Chaff.

Acceptable substitutes: 2xGP, 2xPGM, Forward Firing ordnance, Expendables.

Range Requirement. RSTD, HE, EXP, LSR, MOA acceptable for R, M.

External Syllabus Support. Minimum of one section AR assets, should be of a different T/M/S if possible. Maintain POI may be conducted in the simulator via SSCAR-3300.

2.11.4 Strike (STK)

Purpose. Develop proficiency in strike execution during day and night missions at medium and low altitude in a medium threat surface-to-air environment with the possibility of an air threat.

General. A WTI, MC, or ACTI shall instruct SSTK-3400 and should instruct STK-3403. In addition, SSTK-3400 shall be executed in conjunction with the STK Planning Lab. A WTI or NSI shall instruct SSTK-3401 and STK-3402. A Div Lead shall instruct STK-3403. Basic and Refresh PUI shall be complete and current through the simulators in the Air-to-Air syllabus prior to commencing STK syllabus. Basic and Refresh PUI shall be complete and current with their Night Systems syllabus (NSQ) prior to commencing SSTK-3401.

Ground/Academic Training

Readings

Air NTTP 3-22.1-AV8B:

Review Chapter 3, Threat Countertactics.
Review Chapter 4, Air Interdiction.
Review Chapter 5, Suppression of Enemy Air Defenses.
Review Chapter 7 Air-to-Air Mission Planning.
Review Chapter 8 Air-to-Air Employment.
Review Appendix B, Standard Expendable Loads.
Review MAWTS-1 Mission Commander's Handbook.

Air NTTP 3-22.3-AV8B:

Review Chapter 2 Mission Planning.

AFTTP 3-1.Integrated Planning & Execution:

Review Chapter 4 Theater Command and Control.

AFTTP 3-3.Integrated Planning & Execution:

Review Chapter 2 Mission Planning Methodology
Review Chapter 3 Pre-Frag and Game Plan Design
Review Chapter 4 Running the Mission Planning Cell
Review Attachment 6 Checklists
Review Attachment 8 Rehearsal of Concept Drill
Review Attachment 11 Strike Planning

AFTTP 3-1.Shot Kill:

Review Chapter 1 Air-to-Air Shot Kill Criteria.

AFTTP 3-1.Threat Guide:

Review Chapter 1 Adversary Integrated Air Defense Systems.
Review Chapter 3 Adversary Early Warning and Air Surveillance Systems.
Review Chapter 5 Adversary Surface-to-Air Missile Threats.
Review Chapter 6 Adversary Fighter Aircraft and Armament.
Review Chapter 9 Adversary Air and Air Defense, Employment, Operations, and Training.
Review Chapter 11 Adversary Electronic Warfare.

ALSA MTTP Air Control Communication:

Review Chapter 2 Tactical Administration (TACADMIN) Communication
Review Chapter 3 Force Packaging and Direct Air Support Communication
Review Chapter 6 Air to Surface Communication

Lectures. Receive the following AV-8B courseware lectures:

ASTK-3040, Strike Planning Lab

SSTK-3400	1.5	*	B	D	S	2+ RNAWST/2+ DMRT
------------------	------------	----------	----------	----------	----------	--------------------------

Goal. Under the guidance of a WTI, MC, or ACTI, plan and execute a division strike with an integrated RF threat and the possibility of an air threat.

Requirement

Plan / Brief

- Mission Planning
- Brief Preparation

Execution

- Standardization
 - Admin Execution
 - Tac Admin Execution
 - On Deck Setup
 - Airborne Setup
 - FENCE Check Procedures
- Mission Execution
 - Target Acquisition
 - Target Area Tactics
 - Strike Timeline Adherence
 - Weapons Employment
 - AS Threat Reactions
 - AA Threat Reactions
 - SEAD Integration
 - IFREP

Standardized Comm

Plan. Linked simulator. Squadron WTI/PTO or MC works with squadron Intel to create a relevant scenario to strike a minimum of (12) stationary targets that are defended by an integrated surface-to-air defense network. Threat scenario will include range known strategic and range unknown tactical SAMS and ADA, and a defined TOT. WTI or MC leads PUI through an AI Planning Lab to develop a plan which includes a detailed air-to-surface and threat countertactics gameplan to include the integration of SEAD into the gameplan (EW/HARM/Cyber). JMEMs of the target, to ensure desired Pd is required. The Air-to-Air threat should not be the primary focus of the sortie; however, the scenario should include how the division plans to mitigate the threat; specifically: 1) The airborne threat aircraft are mitigated by support OCA or 2) The alert/stripe threat aircraft are mitigated by timing. The division should be briefed and prepared to defend itself from a leaker or pop-up group using spin, slide, and scram criteria. Combat scenario, no training rules required.

Brief. Review route, no-go criteria, air-to-surface timeline, sensor optimization and TCT gameplan. The focus of the brief should be the mission rehearsal. Brief and plan must include how the section is going to handle the air threat should there be a leaker/pop-up section.

Execution. Conduct one STK ingress, attack and egress.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize Simulator DAQ video if available. Validate all weapons releases. Review all decision points. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD, Map, and Radar for appropriate systems management.

Performance Standard. Execute tactics IAW Air NTPP. Locate correct targets and achieve briefed (JWS derived) level of destruction criteria via a valid weapons release. Execute briefed threat countertactics IAW allowable risk. Manage strike timeline and maintain SA to go / no-go criteria as well as critical supporting asset actions. Maintain SA to air threat and employ as required. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to the MACCS.

Prerequisite. Complete ground/academic training, air-to-surface stage complete, SAA-2803, ASTK-3040.

Ordnance. 4-6xGBU-38 on DITER, Tanks, ALQ-164 or TPOD optional, AIM-9, Expendables.

SSTK-3401 1.5 365 B,R NS S 2+ RNAWST

Goal. Introduce night low altitude strike with an integrated RF threat with the possibility of an air threat.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

Target Acquisition

Target Area Tactics

Strike Timeline Adherence

Weapons Employment

AS Threat Reactions

AA Threat Reactions

SEAD Integration

IFREP

Standardized Comm

Plan. Squadron WTI/PTO works with squadron Intel to create a relevant scenario to strike a stationary target that is defended by an integrated surface-to-air defense network. Scenario will drive a low altitude gameplan through either weather or threat mitigation. Threat scenario will include range known strategic and range unknown tactical SAMS and ADA, as well as a defined TOT. PUI will develop a plan which includes a detailed threat countertactics gameplan and air-to-surface timeline. JMEMs of the target, to ensure desired Pd is required. The Air-to-Air threat should not be the primary focus of the sortie; however, the scenario should include how the section plans to mitigate the threat; specifically: 1) The airborne threat aircraft are mitigated by support OCA or 2) The alert/strip threat aircraft are mitigated by timing. The division should be briefed and prepared to defend itself from a leaker or pop-up group using HSGP, slide, and scram criteria. Combat scenario, no training rules required.

Brief. Review route, no-go criteria, air-to-surface timeline, sensor optimization and TCT gameplan. Review LAT ROC and MCT and TCT. The focus of the brief should be the mission rehearsal.

Execution. Conduct one low altitude AI ingress, attack and egress at comfort level.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize Simulator DAQ video if available. Validate all weapons releases. Review all decision points. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD, Map, and Radar for appropriate systems management.

Execution. Conduct a low altitude strike with an RF SAM threat at night.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JWS derived) level of destruction criteria via a valid weapons release. Execute briefed threat countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to the MACCS. Maintain a minimum of 500-foot clearance of all obstructions HLL and 1000-foot clearance of all obstructions LLL IAW CNAF M-3710.7. Adhere to LAT ROC. Proficient cockpit management including TCT and MCT.

Prerequisite. LAT-2401, NS-2603, SSTK-3400.

Ordinance. Per Planning Scenario, AIM-9, SEL BEST, ALQ-164 or TPOD, Expendables.

STK-3402 1.3 180 B,R,M NS A/S 2 AV-8B/RNAWST

Goal. Review night section strike at low altitude with RF Threat. Initial/Refresh events shall be in the aircraft, Maintain events may be completed with linked simulators.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

Target Acquisition

Target Area Tactics

Strike Timeline Adherence

Weapons Employment

AS Threat Reactions

AA Threat Reactions

SEAD Integration

IFREP

Standardized Comm

Plan. Squadron WTI/PTO works with squadron Intel to create a relevant scenario to strike a stationary target that is defended by a surface-to-air threat. Threat scenario will include range known strategic and range unknown tactical SAMS and ADA, as well as a defined TOT. Scenario will drive a low altitude gameplan through either weather or threat mitigation. PUI will develop a plan which includes a detailed air-to-surface and threat countertactics gameplan. JMEMs of the target, to ensure desired Pd is required.

Brief. Review route, no-go criteria, air-to-surface timeline, sensor optimization and TCT gameplan. Review LAT ROC and MCT and TCT. The focus of the brief should be the mission rehearsal.

Execution. Conduct one STK ingress, attack and egress at night.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validate all weapons releases. Review all decision points. Mass debrief as required; TACTS debrief desired, whiteboard required if not available. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD/Radar/TPOD for appropriate systems management. Review comm.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JWS derived) level of destruction criteria via a valid weapons release. Execute briefed threat countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to the MACCS. Maintain a minimum of 500-foot clearance of all obstructions HLL and 1000-foot clearance of all obstructions LLL IAW CNAF M-3710.7. Adhere to LAT ROC. Proficient cockpit management including TCT and MCT.

Prerequisite. SSTK-3401.

Ordinance

Desired: TPOD or ALQ-164, SCL BEST, TCTS pod, 60 Chaff and 30 Flares.

Acceptable substitutes: SCL BEST, Expendables.

Range Requirement. RSTD, HE, EXP, LSR.

External syllabus support. TACTS facility, SAM threat emitters.

STK-3403 1.3 180 B,R,M (N) A 3+ AV-8B

Goal. Participate in a division strike, day or night, against an integrated RF threat with an air threat.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
Target Acquisition
Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reactions
SEAD Integration
IFREP

Standardized Comm

Plan. Squadron WTI/PTO works with squadron Intel to create a relevant simulated medium/high-risk scenario to strike stationary targets that are defended by an integrated surface-to-air threat network. Threat scenario will include range known strategic and range unknown tactical SAMS and ADA and a defined TOT. PUI will develop a plan which includes a detailed air-to-surface and threat countertactics game plan. JMEMs of the target, to ensure desired Pd is required.

Brief. Threat brief, GCI brief, RTO brief, Tactical Brief. Review route, no-go criteria, air-to-surface timeline, sensor optimization and TCT gameplan. Required briefing items include division deconfliction, departure avoidance, and training rules. The focus of the brief should be the mission rehearsal. The Air-to-Air threat should not be the primary focus of the sortie; however, the scenario should include how the division plans to mitigate the threat; specifically: 1) The airborne threat aircraft are mitigated by support OCA or 2) The alert/strip threat aircraft are mitigated by timing. The division should be briefed and prepared to defend itself from a leaker or pop-up group using IR weapons while flowing cold.

Execution. Conduct one low or medium altitude division STK ingress, attack and egress. The division shall be engaged by red air during some portion of the strike (under the direction/instruction of the RTO).

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validate all weapons releases. Review all decision points. Mass debrief as required; TACTS debrief desired, whiteboard required if not available. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD/Radar/TPOD for appropriate systems management. Review comm.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JWS derived) level of destruction criteria via a valid weapons release. Execute briefed threat countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to the MACCS. Maintain SA to air threat and employ A/A weapons as required.

Prerequisite. STK-3400. STK-3402 if conducted Low Altitude. NS-2603~NS.

Ordnance

Desired: TPOD or ALQ-164, 2xGBU-32 or 2-6xGBU-38, CATM-9, TCTS pod, 30 Chaff and 30 Flares.
Acceptable substitutes: 2xPGM/GP (HE/Inert), CATM-9, TCTS pod, Expendables.

Required: CATM-9, TCTS pod, Expendables.

Range Requirement. RSTD, HE, EXP, LSR.

External syllabus support. Minimum of 1x radar-equipped adversary. Dissimilar preferred. Once initial code complete, maintain may be performed without actual adversary if required. GCI, and blue and red RTOs if red air present. WTI, MC, or ACTI (if not ACMQ) shall be in the flight per non-qualified wingman or section lead. DL is acceptable IF WTI/MC required for RTO. TACTS. SAM threat emitters. 1+SEAD platform (F/A-18, F-16, etc) desired.

2.12 CORE PLUS PHASE

2.12.1 Core Plus Training

Purpose. Train for large scale integrated missions having unique mission tasking and introduce skills or missions having a low probability of execution or are theatre specific.

General. Instructor supervision requirements are stipulated specifically for each stage.

2.13 CORE PLUS STAGES

2.13.1 Day Field Carrier Landing Practice (DAY) (FCLP (D))

Purpose. Review FCLP(D) qualification.

General

An LSO shall instruct all events IAW V/STOL / LSO NATOPS.
All events shall be conducted at a simulated L-Class ship equipped with an optical landing system.
Perform takeoffs and landings as required by V/STOL / LSO NATOPS.
Completion of this stage constitutes FCLP(D) qualification.

Ground/Academic Training

Readings

Review V/STOL Shipboard and LSO NATOPS Manual.
Review LHA/LHD/MCS NATOPS Manual.

Lectures. Receive the following AV-8B courseware lectures:

AFCLP-4000, V/STOL / LSO NATOPS, Part 1.
AFCLP-4001, V/STOL / LSO NATOPS, Part 2.
AFCLP-4002, LHA/LHD/MCS NATOPS.
AFCLP-4003, DAY FCLP.

SFCLP-4100	1.5	*	B,R	D	S	RNAWST/DMRT
------------	-----	---	-----	---	---	-------------

Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Landing 2
Admin Execution	Landing 3
Recovery	Landing 4
Approach 1	Landing 5
Approach 2	Landing 6
Approach 3	Landing 7
Approach 4	Landing 8
Landing 1	

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. Complete ground/academic training, FAM-2101.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO.

FCLP-4101 2.0 365 B,R,M D A 1 AV-8B

Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Landing 2
Admin Execution	Landing 3
Recovery	Landing 4
Approach 1	Landing 5
Approach 2	Landing 6
Approach 3	Landing 7
Approach 4	Landing 8
Landing 1	

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SFCLP-4100.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO, FCLP facility.

2.13.2 Night Field Carrier Landing Practice (NIGHT) (FCLP (N))

Purpose. Complete FCLP(N) qualification.

General

An LSO shall instruct all events IAW V/STOL / LSO NATOPS.
All events shall be conducted at a simulated L-Class ship equipped with an optical landing system.
Perform takeoffs and landings as required by V/STOL / LSO NATOPS.
Completion of this stage constitutes FCLP(N) qualification.

Ground/Academic Training

Lectures. Receive the following AV-8B courseware lectures:
AFCLP-4004, Night FCLP, Unaided.
AFCLP-4005, Night FCLP, Aided.

SFCLP-4102 1.5 * B,R N* S RNAWST/DMRT

Goal. Introduce night unaided FCLP.

Requirement. Perform night (unaided) FCLP normal and emergency procedures to a simulated L-Class ship.
Perform Case 3 recoveries.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Recovery
Approach 1
Approach 2
Approach 3
Approach 4
Landing 1

Landing 2
Landing 3
Landing 4
Landing 5
Landing 6
Landing 7
Landing 8

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. Complete ground/academic training, SFCLP-4100.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO.

FCLP-4103 2.0 365 B,R,M N* A 1 AV-8B

Goal. Introduce night unaided FCLP.

Requirement. Perform night (unaided) FCLP normal and emergency procedures to a simulated L-Class ship. Perform Case 3 recoveries.

Plan / Brief

Mission Planning Brief Preparation

Execution

Standardization
Admin Execution
Recovery
Approach 1
Approach 2
Approach 3
Approach 4
Landing 1

Landing 2
Landing 3
Landing 4
Landing 5
Landing 6
Landing 7
Landing 8

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. FCLP 4101, SFCLP-4102.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO, FCLP facility.

SFCLP-4104	1.5	*	B,R	NS	S	RNAWST
-------------------	------------	----------	------------	-----------	----------	---------------

Goal. Introduce night aided FCLP.

Requirement. Perform night (aided) FCLP normal and emergency procedures to a simulated L-Class ship. Perform Case 1 and Case 3 recoveries.

Plan / Brief

Mission Planning Brief Preparation

Execution

Standardization

Admin Execution

Recovery	Landing 3
Approach 1	Landing 4
Approach 2	Landing 5
Approach 3	Landing 6
Approach 4	Landing 7
Landing 1	Landing 8
Landing 2	

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SFCLP-4102, NS-2603.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO.

FCLP-4105 2.0 365 B,R,M NS A 1 AV-8B

Goal. Introduce night aided FCLP.

Requirement. Perform night (aided) FCLP normal and emergency procedures to a simulated L-Class ship. Perform Case 1 and Case 3 recoveries.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Landing 2
Admin Execution	Landing 3
Recovery	Landing 4
Approach 1	Landing 5
Approach 2	Landing 6
Approach 3	Landing 7
Approach 4	Landing 8
Landing 1	

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. FCLP-4103, SFCLP-4104.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO, NVD-compatible FCLP facility.

2.13.3 Day Carrier Qualification (CQ(D))

Purpose. Complete CQ(D) qualification.

General

An LSO shall instruct all events IAW V/STOL / LSO NATOPS.
Perform takeoffs and landings as required by V/STOL / LSO NATOPS.
Completion of this stage constitutes CQ(D) qualification.

Ground/Academic Training. Receive the following AV-8B courseware lecture: ACQD-4010, Day CQ.

SCQ-4130 1.5 * B,R D S RNAWST/DMRT

Goal. Perform day CQ.

Requirement. Perform day CQ normal and emergency procedures to a simulated L-Class ship. Introduce Case I, II, and III recoveries. Execute LH-1, LH-2, and LH-3 approaches using CCA, TACAN, and ICLS on final.

Plan / Brief	Mission Planning	
	Brief Preparation	
Execution	Standardization	Landing 2
	Admin Execution	Landing 3
	Recovery	Landing 4
	Approach 1	Landing 5
	Approach 2	Landing 6
	Approach 3	Landing 7
	Approach 4	Landing 8
	Landing 1	

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. Complete ground/academic training, SFCLP-4100.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO.

CQ-4131 3.0 365 B,R,M D A 1 AV-8B

Goal. Complete day CQ qualification.

Requirement. Perform day CQ normal procedures to an L-Class ship. Perform required landings per V/STOL Shipboard and LSO NATOPS.

Plan / Brief	Mission Planning	
	Brief Preparation	
Execution	Standardization	Landing 2
	Admin Execution	Landing 3
	Recovery	Landing 4
	Approach 1	Landing 5
	Approach 2	Landing 6
	Approach 3	Landing 7
	Approach 4	Landing 8
	Landing 1	

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL Shipboard and LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SCQ-4130, FCLP-4101.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO, CQ capable shipping.

CQ-4132 1.3 365 B,R,M (N) A 1 AV-8B

Goal. Introduce shipboard instrument recoveries.

Requirement. Perform normal instrument recovery procedures to an L-Class ship. Perform a minimum of 2 CCA and 2 TACAN approaches. Approaches may be performed to a low approach or shipboard landing.

Plan / Brief	
	Mission Planning
	Brief Preparation
Execution	
	Standardization
	Admin Execution
	Recovery
	Approach 1
	Approach 2
	Approach 3
	Approach 4
	Landing 1
	Landing 2
	Landing 3
	Landing 4
	Landing 5
	Landing 6
	Landing 7
	Landing 8

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL Shipboard and LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. CQ-4130.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO, CQ capable shipping.

2.13.4 Night Carrier Qualification (CQ(N))

Purpose. Complete CQ(N) qualification.

General

An LSO shall instruct all events IAW V/STOL / LSO NATOPS.
Perform takeoffs and landings as required by V/STOL / LSO NATOPS.
Completion of this stage constitutes CQ(N) qualification.

Ground/Academic Training. Review the following AV-8B courseware lecture: ACQN-4011, Night CQ.

SCQ-4133 **1.5 * **B,R** **N*** **S** **RNAWST/DMRT****

Goal. Perform night unaided CQ.

Requirement. Perform night (unaided) CQ normal and emergency procedures to a simulated L-Class ship. Perform Case 3 recoveries. Perform CCA and ICLS approaches.

Plan / Brief	
	Mission Planning
	Brief Preparation
Execution	
	Standardization
	Admin Execution
	Recovery
	Approach 1
	Approach 2
	Approach 3
	Approach 4
	Landing 1
	Landing 2
	Landing 3
	Landing 4
	Landing 5
	Landing 6
	Landing 7
	Landing 8

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. Complete ground/academic training. SFCLP-4104.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO.

SCQ-4134 1.5 * B,R NS S RNAWST

Goal. Perform night aided CQ Case 1 and Case 3.

Requirement. Perform night (aided) CQ normal and emergency procedures to a simulated L-Class ship.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Landing 2

Admin Execution

Landing 3

Recovery

Landing 4

Approach 1

Landing 5

Approach 2

Landing 6

Approach 3

Landing 7

Approach 4

Landing 8

Landing 1

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SCQ-4133.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO.

CQ-4135 2.0 365 B,R,M N A 1 AV-8B

Goal. Perform night aided and unaided CQ from an instrument approach.

Requirement. Perform night (unaided) CQ normal procedures to an L-Class ship and night (aided) CQ normal procedures from an instrument approach to an L-Class ship IAW V/STOL Shipboard / LSO NATOPS.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Landing 2

Admin Execution

Landing 3

Recovery

Landing 4

Approach 1

Landing 5

Approach 2

Landing 6

Approach 3

Landing 7

Approach 4

Landing 8

Landing 1

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. FCLP-4105, SCQ-4134.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO, CQ capable shipping.

CQ-4136 2.0 365 B,R,M NS A 1 AV-8B

Goal. Perform night aided Case 1 CQ.

Requirement. Perform aided CQ normal procedures to an L-Class ship and night from the case 1 pattern to an L-Class ship IAW V/STOL Shipboard / LSO NATOPS.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Landing 2
Admin Execution	Landing 3
Recovery	Landing 4
Approach 1	Landing 5
Approach 2	Landing 6
Approach 3	Landing 7
Approach 4	Landing 8
Landing 1	

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. FCLP-4105, SCQ-4134.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSO, CQ capable shipping.

2.13.5 Forward Operating Base Operations (FOB)

Purpose. Complete FOB qualification (ISO Shore-Based Expeditionary Restricted Sites).

General

An LSS shall instruct all events.
Completion of this stage constitutes FOB(N) qualification.

Ground/Academic Training

Readings. Review the following:
NAVAIR 00-80-T-115, Expeditionary Airfields.
Marine Corps Air Stations NATOPS Manual.

Lectures. Review the following AV-8B courseware lecture:
AFOB-4015, Forward Base operations.

SFOB-4160 1.0 * B,R D S RNAWST/DMRT

Goal. Practice day FOB operations.

Requirement. Perform V/STOL to an air facility. Instruction shall include FOD avoidance procedures, emergencies including RPM rollback on STO, abort and ejection decisions, water failure during approach, and flap failure STO. A minimum of 6 takeoffs and landings are required for completion.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Landing 1
Admin Execution	Landing 2

Landing 3
Landing 4
Landing 5

Landing 6
Landing 7
Landing 8

Performance Standard. Execute all procedures IAW NATOPS. Achieve an average pass grade of 2.5.

Prerequisite. Complete ground/academic training, FAM-2101.

Range Requirement. Reference Range Support Matrix.

External syllabus support. LSS.

FOB-4161 2.0 365 B,R,M D A 1 AV-8B

Goal. Practice day FOB operations.

Requirement. Perform V/STOL to an actual or simulated air facility (100 feet by 3,000 feet maximum landing area). Instruction shall emphasize FOD avoidance procedures, line-up control and accurate touchdown point, and ground speed. A minimum of 4 takeoffs and landings are required for completion.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Landing 4
Admin Execution	Landing 5
Landing 1	Landing 6
Landing 2	Landing 7
Landing 3	Landing 8

Performance Standard. Execute all procedures IAW NATOPS. Achieve an average pass grade of 2.5.

Prerequisite. SFOB-4160.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. LSS; Air Facility or Road.

SFOB-4162 1.0 * B,R NS S RNAWST

Goal. Practice FOB operations at night.

Requirement. Perform V/STOL to an air facility at night. Instruction shall include landing area lighting, FOD avoidance procedures, and emergency procedures. A minimum of 6 takeoffs and landings are required for completion.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization	Landing 4
Admin Execution	Landing 5
Landing 1	Landing 6
Landing 2	Landing 7
Landing 3	Landing 8

Performance Standard. Execute all procedures IAW NATOPS and Air NTP. Achieve an average pass grade of 2.5.

Prerequisite. NS-2603, SFOB-4160.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. LSS.

FOB-4163 2.0 365 B,R,M NS A 1 AV-8B

Goal. Practice FOB operations at night.

Requirement. Perform V/STOL to an actual or simulated air facility (100 feet by 3,000 feet maximum landing area). Instruction shall emphasize FOD avoidance procedures, line-up control and accurate touch down point, and ground speed. A minimum of 4 takeoffs and landings are required for completion.

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Landing 1

Landing 2

Landing 3

Landing 4

Landing 5

Landing 6

Landing 7

Landing 8

Performance Standard. Execute all procedures IAW NATOPS and Air NTTP. Achieve an average pass grade of 2.5.

Prerequisite. SFOB-4161,4162.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. LSS; Air Facility or Road.

2.13.7 Night Systems Low Altitude Tactics (NS LAT)

Purpose. Complete NS LAT qualification(NSLATQ).

General

All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Rules of Conduct.

All mission planning and flight briefs shall include BAM/BASH data and current route obstructions and consideration (ECHUM).

Prerequisites for NS LAT training are NS QUAL and LAT QUAL.

A NSLATI shall instruct all Basic and Refresh POI events and ground/academic training.

Ground/Academic Training.

Receive the following MAWTS-1 Common Courseware lecture:
ANSLAT-4030, NS LAT Considerations.

SNS LAT-4300 1.5 * B NS S RNAWST

Goal. Introduce basic and advanced NS LAT.

Requirement

Plan / Brief

Mission Planning

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Basic and Advanced LAT
Execution

Straight and Level
Turns
Ridgeline Crossing
Terrain Masking
Climb to Cope
Vertical Jink
Straight Oblique Jink
Turning Oblique Jink
Reverse Oblique Jink

Section Turns
LAT TCT Execution
Notch
Level S
Hot Weave
Cold Weave
Guns Jink
Deck Transition
Target Attack

Plan. Develop a plan for a NS LAT sortie that includes basic and advanced LAT maneuvers at night in a mountainous database.

Brief. Brief shall emphasize terrain clearance tasks and MCT; efficient NS scan techniques that enable aerodynamic, vector, and altitude control; and adherence to the 10-degree rule, the 50-percent rule, and dive recovery rules. Emphasize environmental effects and the use of NVDs in the low altitude environment.

Execution. Perform basic and advanced LAT maneuvers on a closed LAT circuit at night in a mountainous database. Demonstrate low angle, high illumination NVD problems. Practice straight and level flight, level turns, ridgeline crossings, terrain masking, and climb-to-cope. Practice 2 transitions (1 can be post test KIO) to LAT, 2 SOJ, 2 TOJ, 2 ROJ, and 2 VJ.

Debrief. Utilize DAQ video if available. Review adherence to procedures and LAT ROC. Review aircraft parameters to include altitude, velocity vector and airspeed control. Review adherence to communication standards and correct execution of maneuvers.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Demonstrate proficient cockpit management including terrain clearance tasks and MCT.

Prerequisite. Complete ground/academic training. LAT-2401, NS-2603.

Ordinance. None.

SNSLAT-4301 1.5 365 B,R,M NS S RNAWST

Goal. Review basic and advanced NS LAT. Introduce target attacks and threat countertactics in the LAT environment.

Requirement

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Basic and Advanced LAT
Execution
Straight and Level
Turns
Ridgeline Crossing
Terrain Masking
Climb to Cope

Vertical Jink
Straight Oblique Jink
Turning Oblique Jink
Reverse Oblique Jink
Section Turns
LAT TCT Execution
Notch
Level S
Hot Weave
Cold Weave
Guns Jink
Deck Transition
Target Attack

Plan. Develop a plan for a NS LAT sortie that includes basic and advanced LAT maneuvers, threat countertactics against range known and range unknown SAM and ADA threats and low altitude target attacks (pull-push and pop attacks) in a mountainous database.

Brief. Brief shall emphasize terrain clearance tasks and MCT while executing threat countertactics and target attacks. Deconfliction contracts during threat countertactics and target attacks shall be discussed. Emphasize scan for techniques for target acquisition using visual cues as well as the TPOD.

Execution. Perform all basic and advanced LAT maneuvers, threat countertactics against range known and range unknown RF and ADA threats. Perform a minimum of two target attacks, one attack shall be from a pop-up profile and one attack shall be from a pull-push profile.

Debrief. Utilize DAQ video if available. Review adherence to procedures and LAT ROC. Review aircraft parameters to include altitude, velocity vector and airspeed control. Review adherence to TCT game plan and target attacks.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Execute briefed air-to-surface timeline. Adhere to surface-to-air threat countertactics gameplan. Valid weapon release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. NS LAT-4300

Ordinance. 4xMK-82 HD, SEL Best.

NSLAT-4302 1.3 365 B,R,M NS A 2 AV-8B

Goal. Introduce NS LAT.

Requirement

Plan. Develop a plan for a NS LAT sortie that includes basic and advanced LAT.

Brief. Instruction shall emphasize terrain clearance tasks, MCT and sensor management.

Execution. As a chased aircraft, perform basic and advanced LAT procedures at night on a closed LAT circuit.

Debrief. Conduct HUD debrief. Review adherence to procedures and LAT ROC. Review aircraft parameters to include altitude, velocity vector and airspeed control. Review adherence to game plan, and correct execution of maneuvers.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Demonstrate proficient cockpit management including terrain clearance tasks and MCT.

Prerequisite. SNSLAT-4301.

Ordinance. TPOD.

Range Requirement. RSTD.

NSLAT-4303 1.3 365 B NS A 2 AV-8B

Goal. Review NS LAT in a section and introduce threat countertactics at low altitude at night.

Requirement. Conduct a section LAT flight. Practice section threat countertactics at low altitude. Instruction shall emphasize TCT and MCT, attack geometry, mutual support, and standardized communications.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution

On Deck Setup
Airborne Setup
FENCE Check Procedures

Basic and Advanced LAT
Execution
Straight and Level
Turns
Ridgeline Crossing
Terrain Masking
Climb to Cope
Vertical Jink
Straight Oblique Jink
Turning Oblique Jink

Reverse Oblique Jink
Section Turns
LAT TCT Execution
Notch
Level S
Hot Weave
Cold Weave
Guns Jink
Deck Transition
Target Attack

Plan. Develop a plan for a section NS LAT sortie that includes threat countertactics against range known and unknown RF and ADA threats. Threat countertactics should be performed as a chased aircraft.

Brief. Brief shall emphasize scan, terrain clearance tasks, and MCT while executing threat countertactics.

Execution. As a chased aircraft, execute section threat countertactics to include lean, notch, guns jink, and weaves against range-known and range-unknown RF SAM and ADA threats. As a wingman, review NS LAT in a section.

Debrief. Conduct HUD debrief. Review adherence to procedures and LAT ROC. Review adherence to threat countertactics game plan, and correct execution of maneuvers.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Execute briefed air-to-surface timeline. Adhere to surface-to-air threat countertactics game plan. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. NSLAT-4302.

Ordinance.

Desired: TPOD, 30 flare (should be loaded in bottom buckets), 30 chaff.

Acceptable Substitutes: 4xGP HD, expendables.

Range Requirement. RSTD, EXP.

NSLAT-4304 1.3 365 B,R,M NS A 2 AV-8B

Goal. Introduce target area tactics and review threat countertactics at low altitude at night in a section.

Requirement. Execute a minimum of 2 target attacks at low altitude. Practice section threat countertactics at low altitude. Instruction shall emphasize scan and MCT, attack geometry, mutual support, target acquisition, and standardized communications.

Plan / Brief

Mission Planning
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Basic and Advanced LAT
Execution
Straight and Level
Turns
Ridgeline Crossing
Terrain Masking
Climb to Cope

Vertical Jink
Straight Oblique Jink
Turning Oblique Jink
Reverse Oblique Jink
Section Turns
LAT TCT Execution
Notch
Level S
Hot Weave
Cold Weave
Guns Jink
Deck Transition
Target Attack

Plan. Develop a plan for a section NS LAT sortie that includes 2 target attacks and threat countertactics against range known and unknown RF and ADA threats.

Brief. Brief shall emphasize terrain clearance tasks and MCT while executing threat countertactics and target attacks. Deconfliction contracts during threat countertactics and target attacks shall be discussed. Emphasize scan and techniques for target acquisition using visual cues as well as the TPOD.

Execution. As a wingman execute section threat countertactics to include guns jink, and weaves against range-known and range-unknown RF SAM and ADA threats. Conduct 2 target attacks.

Debrief. Conduct HUD debrief. Review adherence to procedures and LAT ROC. Review adherence to threat countertactics game plan, and correct execution of maneuvers. Review target attack parameters and correct off target maneuver.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Execute briefed air-to-surface timeline. Adhere to surface-to-air threat countertactics game plan. Valid weapon release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. NSLAT-4303.

Ordnance.

Desired: TPOD, 4xMK-82 HD, 30 flare (should be loaded in bottom buckets), 30 chaff.

Acceptable Substitutes: 4xGP HD, expendables.

Range Requirement. RSTD, EXP, HE.

2.13.8 Active Air Defense (AAD)

Purpose. The Active Air Defense phase is intended to introduce and develop Air-to-Air proficiency against advanced threat capabilities and maneuvering adversaries. In conjunction with the Air Defense Flight Lead Syllabus, it presents a linear and coherent manner in which to develop the aforementioned skills. At the conclusion of the AAD phase, AV-8B pilots should be comfortable and competent -2 and -4 flight members in either a 2vX or 4vX scenario.

General

All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual ACM Rules of Conduct.

An AV-8B ACTI or WTI shall instruct all Basic and Refresh POI events.

An AV-8B ADFL may lead all Maintain POI events.

Wingmen must be ACM qualified.

Dissimilar, RADAR equipped adversaries are preferred, but not required.

AAD-4402 may be maintained in the simulator or DMRT.

Ground/Academic Training

Required Readings

ALSA Air Control Communications

Review Chapter 2, Tactical Administration Communications

Review Chapter 4, Air-to-Air Communication Fundamentals

Review Chapter 5, Air-to-Air Intercept Communication

Air NTTP 3-22.1-AV8B

Review Chapter 7, Air-to-Air Mission Planning.

Review Chapter 8, Air-to-Air Employment.

Air NTTP 3-22.7-AV8B

Review Appendix C, Shot Validation and RTO Procedures.

NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual
Review ACM Rules of Conduct.

AFTTP 3-1. Shot Kill

Review Chapter 2, Debrief and Range Training Officer/Non-Range Training Officer Procedures.

AFTTP 3-3. Integrated Planning & Employment

Review Chapter 5: Section II: Air-to-Air/Air-to-Ground Criteria and Rules-of-Engagement.

Review Chapter 5: Section III: Air-to-Air.

TOPGUN Manual

Review Threat Levels for Adversary Employment.

Lectures

Review the following AV-8B courseware lectures

AAAD-4040, AV-8B Air-to-Air Employment (MAWTS-1 ASP)

SAAD-4400 1.5 * B (N) S 2+ RNAWST/2+DMRT

Goal. Introduce HSGP against maneuvering adversaries.

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardization
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSPG Timeline Knowledge

Execution

Standardization
Flight Leadership
Admin Execution
Tac Admin Execution
Mission Execution
CAP Setup/Maintenance
Meld Mechanics
Sort Mechanics
Valid Weapons Employment
Shot and Post-Shot Mechanics
Flow Decision-Making

Merge Mechanics
VID Mechanics
Actions at DR
Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Expendables Usage
C3 / AIC Integration
Training Rule Adherence
Fox Comm
Shot Status Comm

Plan. Linked simulator. ACTI or ADFL, with an ACTI at the console, may act as flight lead. Utilize squadron ACTI, PTO and S-2 to develop ROE and adversary presentations based upon AFTTP 3-1 Threat Guide. ROE should provide for a hostile declaration NLT than sort range. Presentations shall include sweeper (SAR-1) and striker (IR-2 or IR-3) profiles. The sweeper section will demonstrate the following profiles, at a minimum, during the sortie: be above 30,000 MSL, airspeed above 0.9 Mach, mutual crank, defensive maneuver SR+5. The striker section will demonstrate the following profiles, at a minimum, during the sortie: descend below Radar Coverage (nominally 5,000' AGL), lean away from sweepers, and conduct a deception maneuver. Sortie should be conducted as line training. Exercise control should be Single Shot Employment with Real Time RTO Assessment.

Brief. Observe a GCI, fighter, and red air brief conducted by ACTI. GCI brief may be concurrent with fighter brief. Review admin, TACADMIN, and blue and red timelines. Focus points should include area sanitization, flow

decision points, RADAR mechanics, weapons employment, communications, threat countertactics, and section engaged maneuvering. Mandatory briefing points include departure prevention, training rules, and deconfliction.

Execution. Conduct a minimum of four intercepts as a wingman. Demonstrate proficiency of the basic air-to-air timeline. Demonstrate the ability to sort and communicate shot contracts. Perform both short skate and banzai, otherwise incomplete.

Debrief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validate shots. Utilize simulator DAQ video and AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction and fighter scrub. Debrief should focus on: RADAR mechanics, weapons employment, flow decision points, intercept geometries, communications, and TCT.

Performance Standard. Adhere to ACM training rules. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of geometry and timeline IAW HSGP. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP.

Training Objectives.

Detect, Shoot, and Kill all Factor Groups.

Valid A/A Weapons Employment

S/A Enhancing Communications IAW ALSA and ACC

TCT and Expendable Usage IAW Air NTTP

Prerequisite. Academics, AA stage complete.

Ordnance. 2xAIM-120, 2xAIM-9, SEL Best.

External Syllabus Support. GCI.

SAAD-4401 1.5 365 B,R,M (N) S 2+ RNAWST/2+DMRT

Goal. Introduce Section DCA

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardizaion
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSGP Timeline Knowledge

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
CAP Setup/Maintenance
Meld Mechanics
Sort Mechanics
Valid Weapons Employment
Shot and Post-Shot Mechanics
Flow Decision-Making

Merge Mechanics
VID Mechanics
Actions at DR
Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Expendables Usage
C3 / AIC Integration
Training Rule Adherence
Fox Comm
Shot Status Comm

Plan. Linked simulator. In a missionized simulator, defend an asset for 30 minutes against level II+ maneuvering adversaries. Utilize squadron S-2 and PTO to develop a scenario based upon a pre-briefed threat country. Utilize the concepts outlined in the ANTTTP Air-to-Air Planning Chapter. SM-2 and Ship-based capabilities may be

incorporated, but fighters must be driven to commit. Conduct a minimum of 4 engagements against sortable and non-sortable groups. One engagement must be a VID. The sortie should incorporate increasing complexity and allowable risk with a maximum of 2 coordinated groups. The picture may incorporate white and red players. Groups will not split. SAR-2 and AR-1 threats may be introduced for advanced timeline awareness at the discretion of the instructor. ROE shall be incorporated. Exercise control should be Realistic Employment, BVR Option, with Real Time RTO assessment.

Brief. Red air should be tasked separately by squadron S-2 and PTO. GCI brief may be concurrent with fighter brief. Focus points should include area sanitization, flow decision points, RADAR mechanics, weapons employment, communications, threat countertactics, section engaged maneuvering, enemy MLCOA and MDCOA.

Execution. Must conduct 4 engagements, one of which is a VID. Must target all factor groups. No blue losses due to non-adherence to briefed threat ranges or poor airmanship (i.e., a 2g abort).

Debrief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validate shots. Utilize simulator DAQ video and AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction and fighter scrub. Debrief should focus on: RADAR mechanics, weapons employment, flow decision points, intercept geometries, communications, and TCT. Analyze planning factors and assumptions that contributed to mission success or otherwise.

Performance Standard. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Valid A/A Weapons Employment. S/A Enhancing Communications IAW ALSA and ACC. TCT and Expendable Usage IAW Air NTTP. Maintain SA to wingman throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP.

Mission Objectives.

Influence or destroy all factor groups.
No unnecessary blue losses.

Prerequisite. SAAD-4400.

Ordinance. 2xAIM-120, 2xAIM-9, SEL Best.

External Syllabus Support. GCI

AAD-4402 1.3 365 B,R,M (N) A/S 2+ AV-8B/2+RNAWST/2+DMRT

Goal. Review Section DCA.

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardizaion
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSGP Timeline Knowledge

Execution

Standardizaion
Flight Leadership
Admin Execution
Tac Admin Execution
Mission Execution
CAP Setup/Maintenance
Meld Mechanics

Sort Mechanics
Valid Weapons Employment
Shot and Post-Shot Mechanics
Flow Decision-Making
Merge Mechanics
VID Mechanics
Actions at DR

Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Expendables Usage

C3 / AIC Integration
Training Rule Adherence
Fox Comm
Shot Status Comm

Plan. Utilize squadron S-2 and PTO to develop a scenario based upon a pre-briefed threat country. Utilize the concepts outlined in the ANTTP Air-to-Air Planning Chapter. SM-2 and Ship-based capabilities may be incorporated, but fighters must be driven to commit. Conduct a minimum of 4 engagements against sortable and non-sortable groups. One engagement must be a VID. The sortie should incorporate increasing complexity and allowable risk with a maximum of 2 coordinated groups. The picture may incorporate white and red players. Groups will not split. SAR-2, AR-1, and EW threats may be introduced for advanced tactic and timeline awareness at the discretion of the instructor. ROE shall be incorporated. The mission should be in conjunction with higher-level tasking defining the VUL, such as a NEO, HA/DR, straits transit, etc. The plan must provide an overall game-plan to exploit threat vulnerabilities. Exercise control should be Realistic Employment, BVR option, with Real Time RTO Assessment. A Blue and Red RTO shall be used.

Brief. Red air should be tasked separately by squadron S-2 and PTO. GCI brief may be concurrent with fighter brief. Focus points should include area sanitization, flow decision points, RADAR mechanics, weapons employment, communications, threat countertactics, section engaged maneuvering, enemy MLCOA and MDCOA.

Execution. Must conduct four engagements. An engagement will equate to committing on a group. Target and achieve SA to all factor groups (visual or RADAR). No blue losses due to non-adherence to briefed TCT ranges or poor airmanship (i.e., a 2g abort). Workable RADAR, otherwise incomplete.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Fighter scrub, Mass Debrief, and Fighter Debrief. Debrief at TCTS facility desired. If not available, whiteboard debrief required. Validate shots. Flight lead will conduct a fighter scrub, mass debrief with bandits, and fighter debrief validating all shots, missed shot opportunities, flow decision points, game-plan execution, intercept geometry, communications, RADAR mechanics, and threat counter-tactics. Red Air threat, type, simulation and game-plan shall be covered to validate blue fighter planning assumptions. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction.

Performance Standard. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Valid A/A Weapons Employment. S/A Enhancing Communications IAW ALSA and ACC. TCT and Expendable Usage IAW Air NTTP. Maintain SA to wingman throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP.

Mission Objectives.

Influence or destroy all factor groups.
No unnecessary blue losses.

Prerequisite. SAAD-4401.

Ordnance

Desired: 2xCATM-120, 1xCATM-9, TCTS Pod, Tanks, 30 Flare, 30 Chaff.
Required: 1xCATM-9, TCTS POD, Expendables.

Range Requirement. RSTD, EXP.

External Syllabus Support. TACTS range, GCI/AIC, minimum 2 RADAR-equipped adversaries. Dissimilar preferred.

AAD-4403 1.3 365 B,R,M (N) A 3+ AV-8B

Goal. Introduce Division DCA as -2 or -4.

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardizaion
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSGP Timeline Knowledge

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
CAP Setup/Maintenance
Meld Mechanics
Sort Mechanics
Valid Weapons Employment
Shot and Post-Shot Mechanics
Flow Decision-Making

Merge Mechanics
VID Mechanics
Actions at DR
Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Expendables Usage
C3 / AIC Integration
Training Rule Adherence
Fox Comm
Shot Status Comm

Plan. Utilize squadron S-2 and PTO to develop a scenario based upon a pre-briefed threat country. Utilize the concepts outlined in the ANTPP Air-to-Air Planning Chapter. SM-2 and Ship-based capabilities may be incorporated, but fighters must be driven to commit. Conduct a minimum of 3 engagements against sortable and non-sortable groups. One engagement must be a VID. The sortie should incorporate increasing complexity and allowable risk with a maximum of 2 coordinated groups. The picture may incorporate white and red players. Groups will not split. SAR-2, AR-1, and EW threats may be introduced for advanced tactic and timeline awareness at the discretion of the instructor. ROE shall be incorporated. The mission should be in conjunction with higher-level tasking defining the VUL, such as a NEO, HA/DR, straits transit, etc. The plan must provide an overall game-plan to exploit threat vulnerabilities. Exercise control should be Realistic Employment, BVR option, with Real Time RTO Assessment. A Blue and Red RTO shall be used.

Brief. Red air should be tasked separately by squadron S-2 and PTO. GCI brief may be concurrent with fighter brief. Focus points should include area sanitization, flow decision points, RADAR mechanics, weapons employment, communications, threat countertactics, section engaged maneuvering, enemy MLCOA and MDCOA.

Execution. Must conduct three engagements. An engagement will equate to committing on a group. Target and achieve SA to all factor groups (visual or RADAR). No blue losses due to non-adherence to briefed TCT ranges or poor airmanship (i.e., a 2g abort). Workable RADAR, otherwise incomplete.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Fighter scrub, Mass Debrief, and Fighter Debrief. Debrief at TCTS facility desired. If not available, whiteboard debrief required. Validate shots. Flight lead will conduct a fighter scrub, mass debrief with bandits, and fighter debrief validating all shots, missed shot opportunities, flow decision points, game-plan execution, intercept geometry, communications, RADAR mechanics, and threat counter-tactics. Red Air threat, type, simulation and game-plan shall be covered to validate blue fighter planning assumptions. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction.

Performance Standard. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Valid A/A Weapons Employment. S/A Enhancing Communications IAW ALSA and ACC. TCT and Expendable Usage IAW Air NTTP. Maintain SA to wingman throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP.

Mission Objectives.

Influence or destroy all factor groups.
No unnecesasary blue losses.

Prerequisite. AAD-4402.

Ordnance

Desired: 2xCATM-120, 1xCATM-9, TCTS Pod, Tanks, 30 Flare, 30 Chaff.

Required: 1xCATM-9, TCTS POD, Expendables.

Range Requirement. RSTD, EXP.

External Syllabus Support. TACTS range, GCI/AIC, minimum 2 RADAR-equipped adversaries (dissimilar preferred).

2.13.9 Offensive Anti-Air Warfare (OAAW)

Purpose. Develop proficiency in OAAW/STK execution during day and night missions in a medium threat environment with AIM-120 for self-defense.

General. An ACTI or WTI shall instruct all Basic and Refresh POI events.
Wingmen must be ACM qualified.

Ground/Academic Training

Readings

Air NTTP 3-22.1-AV8B:

Review Chapter 3, Threat Countertactics.

Review Chapter 4, Air Interdiction.

Review Chapter 5, Suppression of Enemy Air Defenses.

Review Chapter 7 Air-to-Air Mission Planning.

Review Chapter 8 Air-to-Air Employment.

Review Appendix B, Standard Expendable Loads.

Review MAWTS-1 Mission Commander's Handbook.

Air NTTP 3-22.3-AV8B:

Review Chapter 2 Mission Planning.

AFTTP 3-1.Integrated Planning & Execution:

Review Chapter 4 Theater Command and Control.

AFTTP 3-3.Integrated Planning & Execution:

Review Chapter 2 Mission Planning Methodology

Review Chapter 3 Pre-Frag and Game Plan Design

Review Chapter 4 Running the Mission Planning Cell

Review Attachment 6 Checklists

Review Attachment 8 Rehearsal of Concept Drill

Review Attachment 11 Strike Planning

AFTTP 3-1.Shot Kill:

Review Chapter 1 Air-to-Air Shot Kill Criteria.

AFTTP 3-1.Threat Guide:

Review Chapter 1 Adversary Integrated Air Defense Systems.

Review Chapter 3 Adversary Early Warning and Air Surveillance Systems.

Review Chapter 5 Adversary Surface-to-Air Missile Threats.

Review Chapter 6 Adversary Fighter Aircraft and Armament.

Review Chapter 9 Adversary Air and Air Defense, Employment, Operations, and Training.

Review Chapter 11 Adversary Electronic Warfare.

AFTTP 3-1.F-16:

Chapter 15.2.3.11 Striker Engagement Zone

ALSA MTTP Air Control Communication:

Review Chapter 2 Tactical Administration (TACADMIN) Communication

Review Chapter 3 Force Packaging and Direct Air Support Communication

Review Chapter 6 Air to Surface Communication

SOAAW-4500 1.5 365 B,R,M (N) S 2+ RNAWST/2+ DMRT

Goal. Plan and execute a STK with RF threat and SAR-1 or greater air threat; SEAD required. Strikers will be equipped with AIM-120 for self defense.

Requirement

Plan / Brief

Mission Planning

Adversary Brief

C3 / AIC Brief

Brief Preparation

Execution

Standardization

Admin Execution

Tac Admin Execution

On Deck Setup

Airborne Setup

FENCE Check Procedures

Mission Execution

Target Acquisition

Target Area Tactics

Strike Timeline Adherence

Weapons Employment

AS Threat Reactions

AA Threat Reactions

SEAD Integration

IFREP

Standardized Comm

Plan. Linked simulator. Squadron WTI/PTO coordinates with Intel to create relevant scenario that requires detailed AG planning and threat countertactics game plan to include a SAR-1 air threat. PUI, with wingman or flight lead, develops detailed air-to-surface timeline and routing to meet mission success. Integrate SEAD into gameplan; either EA, HARM, or WTI/PTO derived scenario. Plan to utilize HSGP or advanced threat derivative with a Striker Engagement Zone. Combat scenario, no training rules required.

Brief. Assume all members are well acquainted with the overall plan. Review admin, required TACADMIN, and focus on mission rehearsal of the most likely course of action to include SEAD integration and the most likely contingencies. Brief and plan must include how the section is going to handle the air threat. Target area diagram with detailed air-to-surface timeline required.

Execution. Conducts required TACADMIN that results in no switchology, systems, or configuration errors. As a wingman, executes formation, systems, and communication in accordance with the brief. Wingman has valid weapons release and correctly executes threat countertactics IAW brief. Flight lead has valid weapons release, executes TCT IAW with brief, and makes sound tactical decisions on time IAW with plan.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Utilize Simulator DAQ video if available. Validate all weapons releases. Review all decision points. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD, Map, and Radar for appropriate systems management.

Performance Standard. Execute IAW Air NTTP. Generate and execute a plan that achieves target destruction criteria and manages air and surface threats and environmental conditions. Manage strike timeline and maintain SA to go / no-go criteria as well as critical supporting asset actions. Maintain SA to air threat and employ A/A weapons as required.

Prerequisite. STK-3404, AAD-4402.

Ordnance. 2xAIM-9, 2x AIM-120, PUI derived A/S ordnance load, SEL Best.

External syllabus support. Linked simulator is required. IF dual completion (flight lead and wingman), WTI or ACTI shall be the instructor at the console and will provide the flight brief/debrief. GCI desired.

OAAW-4501 1.3 365 B,R,M (N) A 3+ AV-8B

Goal. Plan and execute a OAAW/STK with RF threat and SAR-1 or greater air threat; SEAD required. Strikers will be equipped with AIM-120 for self defense.

Requirement

Plan / Brief

Mission Planning
Adversary Brief
C3 / AIC Brief
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
Target Acquisition
Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reactions
SEAD Integration
IFREP

Standardized Comm

Plan. Squadron WTI/PTO coordinates with Intel to create relevant scenario that requires detailed AG planning, detailed threat countertactics game plan to include an air threat, and SEAD support. PUI, with wingman or flight lead, develops detailed air-to-surface timeline and routing to meet mission success. The intent is for a division level planning effort lead by the division lead. Integrate SEAD into game plan; either EW, HARM, or WTI/PTO derived scenario. SEAD is desired to be actual aircraft/systems, but may be degraded to simulation by TMS aircrew. Emitters must be used, otherwise incomplete. Plan to utilize HSGP or advanced threat derivative with a Striker Engagement Zone. RTO kill removal is desired. Multiple codes are authorized during the sortie if required instructors are available (two wingman with two WTIs or ACTIs). AA threat shall be at least SAR-1 sweepers and must attempt to influence the strikers pre or post employment. External air fighters or strikers may be incorporated and are highly recommended.

Brief. Threat brief, GCI brief, RTO brief, Tactical Brief. Division lead should apportion different parts of the brief to flight members. Tactical brief should be a mission rehearsal. Required briefing items include division deconfliction, departure avoidance, and training rules. Target area diagram with detailed air-to-surface timeline is required. Red air attrition/blue defensive actions within the SEZ is required.

Execution. Conducts required TACADMIN that results in no switchology, systems, or configuration errors. As a wingman, executes formation, systems, and communication in accordance with the brief. Wingmen have valid weapons releases and correctly execute threat countertactics IAW brief. Flight has valid weapons release, executes TCT IAW with brief, and makes sound tactical decisions on time IAW with plan.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validate all weapons releases. Review all decision points. Mass debrief; TACTS debrief desired, whiteboard required if not available. Compare briefed tactics to executed tactics for validation or lessons learned. Conduct fighter debrief. Review HUD/Radar for appropriate systems management. Review comm.

Performance Standard. Execute IAW Air NTTP. Generate and execute a plan that achieves target destruction criteria and manages air and surface threats and environmental conditions. Manage strike timeline and maintain SA to go / no-go criteria as well as critical supporting asset actions. Maintain SA to air threat and employ A/A weapons as required.

Prerequisite. SOAAW-4500.

Ordnance

Desired: PUI derived ordnance load, 1xCATM-9, TCTS Pod, 1xCATM-120+, best SEL.
Required: 1xCATM-9, TCTS Pod, 30 Flares, 30 Chaff.

Range Requirement. RSTD, EXP, AA.

External syllabus support. 1xSEAD platform (F-35, F/A-18, F-16, etc), Minimum 2xSAR-1 capable radar-equipped adversaries. Dissimilar preferred. GCI, and blue and red RTOs. TACTS.

2.13.10 Aerial Escort (AESC)

Purpose. Conduct Assault Support Escort (ASE) in an objective area without an air threat and an objective area with an air threat. Completion of this stage as a flight lead makes the PUI qualified to act as an Escort Flight Lead.

General.

A WTI or FAC(A) who has completed AE-4602 shall instruct SAE-4600 and AE-4602. A WTI or ACTI shall instruct SAE-4601.

The first and third events of this stage are designed to teach the PUI how to conduct ASE into an objective area where Air Superiority is established. The two events shall focus on conducting OAS during the insert of friendly forces, their actions on the objective, and their extract from the objective.

The second event is designed to teach the PUI how to conduct ASE into an objective area where Air Superiority is not established. The event shall focus on conducting AAD/OAAW during the insert of friendly forces, their actions on the objective, and their extract from the objective.

Specific emphasis should be placed on the coordination with the Assault Flight Lead (AFL) and Mission Commander (MC) that is required during the planning phase to determine the AV-8B's role in the mission. Detailed planning must be conducted for each event with a dedicated scenario developed for an actual mission or an S-2/PTO developed mission.

Ground/Academic Training

Readings. Air NTTP 3-22.3, Chapter 12, Escort

Lectures. Receive the following AV-8B Courseware lecture:
AAESC-4060, AV-8B Escort Flight Lead (MAWTS-1 ASP)

SAESC-4600	1.5	365	B,R,M	(NS)	S	2 RNAWST/2 DMRT
-------------------	------------	------------	--------------	-------------	----------	------------------------

Goal. Conduct an ASE mission in an objective area with Air Superiority.

Requirement

Plan / Brief		
	Mission Planning	
	Coordination Brief	
	Objection Area Diagram	
	Brief Preparation	
Execution		
	Standardization	Weapons Employment
	Admin Execution	Attached Escort
	Tac Admin Execution	Detached Escort
	On Deck Setup	Combined Escort
	Airborne Setup	Routing
	FENCE Check Procedures	Actions at Landing Zone
	Mission Execution	Fires coordination
	Awarenewss of assault	AS Threat Reactions
	package	AA Threat Reactions
	Usage of Execution Checklist	IFREP
	Adherence to ROE	Standardized Comm

Plan. Should be a linked simulator. Squadron WTI/PTO tasks Intel to create relevant a scenario that requires detailed escort planning to include a low probability air threat. PUI, with wingman or flight lead (per stage), develops detailed escort timeline and routing to meet mission success. Integrate attached, detached, and/or combined escort game plans; execution checklist; communication plan; assault routing; surface-to-air threat engagement game plans; actions at the landing zone; Initial Terminal Guidance (ITG); ROE; and fires coordination. Combat scenario. Scenario shall include a surface-to-air threat.

Brief. Assume all members are well acquainted with the overall plan. Review admin, required TACADMIN, and focus on mission rehearsal of the most likely course of action to include the six functions of the assault support escort. Brief and plan must include how the section is going to handle the low-probability air threat. Objective area diagram required.

Execution. Execute the 6 missions of an EFL. Execute all tasking (CAS, AR, FAC(A)) IAW Air NTTP. Maintain awareness of the assault package and status of execution checklist. Adhere to ROE and briefed fires coordination gameplan.

Debrief. Utilize Simulator DAQ video if available. Validate all weapons releases. Review all decision points. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD, Map, and Radar for appropriate systems management.

Performance Standard. Execute IAW Air NTTP. Generate and execute a plan that supports assault package and manages surface threats and environmental conditions. Maintain SA to assault package at all times. Ensure safe passage of assault package, and adhere to pre-planned timelines.

Prerequisite. 3000 phase complete. Complete ground/academic training.

Ordnance. TPOD, PUI derived ordnance load (at least 2x PGMs), SEL Best.

Range Requirement. RSTD, EXP, AA.

External syllabus support. GCI/AIC.

SAESC-4601 1.5 365 B,R,M (NS) S 2 RNAWST/2 DMRT

Goal. Conduct an ASE mission without Air Superiority.

Requirement

Plan / Brief
Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Weapons Employment
Admin Execution	Attached Escort
Tac Admin Execution	Detached Escort
On Deck Setup	Combined Escort
Airborne Setup	Routing
FENCE Check Procedures	Actions at Landing Zone
Mission Execution	Fires coordination
Awareness of assault package	AS Threat Reactions
Usage of Execution Checklist	AA Threat Reactions
Adherence to ROE	IFREP
	Standardized Comm

Plan. Linked simulator. Squadron WTI/PTO tasks Intel to create a relevant scenario or support a real life scenario that requires detailed escort planning to include a high probability air threat. PUI, with wingman or flight lead (per stage), develops detailed escort timeline and routing to meet mission success. Integrate attached, detached, and/or combined escort game plans; execution checklist; communication plan; assault routing; surface-to-air and air-to-air threat engagement game plans; actions at the landing zone; Initial Terminal Guidance (ITG); ROE; and fires coordination. Combat scenario. Scenario shall include a simulated surface-to-air threat.

Brief. Assume all members are well acquainted with the overall plan. Review admin, required TACADMIN, and focus on mission rehearsal of the most likely course of action to include the six functions of the assault support escort. Brief and plan must include and should focus on how the section is going to handle the high-probability air threat.

Execution. Execute the 6 missions of an EFL. Execute all tasking (CAS, AR, FAC(A), AAD) IAW Air NTTP. Maintain awareness of the assault package and status of execution checklist. Adhere to ROE and briefed fires coordination game plan.

Debrief. Utilize Simulator DAQ video if available. Validate all weapons releases. Review all decision points. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD, Map, and Radar for appropriate systems management.

Performance Standard. Execute IAW Air NTTP. Generate and execute a plan that supports assault package and manages air threats and environmental conditions. Maintain SA to assault package at all times. Ensure safe passage of assault package, and adhere to pre-planned timelines. Maintain SA to air threat and employ HSGP as required.

Prerequisite. 3000 phase complete. Complete ground/academic training. SAAD-4401 (AAD-4402 if conducted in aircraft).

Ordinance. TPOD, 2xAIM-120, 2xAIM-9, 300x25mm, SEL Best.

External Syllabus Support. GCI/AIC.

AESC-4602 1.3 * B (NS) A 2+ AV-8B

Goal. Conduct an ASE mission in an objective area with Air Superiority.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup

Airborne Setup
FENCE Check Procedures
Mission Execution

Awareness of assault
package
Usage of Execution Checklist
Adherence to ROE
Weapons Employment
Attached Escort
Detached Escort
Combined Escort

Routing
Actions at Landing Zone
Fires coordination
AS Threat Reactions
AA Threat Reactions
IFREP
Standardized Comm

Plan. Squadron WTI/PTO tasks Intel to create a relevant scenario or support a real life scenario that requires detailed escort planning to include a low probability air threat. PUI, with wingman or flight lead (per stage), develops detailed escort timeline and routing to meet mission success. Integrate attached, detached, and/or combined escort game plans; execution checklist; communication plan; assault routing; surface-to-air threat engagement game plans; actions at the landing zone; Initial Terminal Guidance (ITG); ROE; and fires coordination. Combat scenario. Scenario shall include a simulated surface-to-air threat.

Brief. Assume all members are well acquainted with the overall plan. Review admin, required TACADMIN, and focus on mission rehearsal of the most likely course of action to include the six functions of the assault support escort. Brief and plan should include how the section is going to handle the low-probability air threat. Objective area diagram required.

Execution. Execute the 6 missions of an EFL. Execute all tasking (CAS, AR, FAC(A)) IAW Air NTTP. Maintain awareness of the assault package and status of execution checklist. Adhere to ROE and briefed fires coordination gameplan.

Debrief. Validate all weapons releases. Review all decision points. Compare briefed tactics to executed tactics for validation or lessons learned. Review HUD, Map, and Radar for appropriate systems management.

Performance Standard. Execute IAW Air NTTP. Generate and execute a plan that supports assault package and manages surface threats and environmental conditions. Maintain SA to assault package at all times. Ensure safe passage of assault package, and adhere to pre-planned timelines.

Prerequisite. SAE-4600.

Ordnance

Desired: TPOD, 2xGBU-12, 300x25mm, 20 Chaff, 60 Flares.

Acceptable substitute: 2xLGTR/2xGBU-16/2xGBU-32/2xGBU-38/2xGBU-54/APKWS.

Range Requirement. RSTD, EXP, HE, LSR.

External Syllabus Support. Assault Support assets.

2.13.11 Call For Fire

Purpose. Complete Call For Fire qualification.

General. A Section Lead who has completed the CFF syllabus or a FAC(A)/FAC(A)I shall instruct Basic and Refresh POI events.

Ground/Academic Training.

Review the following AV-8B Courseware Lectures.

ACFF-4070 Call For Fire (Given by FAC(A) or prior JTAC).

SCFF-4700 1.5 * B (N) S RNAWST/DMRT

Goal. Introduce mortar/artillery airspot.

Requirement

Plan / Brief

	Mission Planning	
	Coordination Brief	
	Objection Area Diagram	
	Brief Preparation	
Execution		
	Standardization	Mission Execution
	Admin Execution	LASER Adjust Fire
	Tac Admin Execution	Grid Adjust Fire
	On Deck Setup	Immediate Suppression
	Airborne Setup	SEAD Mission
	FENCE Check Procedures	High Threat SEAD Mission

Plan. Use PTO and Squadron S-2 to update tablet imagery and files, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, ID, and kill the enemy.

Brief. Focus on Call for fire control templates, aircraft positioning, sensor optimization.

Execution. On a tactical range, perform visual/sensor reconnaissance of three separate targets and generate target coordinates with aircraft systems. Plot targets on the tablet and prepare call-for-fire briefs. Emphasize accurate call-for-fire communications and adjustment procedures. Execute 1 LASER adjust fire, 1 traditional (grid) adjust fire, 1 immediate suppression, 1 SEAD mission, and 1 high threat SEAD mission. For the high threat SEAD mission, emphasize high threat airspot and positioning to provide redundant mark and accurate corrections for IDFS. The simulated weather for the high threat SEAD mission is overcast at 8,000 feet MSL. Both SEAD missions must include marking and suppressing targets.

Debrief. The sortie will be debriefed using simulator DAQ. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Execute appropriate search, detection, and PID profiles. Proper communication format with the firing unit. Provide timely and accurate corrections to the firing unit. Complete an immediate suppression CFF within 60 seconds of receiving the mission from the FAC/FO. Correct ALSA Communication Brevity.

Prerequisite. AS-2604.

Ordinance. TPOD, Expendables.

Range Requirement. RSTD, EXP.

CFF-4701 1.3 * B (N) A 2+ AV-8B

Goal. Introduce mortar/artillery airspot.

Requirement

Plan / Brief		
	Mission Planning	
	Coordination Brief	
	Objection Area Diagram	
	Brief Preparation	
Execution		
	Standardization	Mission Execution
	Admin Execution	LASER Adjust Fire
	Tac Admin Execution	Grid Adjust Fire
	On Deck Setup	Immediate Suppression
	Airborne Setup	SEAD Mission
	FENCE Check Procedures	High Threat SEAD Mission

Plan. Use PTO and Squadron S-2 to update tablet imagery and files, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, ID, and kill the enemy.

Brief. Focus on Call for fire control templates, aircraft positioning, sensor optimization.

Execution. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot targets on the tablet and prepare call-for-fire briefs. Emphasize accurate call-for-fire communications and adjustment procedures. Execute 1 LASER adjust fire, 1 traditional (grid) adjust fire, 1 immediate suppression, 1 SEAD mission, and 1 high threat SEAD mission. For the high threat SEAD mission, emphasize high threat airspot and positioning to provide redundant mark and accurate corrections for IDFS. The simulated weather for the high threat SEAD mission is overcast at 8,000 feet MSL. Both SEAD missions must include marking and suppressing targets.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds, if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Execute appropriate search, detection, and PID profiles. Proper communication format with the firing unit. Provide timely and accurate corrections to the firing unit. Complete an immediate suppression CFF within 60 seconds of receiving the mission from the FAC/FO. Correct ALSA Communication Brevity.

Prerequisite. SCFF-4700.

Ordnance. TPOD, Expendables.

Range Requirement. RSTD, EXP.

External Syllabus Support. Indirect fire support assets must consist of either 155mm artillery, 81mm mortars or 120mm expeditionary fire support system. Indirect fire support asset requires a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds.

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

Purpose. Complete FAC(A) qualification.

General

The JCAS AP MOA (referred to as the JFAC(A) MOA) provides the minimum standard for certification and qualification as a FAC(A). Meeting the T&R syllabus requirements for FAC(A) will meet the JFAC(A) MOA requirements. The JFAC(A) MOA can be found on the MAWTS-1 sharepoint.

Prior to beginning this stage, an AV-8B pilot shall, at a minimum, be a Division Lead or a Section Lead/WTO with prior FAC experience. Additionally, the PUI must complete the SCFF-4700.

Upon completion of FAC(A)-4808, with JFAC(A) MOA requirements met, the commanding officer may issue a T&R FAC(A) qualification and a JFAC(A) MOA FAC(A) certification.

Unqualified pilots will fly SFAC(A)-4800 through FAC(A)-4808 with a MAWTS-1 certified FAC(A)I designated by the commanding officer. For the flights, the FAC(A)I will fly in the escort aircraft. Any USMC F/A-18 FAC(A)I aircraft may be used to fulfill this requirement. The FAC(A)I may simulate the GFAC/JTAC if one is not available. Attempts should be made to incorporate JTAC support on every FAC(A) event to enhance realistic training.

A non-qualified FAC(A) pilot must have a FAC(A)I in the section and may not control CAS aircraft delivering actual ordnance closer than the most conservative of the following: minimum safe distance, 1,000 meters, or range regulations. A FAC(A)-qualified pilot may not employ CAS aircraft delivering actual ordnance closer than the most conservative of minimum safe distance or range regulations.

The FAC(A)I will conduct a 9-line generation planning lab and a FAC(A) execution chalk-talk in order to introduce the PFAC(A) to cockpit management and the FAC(A) execution templates.

SFAC(A)-4800, 4801, and 4804 are work-up events designed to teach FAC(A) principles with heavy instruction from the FAC(A)I. The FAC(A)I may brief any sortie; however, the intent is for the FAC(A) under instruction to develop planning, briefing, and debriefing skills throughout the FAC(A)-4800, 4801, and 4804 simulators.

SFAC(A)-4801 and SFAC(A)-4808 shall be linked simulator events. All simulator events may be linked. The PFAC(A) will execute as a FAC(A) section lead in one simulator while a CAS qualified pilot will execute as a section lead conducting CAS in the linked simulator. The FAC(A)I will instruct from the console and will simulate all controlling agencies.

SFAC(A)-4804 and SFAC(A)-4806 are 1.0 hour simulator events. These events may be briefed together and combined in a single 1.5 hour simulator evolution at the discretion of the FAC(A)-I and PTO provided all requirements for each event can be accomplished.

FAC(A)-4807 and SFAC(A)-4808 are exercises in integrating the fire support assets. The intent is to expose prospective FAC(A) pilots to the unique challenges posed by each asset when integrated with fixed-wing CAS. SFAC(A)-4808 integrates FW, RW, UAS, SEAD, and IDFS. FAC(A)-4807 shall have FW and RW strikers with live/inert ordnance. Tanker, UAS, SEAD, and IDFS assets are highly encouraged but not required.

SFAC(A)-4809 is the FAC(A) reassessment required by the JFAC(A) MOA. This event shall be completed every 2 years following initial certification. For pilots completing their initial or refresh FAC(A) syllabus, SFAC(A)-4809 should be logged along with the SFAC(A)-4808. A FAC(A)I is required to observe the event. The FAC(A) reassessment can be logged in the aircraft, given the instructor requirement is met, and the sortie is scheduled specifically as a complete mission profile (CMP).

Due to the task intensive nature of the FAC(A) mission, pilots who achieved their initial FAC(A) qualification in any other TMS will complete the entire qualification syllabus in an AV-8B prior to being FAC(A) qualified in an AV-8B squadron.

Failure to meet JFAC(A) MOA proficiency or currency requirements or loss of proficiency (delinquent re-fly factor) for all associated FAC(A) qualification events (per paragraph 500.1.b) constitutes loss of the FAC(A) qualification.

Pilots who have lost the FAC(A) qualification due to failure to meet JFAC(A) MOA proficiency or currency requirements shall regain the FAC(A) qualification by successfully completing events as delineated in the appropriate T&R syllabus under the supervision of a qualified FAC(A). At a minimum, such pilots must complete the number of controls per the JFAC(A) MOA.

Escort aircraft that are not flown by a FAC(A)I conducting instruction during a FAC(A) work-up will log a FAC(A) Escort code of FAC(A)-4602. Escort aircraft that are flown by a FAC(A)I conducting instruction during a FAC(A)/FAC(A)I work-up will log the appropriate FAC(A) code and log the FAC(A) controls. AV-8B FAC(A)s should fly as part of a section with an assigned escort. Escort aircraft shall not fulfill the external support requirement of a fixed-wing CAS element for any FAC(A) qualification work-up sortie.

Ground/Academic Training. All PFAC(A) are required to receive the JFAC(A) Common lectures, the AV-8B FAC(A) Employment lecture, 9-line generation planning lab, and FAC(A) Execution chalk-talk prior to beginning SFAC(A)-4800. All required JFAC(A) Common Lectures are located on the MAWTS-1 MCEITS site. Lectures must be taught by a current FAC(A)I. Recommended that PFAC(A) attend FAC(A) ground school hosted by MATSS. Reference JFAC(A) MOA for detailed information on additional FAC(A) required training.

Readings

Review Joint Publication 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support. AV-8B NATIP (NTRP 3-22.4-AV8B), Review Section 2.11.3, CAS Display.

Air NTTP 3-22.3 AV-8B, Review Chapter 9, Forward Air Controller (Airborne).

Tactical Air Control Party Tactical Standard Operation Procedures (TACP TACSOP), MAWTS-1.

MCRP 3-16B Multiservice Tactics Techniques and Procedures for Joint Application of Firepower (JFIRE).

Lectures

Receive the following AV-8B courseware lecture from an AV-8B FAC(A)I:

AFACA-4080, JFAC(A) Common Lectures
AFACA-4081, AV-8B FAC(A) Employment (MAWTS-1 ASP)

Review the following AV-8B courseware lectures:

AFACA-4082, CAS Standardization (MAWTS-1 ASP)
AFACA-4083, CAS Aircraft (MAWTS-1 ASP)
AFACA-4084, Urban CAS (MAWTS-1 ASP)

Planning Labs

AFACA-4085, 9-Line generation planning lab.
AFACA-4086, FAC(A) execution chalk talk.

SFAC(A)-4800 1.5 * B D S RNAWST/DMRT

Goal. Introduce Type 1 and 2 FW control procedures in a permissive environment.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Type 1 Control of FW
Admin Execution	Type 2 Control of FW
Tac Admin Execution	Type 3 Control of FW
On Deck Setup	Type 1 Control of RW
Airborne Setup	Type 2 Control of RW
FENCE Check Procedures	Type 3 Control of RW
Mission Execution	Control Hellfire
Type 1 Control with GP/FF	Control PGM
Mark	Control Artillery Mark
Type 2 Control with GP/FF	Combined FW / RW Attack
Mark	

Plan. FAC(A)I led. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground scheme of maneuver (SOM), and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize tablet and FAC(A) mission cards to enable mission success.

Brief. FAC(A)I led. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment principles and TACP TACSOP CAS execution template, focusing on systems and tablet management, correlation, and specific attack templates. Mission rehearsal should emphasize Type 1 and 2 FAC(A) control templates, escort integration, systems management, target PID, target coordinate generation accuracy, PGM employment, TCT, and standardized communications.

Execution. Conduct three attacks for two Type 1 and four Type 2 FW controls. Provide TGO for four striker PGMS. The FAC(A)I shall simulate C3 agencies, TACP, Escort, and CAS aircraft.

Debrief. The sortie will be debriefed using simulator recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Execute Type 1 and 2 FAC(A) control IAW JCAS and the ANTP. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, timing, sensor management, and

CRM. Efficient coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. Complete with ground/academic training. SCFF-4700.

Ordnance. TPOD, Tanks, 1xGBU-12, 1xGBU-38, 300x25mm, Expendables.

SFAC(A)-4801 1.5 180 B,R,M D S 2 RNAWST/2 DMRT

Goal. Linked Simulator. Introduce day Type3 and Type 1FW Control with GP/FF marking procedures and CFF in a permissive environment.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Type 1 Control of FW
Admin Execution	Type 2 Control of FW
Tac Admin Execution	Type 3 Control of FW
On Deck Setup	Type 1 Control of RW
Airborne Setup	Type 2 Control of RW
FENCE Check Procedures	Type 3 Control of RW
Mission Execution	Control Hellfire
Type 1 Control with GP/FF	Control PGM
Mark	Control Artillery Mark
Type 2 Control with GP/FF	Combined FW / RW Attack
Mark	

Plan. FAC(A)I led. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground scheme of maneuver (SOM), and threats. Develop a plan to locate, PID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk. Organize tablet and FAC(A) mission cards to enable mission success.

Brief. FAC(A)I led. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment principles and TACP TACSOP CAS execution template, focusing on systems and tablet management, communications, correlation, and specific attack and mark templates. Mission rehearsal should emphasize the Type 1 FAC(A) control template with IDF mark, Type 3 FAC(A) control with FAC(A) mark, Escort integration/tasks, systems management, target PID, target coordinate generation accuracy, PGM employment, TCT, and standardized communications.

Execution. Conduct three attacks. Execute four Type 1 and two Type 3 controls with GP/FF mark. Coordinate one Artillery mark for at least one of the Type 1 attacks. The FAC(A)I shall simulate C3 agencies, TACP, IDF, and Escort from the console. The linked simulator will play the role of a CAS striker.

Debrief. The sortie will be debriefed using simulator recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Execute Type 1 and 3 control IAW JCAS and the ANTTP. Accurate target coordinate and 9-line generation. Appropriate C3 integration, target area flow, and timing; sensor management; and CRM. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4800.

Ordnance. TPOD, 4x5" Rockets, 2xMk-82, Expendables.

FAC(A)-4802 1.3 180 B,R D A 2 AV-8B

Goal. Review Type 1 and 2 FW control procedures in a permissive environment.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Type 1 Control of FW
Admin Execution	Type 2 Control of FW
Tac Admin Execution	Type 3 Control of FW
On Deck Setup	Type 1 Control of RW
Airborne Setup	Type 2 Control of RW
FENCE Check Procedures	Type 3 Control of RW
Mission Execution	Control Hellfire
Type 1 Control with GP/FF	Control PGM
Mark	Control Artillery Mark
Type 2 Control with GP/FF	Combined FW / RW Attack
Mark	

Plan. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground scheme of maneuver (SOM), and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system while meeting allowable risk standards. Optimize tablet and FAC(A) mission cards to enable mission success.

Brief. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment principles and TACP TACSOP CAS execution template, focusing on systems and tablet management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize Type 1 and 2 FAC(A) control templates, Escort integration, systems management, target PID, target coordinate generation accuracy, PGM employment, TCT, and standardized communications.

Execution. Execute, at a minimum, two Type 1 controls and four Type 2 controls. The FAC(A)I may simulate C3 agencies and TACP and serve as a fully trained Escort.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, timing, sensor management, and CRM. Efficient coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4801.

Ordnance

Desired: TPOD, Tanks, 2xGBU-12, 300x25mm, Expendables.

Acceptable: PGM, FF, Expendables.

Range Requirement. RSTD, HE, EXP, LSR.

External Syllabus Support. One FW CAS element with HE or inert GP ordnance and LGWs. Ground FAC/JTAC.

FAC(A)-4803 1.3 180 B,R,M D A 2 AV-8B

Goal. Review Type 1, 2, and 3 FW Control with GP/FF marking procedures.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Type 1 Control of FW
Admin Execution	Type 2 Control of FW
Tac Admin Execution	Type 3 Control of FW
On Deck Setup	Type 1 Control of RW
Airborne Setup	Type 2 Control of RW
FENCE Check Procedures	Type 3 Control of RW
Mission Execution	Control Hellfire
Type 1 Control with GP/FF	Control PGM
Mark	Control Artillery Mark
Type 2 Control with GP/FF	Combined FW / RW Attack
Mark	

Plan. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk. Organize tablet and FAC(A) mission cards to enable mission success.

Brief. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment principles and TACP TACSOP CAS execution template, focusing on systems and tablet management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize Type 1 FAC(A) control templates, Type 2/3 FAC(A) control with a FAC(A) with GP/FF mark, escort integration and tasking, systems management, target PID, target coordinate generation accuracy, PGM employment, TCT, and standardized communications.

Execution. Execute at least two Type 1 controls; two Type 2 control; and two Type 3 control with a FAC(A) mark with GP/FF. The FAC(A)I will chase all attacks. The FAC(A)I may simulate C3 agencies, TACP, and Escort.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Execute Type 1, 2, and 3 FAC(A) control IAW JCAS and the ANTTTP. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, timing, sensor management, and CRM. Efficient coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4802

Ordnance

Desired: TPOD, Tanks, 1xMk-82, 4x5" Rockets, 300x25mm, Expendables.

Acceptable substitutes: TPOD, Tanks, Rockets, GP, Expendables.

Range Requirement. RSTD, HE, EXP, LSR.

External Syllabus Support. One FW CAS element with GP and FF ordnance. Ground FAC/JTAC.

SFAC(A)-4804 1.0 * B (NS) S RNAWST/DMRT

Goal. Introduce Type 1, 2, and 3 control procedures for FW and RW in an urban, permissive environment.

Requirement

Plan / Brief

	Mission Planning	
	Coordination Brief	
	Objection Area Diagram	
	Brief Preparation	
Execution		
	Standardization	Type 2 Control of FW
	Admin Execution	Type 3 Control of FW
	Tac Admin Execution	Type 1 Control of RW
	On Deck Setup	Type 2 Control of RW
	Airborne Setup	Type 3 Control of RW
	FENCE Check Procedures	Control Hellfire
	Mission Execution	Control PGM
	Type 1 Control with GP/FF Mark	Control Artillery Mark
	Type 2 Control with GP/FF Mark	Combined FW / RW Attack
	Type 1 Control of FW	

Plan. FAC(A)I led. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, PID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize tablet and FAC(A) mission cards to enable mission success.

Brief. FAC(A)I led. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment template and TACP TACSOP CAS execution template, focusing on system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize Type 1,2 and 3 FAC(A) control templates, systems and tablet management, 9-line creation, read backs, target PID, target coordinate generation accuracy, GP and PGM employment, TCT, and standardized communications.

Execution. Conduct four attacks. Execute two Type 1 and two Type 2 of FW strikers. PFAC(A) will provide TGO for, at a minimum, two FW PGMs. Execute two Type 2 control of RW strikers. The PFAC(A) will provide TGO for, at a minimum, one Hellfire. The FAC(A)I shall simulate C3 agencies, TACP, Escort, and CAS strikers.

Debrief. The sortie will be debriefed using simulator recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Execute Type 1, 2, and 3 control IAW JCAS and the ANTTTP. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, and timing; sensor management; and CRM. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4801.

Ordnance. TPOD, Tanks, 2xGBU-54, 300x25mm, Expendables.

FAC(A)-4805 1.3 180 B,R,M NS A 2 AV-8B

Goal. Review Type 1 and 2 FW control procedures at Night in a permissive environment.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution

On Deck Setup
Airborne Setup
FENCE Check Procedures

Mission Execution	Type 1 Control of RW
Type 1 Control with GP/FF	Type 2 Control of RW
Mark	Type 3 Control of RW
Type 2 Control with GP/FF	Control Hellfire
Mark	Control PGM
Type 1 Control of FW	Control Artillery Mark
Type 2 Control of FW	Combined FW / RW Attack
Type 3 Control of FW	

Plan. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, PID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system and maintain sanctuary from the threat IAW the allowable risk. Organize tablet and FAC(A) mission cards to enable mission success.

Brief. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment template and TACP TACSOP CAS execution template, system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize Type 1 and 2 FAC(A) control templates in a non-permissive environment, systems management, 9-line creation, read backs, target PID, target coordinate generation accuracy, GP/PGM employment, TCT, and standardized communications.

Execution. Execute, at a minimum, two Type 1 controls and four Type 2 controls. The FAC(A)I may simulate C3 agencies and TACP.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, and timing; sensor management; and CRM. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4804.

Ordnance

Desired: TPOD, Tanks, 2xGBU-12, Expendables.

Acceptable: PGM, GP, FF, Expendables.

Range Requirement. RSTD, HE, EXP, LSR.

External Syllabus Support. One FW element with GP and PGM ordnance. Ground FAC/JTAC.

SFAC(A)-4806 1.0 * B (NS) S RNAWST/DMRT

Goal. Introduce Type 2, and 3 control procedures for FW and RW in a non-permissive environment.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution

Type 1 Control with GP/FF
Mark
Type 2 Control with GP/FF
Mark
Type 1 Control of FW
Type 2 Control of FW
Type 3 Control of FW
Type 1 Control of RW

Type 2 Control of RW
Type 3 Control of RW
Control Hellfire

Control PGM
Control Artillery Mark
Combined FW / RW Attack

Plan. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, PID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system IAW the allowable risk. Optimize tablet and FAC(A) mission cards to enable mission success.

Brief. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment template and TACP TACSOP CAS execution template, focusing on system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize Type 1,2 and 3 FAC(A) control templates, systems and tablet management, 9-line creation, read backs, target PID, target coordinate generation accuracy, GP and PGM employment, TCT, and standardized communications.

Execution. Execute two Type 2 controls of FW strikers. Execute two Type 2 and one Type 3 control of RW strikers. The PFAC(A) will provide TGO for, at a minimum, one Hellfire. The FAC(A)I shall simulate C3 agencies, TACP, Escort, and CAS strikers.

Debrief. The sortie will be debriefed using simulator recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Execute Type 1, 2, and 3 control IAW JCAS and the ANTTTP. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, and timing; sensor management; and CRM. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4804.

Ordnance. TPOD, Tanks, 2xGBU-54, 300x25mm, Expendables.

FAC(A)-4807 1.3 * B (NS) A 2 AV-8B

Goal. Review multiple asset integration.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
Type 1 Control with GP/FF
Mark
Type 2 Control with GP/FF
Mark

Type 1 Control of FW
Type 2 Control of FW
Type 3 Control of FW
Type 1 Control of RW
Type 2 Control of RW
Type 3 Control of RW
Control Hellfire
Control PGM
Control Artillery Mark
Combined FW / RW Attack

Plan. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, PID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system and maintain sanctuary from the threat IAW the allowable risk. Organize tablet and FAC(A) mission cards to enable mission success.

Brief. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment template and TACP TACSOP CAS execution template, system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize Type 2 and 3 FAC(A) control templates, systems management, 9-line creation, read backs, target PID, target coordinate generation accuracy, GP/PGM employment, TCT, and standardized communications.

Execution. Conduct, at a minimum, two Type 2 FW controls and two RW controls. Execute, at a minimum, one combined attack using FW and RW. The FAC(A)I may simulate C3 agencies, TACP, and serve as a fully trained Escort.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices and TCTS feeds if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, and timing; sensor management; and CRM. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4806.

Ordnance

Desired: TPOD, Tanks, 2xGBU-12, Expendables.

Acceptable: PGM, GP, FF, Expendables.

Range Requirement. RSTD, HE, EXP, LSR.

External Syllabus Support. One FW element with GP and PGM ordnance, and one RW CAS element with live/captive Hellfire, and live rockets and/or guns. Ground FAC/JTAC.

SFAC(A)-4808 1.5 180 B,R,M NS S 2 RNAWST

Goal. Linked Simulator. Introduce multiple asset integration in a night, non-permissive, urban environment.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Type 1 Control of FW
Admin Execution	Type 2 Control of FW
Tac Admin Execution	Type 3 Control of FW
On Deck Setup	Type 1 Control of RW
Airborne Setup	Type 2 Control of RW
FENCE Check Procedures	Type 3 Control of RW
Mission Execution	Control Hellfire
Type 1 Control with GP/FF	Control PGM
Mark	Control Artillery Mark
Type 2 Control with GP/FF	Combined FW / RW Attack
Mark	

Plan. Use PTO, Squadron S-2, and FAC(A)I to update tablet imagery and software, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, PID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match in a non-permissive environment. Have a TCT game plan to defeat the threat system and maintain sanctuary from the threat IAW the allowable risk. Organize tablet and FAC(A) mission cards to enable mission success.

Brief. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment template and TACP TACSOP CAS execution template, focusing on urban FAC(A)/CAS considerations, system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize Type

2, and 3 FAC(A) control templates in a non-permissive environment, systems management, 9-line creation, readbacks, target PID, target coordinate generation accuracy, PGM employment, TCT, and standardized communications.

Execution. At a minimum, one attack must integrate two or more assets. Provide TGO for, at a minimum, two striker PGMs. Execute two Type 2 and two Type 3 controls for FW strikers. Execute two Type 2 controls of RW strikers.

Debrief. The sortie will be debriefed using simulator recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Type 2, and 3 control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, and timing; sensor management; and CRM. The FAC(A)I shall simulate C3 agencies, TACP, Escort, IDF, and CAS aircraft. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity. Accurate target coordinate and 9-line generation. Proper coordination and approval for CAS attacks.

Prerequisite. SFAC(A)-4806

Ordnance. TPOD, Tanks, 1xGBU-12, 1xGBU-38, 300x25mm, Expendables.

SFAC(A)-4809 1.5 730 B,R,M (NS) S RNAWST/DMRT

Goal. Conduct FAC(A) reassessment.

Requirement

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Type 1 Control of FW
Admin Execution	Type 2 Control of FW
Tac Admin Execution	Type 3 Control of FW
On Deck Setup	Type 1 Control of RW
Airborne Setup	Type 2 Control of RW
FENCE Check Procedures	Type 3 Control of RW
Mission Execution	Control Hellfire
Type 1 Control with GP/FF	Control PGM
Mark	Control Artillery Mark
Type 2 Control with GP/FF	Combined FW / RW Attack
Mark	

Plan. Use PTO and Squadron S-2 to update tablet imagery and software, develop ROE, SPINS, ground SOM, and threats. Develop a plan to locate, PID, and kill enemy targets IAW the ground SOM, achieve commander's intent with the correct weapon to target match. Have a TCT game plan to defeat the threat system or maintain sanctuary from the threat IAW the allowable risk. Organize tablet and FAC(A) mission cards to enable mission success.

Brief. Execute IAW MAWTS-1 brief/debriefing guide. Tailor brief around the AV-8B FAC(A) employment template and TACP TACSOP CAS execution template, system management, communications, correlation, and specific attack templates. Mission rehearsal should emphasize FAC(A) control templates, systems management, 9-line creation, read backs, target PID, target coordinate generation accuracy, GP/PGM employment, TCT, and standardized communications.

Execution. Conduct FAC(A) reassessment IAW JFAC(A) MOA. The FAC(A)I may simulate C3 agencies, TACP, and fully trained Escort.

Debrief. The sortie will be debriefed using simulator recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide.

Performance Standard. Conduct FAC(A) IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Emphasize C3 integration, target area flow, and timing; sensor management; and CRM. The FAC(A)I shall simulate C3 agencies, TACP, Escort, IDF, and CAS aircraft. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity. Accurate target coordinate and 9-line generation. Proper coordination and approval for CAS attacks.

Prerequisite. SFAC(A)-4808.

Ordnance. TPOD, Tanks, PGM, GP, Expendables

FAC(A)-4851 1.3 * B (NS) A 2 AV-8B

Goal. Conduct Aerial Escort (AE) by introducing FAC(A) escort.

Requirement. Escort a FAC(A).

Plan / Brief

Mission Planning
Coordination Brief
Objection Area Diagram
Brief Preparation

Execution

Standardization	Type 1 Control of FW
Admin Execution	Type 2 Control of FW
Tac Admin Execution	Type 3 Control of FW
On Deck Setup	Type 1 Control of RW
Airborne Setup	Type 2 Control of RW
FENCE Check Procedures	Type 3 Control of RW
Mission Execution	Control Hellfire
Type 1 Control with GP/FF	Control PGM
Mark	Control Artillery Mark
Type 2 Control with GP/FF	Combined FW / RW Attack
Mark	

Plan: Support FAC(A) mission objectives throughout planning process.

Brief: FAC(A) led.

Execution: Perform assigned tasking. Provide support to FAC(A) to include communication with MACCS, CAS platform deconfliction, and coordinating marks via SEAD CFF. Maintain situational awareness of FAC(A) and ground units.

Prerequisite. Section Lead. Must have completed CFF-4701 before being tasked to coordinate IDFS marks via SEAD CFF.

Ordnance

Desired: 1 TPOD, 6xMk-76, 1 LGTR, 20 Chaff, 40 Flares.

Acceptable: Mk-82, Mk-83, GBU-12, GBU-38, GBU-54, APKWS, 300 25mm.

Range Requirement. RSTD, HE, EXP, LSR.

External Syllabus Support. FAC(A)led CAS flight.

2.13.13 Large Force Exercise (LFE)

Purpose. Develop proficiency integrating in an LFE under daylight or night conditions.

General

The LFE shall include at least four of the following assets: strike element, sweep element, SEAD element, EA/ES assets, AAR assets, and command and control assets.

The LFE shall include a surface-to-air and/or air-to-air threat.

A WTI or Mission Commander shall instruct all events.

LFE-4900 1.3 365 B,R,M D A 3+ AV-8B

Goal. Execute a day LFE.

Requirement. Complete a day LFE.

Plan / Brief

Mission Planning
Adversary Brief
C3 / AIC Brief
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
Target Acquisition

Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reactions
SEAD Integration
IFREP
Standardized Comm

Performance Standard. Execute all mission tasking IAW Air NTTP. Adhere to all applicable Rules of Conduct and Training Rules. Adhere to air-to-surface and/or air-to-air timelines. Adhere to surface-to-air and/or air-to-air threat countertactics gameplans. 100 percent valid air-to-surface and/or air-to-air weapon releases. Correct ALSA Communication Brevity.

Prerequisite. Applicable 3000 Stage complete. With adversary air threat participating, shall be ACM QUAL. Ensure appropriate flight leadership requirements based on tasking (e.g. ADFL, MC, etc).

Ordnance. Per applicable MCT T&R code being executed.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Per Scenario.

LFE-4901 1.3 365 B,R,M NS A 3+ AV-8B

Goal. Execute a night LFE.

Requirement. Complete a night LFE.

Plan / Brief

Mission Planning
Adversary Brief
C3 / AIC Brief
Brief Preparation

Execution

Standardization
Admin Execution
Tac Admin Execution
On Deck Setup
Airborne Setup
FENCE Check Procedures
Mission Execution
Target Acquisition

Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reactions
SEAD Integration
IFREP
Standardized Comm

Performance Standard. Execute all mission tasking IAW Air NTTP. Adhere to all applicable Rules of Conduct and Training Rules. Adhere to air-to-surface and/or air-to-air timelines. Adhere to surface-to-air and/or air-to-air threat countertactics gameplans. 100 percent valid air-to-surface and/or air-to-air weapon releases. Correct ALSA Communication Brevity.

Prerequisite. NS-2603. Applicable 3000 Stage complete. With adversary air threat participating, shall be ACM QUAL. Ensure appropriate flight leadership requirements based on tasking (e.g. ADFL, MC, etc).

Ordnance. Per applicable MCT T&R code being executed.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Per Scenario.

2.14 INSTRUCTOR TRAINING PHASE

2.14.1 MAWTS-1 Certifications

Purpose. Enumerate MAWTS-1 instructor training syllabi.

General. All certification sorties will be conducted in accordance with the MAWTS-1 Course Catalog. The commanding officer of MAWTS-1 must approve any deviations.

Ground/Academic Training. Refer to the MAWTS-1 Course Catalog.

SWTO-5100	1.5	*	B	S	2 RNAWST
------------------	------------	----------	----------	----------	-----------------

Goal. WTO certification simulator.

Requirement. See MAWTS-1 Course Catalog.

SWTO-5101	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. WTO certification simulator.

Requirement. See MAWTS-1 Course Catalog.

SWTO-5102	1.5	*	B,R	D	S	RNAWST
------------------	------------	----------	------------	----------	----------	---------------

Goal. WTO certification simulator.

Requirement. See MAWTS-1 Course Catalog.

WTO-5103	1.3	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. WTO certification sortie.

Requirement. See MAWTS-1 Course Catalog.

WTO-5104	1.3	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. WTO certification sortie.

Requirement. See MAWTS-1 Course Catalog.

SLATI-5200	1.5	*	B,R	D	S	2 RNAWST
-------------------	------------	----------	------------	----------	----------	-----------------

Goal. LATI certification simulator.

Requirement. See MAWTS-1 Course Catalog.

SLATI-5201	1.5	*	B	D	S	2 RNAWST
-------------------	------------	----------	----------	----------	----------	-----------------

Goal. LATI certification simulator.

Requirement. See MAWTS-1 Course Catalog.

LATI-5202 1.3 * B,R D A 2 AV-8B

Goal. LATI certification sortie.

Requirement. See MAWTS-1 Course Catalog.

LATI-5203 1.3 * B D A 2 AV-8B

Goal. LATI certification sortie.

Requirement. See MAWTS-1 Course Catalog.

LATI-5204 1.3 * B D A 2 AV-8B

Goal. LATI certification sortie.

Requirement. See MAWTS-1 Course Catalog.

SNSI-5300 1.5 * B NS S 2 RNAWST

Goal. NSI certification simulator.

Requirement. See MAWTS-1 Course Catalog.

SNSI-5301 1.5 * B NS S 2 RNAWST

Goal. NSI certification simulator.

Requirement. See MAWTS-1 Course Catalog.

NSI-5302 1.3 * B,R NS A 2 AV-8B

Goal. NSI certification sortie.

Requirement. See MAWTS-1 Course Catalog.

NSI-5303 1.3 * B NS A 2 AV-8B

Goal. NSI certification sortie.

Requirement. See MAWTS-1 Course Catalog.

SNSLATI-5400 1.5 * B NS S 2 RNAWST

Goal. NS LATI certification simulator.

Requirement. See MAWTS-1 Course Catalog.

SNSLATI-5401 1.5 * B NS S RNAWST

Goal. NS LATI certification simulator.

Requirement. See MAWTS-1 Course Catalog.

NSLATI-5402 1.3 * B,R NS A 2 AV-8B

Goal. NS LATI certification sortie.

Requirement. See MAWTS-1 Course Catalog.

SACTI-5500 2.0 * B,R D S 2 RNAWST

Goal. WTI certification final sortie.

Requirement. See MAWTS-1 Course Catalog.

2.14.2 VMAT-203 Instructor Under Training (IUT) Syllabus

Purpose. Enumerate FRS instructor training syllabi.

General. All training shall be conducted in accordance with the FRS IUT FSG. The VMAT-203 Commanding Officer must approve any deviations.

Ground/Academic Training. Refer to the FRS IUT FSG.

Landing Site Instructor (LSI) Training. LSI 5700-5701 training shall be accomplished prior to flight with students in the aircraft. The LSI syllabus requirements are detailed in the IUT FSG. FRS LSIs are only required to be facility qualified. They are not required to be road qualified.

LSI-5700	1.3	*	B	D	G	1 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Observe LSI control of FAM solo flight.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5701	1.3	*	B	D	G	1 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Introduction to LSI control of FAM solo flight.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5702	1.3	*	B	N*	G	1 AV-8B
-----------------	------------	----------	----------	-----------	----------	----------------

Goal. Review LSI control introducing night LSI procedures.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5703	1.3	*	B	D	G	1 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Review LSI control and introduce FBO operations from an approved EAF site.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5704	2.0	*	B	D	G	1 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Review LSO control per LSO NATOPS for FCLP operations.

Requirement. IAW VMAT-203 IUT FSG.

2.14.3 Fleet Replacement Squadron Instructor (FRSI) Training

Prerequisite: Qualified FRS instructor prerequisites.

SIUT-5800	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Practice normal procedures.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5801	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Review normal and emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5802	1.3	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce normal procedures from the rear seat of the TAV-8B.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5803	1.3	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Review normal procedures from the rear seat of the TAV-8B.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5804	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Introduce simulator instructional techniques.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5805	1.3	*	B	D	A	2 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce basic and tactical formation as lead.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5806	1.3	*	B	D	A	4 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce division formation.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5807	1.3	*	B	D	A	4 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Review division formation as lead.

Requirement. IAW VMAT-203 IUT FSG.

2.14.4 Aerial Refueling Stage Instructor Pilot (AARI)

Prerequisite: Fleet Replacement Squadron Instructor (FRSI)

IUT-5808	1.3	*	B	D	A	1 TAV-8B/1 AV-8B
-----------------	------------	----------	----------	----------	----------	-------------------------

Goal. Monitor an aerial refueling sortie.

Requirement. IAW VMAT-203 IUT FSG.

2.14.5 Threat Countertactics Stage Instructor Pilot (TCTI)

Prerequisite: Late Stage Familiarization Instructor and WTO, or LATI, or ACTI.

SIUT-5809	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Review threat countertactics.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5810	1.3	*	B	D	A	1 AV-8B/1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-------------------------

Goal. Introduce threat countertactics chase.

Requirement. IAW VMAT-203 IUT FSG.

2.14.6 Air-to-Surface Stage Instructor Pilot (ASI)

IUT-5819	1.3	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Introduce FAM stage maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5820	1.3	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Practice FAM stage maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5821	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Review FAM stage maneuvers and dangerous errors.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5822	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Monitor Late Stage FAM (instrument) simulator.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5823	1.3	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Review instrument procedures in the FAM stage.

Requirement. IAW VMAT-203 IUT FSG.

2.14.10 Early Stage Familiarization Stage Instructor (EFAMI)

Prerequisite: Late Stage Familiarization Instructor (LFAMI)

SIUT-5824	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Monitor early stage FAM simulator.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5825	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Review FAM stage maneuvers and dangerous errors.

Requirement. IAW VMAT-203 IUT FSG

2.14.11 Night Systems Familiarization Instructor Pilot (NSFI)

Prerequisite: LSI-5704, Night Systems Instructor (NSI) and Late Stage Familiarization Instructor.

IUT-5826	1.3	*	B	NS	A	1 TAV-8B
-----------------	------------	----------	----------	-----------	----------	-----------------

Goal. Introduce Night Systems stage maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5827	1.3	*	B	NS	A	2 TAV-8B
-----------------	------------	----------	----------	-----------	----------	-----------------

Goal. Monitor Night Systems formation maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5828	1.3	*	B	NS	A	2 TAV-8B
-----------------	------------	----------	----------	-----------	----------	-----------------

Goal. Introduce Night Systems formation maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

2.14.12 Advanced Aircraft Handling Instructor Pilot (AAHI)

Prerequisite: Late Stage Familiarization Instructor and Weapons Training Officer (WTO), or LATI, or ACTI.

SIUT-5829	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Monitor advanced aircraft handling simulator.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5830	1.1	*	B	D	A	2 TAV-8B/1 AV-8B
-----------------	------------	----------	----------	----------	----------	-------------------------

Goal. Introduce advanced aircraft handling chase.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5831	1.1	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Review advanced aircraft handling maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

2.14.13 Air-to-Air Stage Instructor Pilot (AAI)

Prerequisite: Air Combat Tactics Instructor (ACTI)

SIUT-5832	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Monitor TVC simulator.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5833	1.1	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Review TVC and BFM maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5834	1.1	*	B	D	A	1 TAV-8B/1 AV-8B
-----------------	------------	----------	----------	----------	----------	-------------------------

Goal. Chase TVC maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5835	1.1	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Review 1V1 BFM.

Requirement. IAW VMAT-203 IUT FSG.

2.14.14 FRS Low Altitude Tactics Instructor Pilot (FRSLATI)

Prerequisite: Low Altitude Tactics Instructor (LATI).

SIUT-5836	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Review Basic and Advanced LAT maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5837	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Review low altitude threat reaction.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5838	1.3	*	B	D	A	1 TAV-8B
-----------------	------------	----------	----------	----------	----------	-----------------

Goal. Review Basic and Advanced LAT maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5839	1.3	*	B	D	A	2 AV-8B
-----------------	------------	----------	----------	----------	----------	----------------

Goal. Review low altitude threat reaction.

Requirement. IAW VMAT-203 IUT FSG

2.14.15 Forward Operating Based Operations Stage Instructor Pilot (FOBI)

Prerequisite: LSI-5705 and Main Base LSS

SIUT-5840	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Monitor FBO simulator.

Requirement. IAW VMAT-203 IUT FSG

2.14.16 NATOPS Check Instructor Pilot

Prerequisite: Fleet Replacement Squadron Instructor (FRSI).

SIUT-5841	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Fly NATOPS check with program/model manager.

Requirement. IAW VMAT-203 IUT FSG.

2.14.17 Navigation Stage Instructor Pilot (NAVI)

Prerequisite: Fleet Replacement Squadron Instructor (FRSI).

SIUT-5842	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Monitor SNAV-1331 simulator.

Requirement. IAW VMAT-203 IUT FSG.

2.14.18 Radar Fundamentals Stage Instructor Pilot (RADI)

Prerequisite: Fleet Replacement Squadron Instructor (FRSI).

SIUT-5843	1.5	*	B	D	S	RNAWST
------------------	------------	----------	----------	----------	----------	---------------

Goal. Monitor SRAD-1361 to review console operation and AS and AA radar TTPs.

Requirement. IAW VMAT-203 IUT FSG.

2.14.19 Air-to-Surface Sensor Fundamentals Stage Instructor Pilot (SENI)

Prerequisite: MECH Stage Instructor (MECHI), Night Systems Familiarization Instructor (NSFI) required to instruct night events.

SIUT-5844 1.5 * B (NS) S RNAWST

Goal. Review all GP and PGM attacks with a TPOD, conducted at night for NSFIs.

Requirement. IAW VMAT-203 IUT FSG.

2.14.20 FRS Bandit Qualification (FRSBQ)

Prerequisite: AA Proficient Fleet Replacement Squadron Instructor (FRSI).

IUT-5845 1.1 * B D A 3 AV-8B

Goal. Fly bandit profiles for a 2v1 WVR SEM sortie.

Requirement. IAW VMAT-203 IUT FSG.

2.14.21 Flight Lead Standardization Evaluator (FLSE)

Purpose. To designate fleet instructors capable of evaluating and standardizing all prospective AV-8B flight leaders. Once designated, FLSE aircrew should evaluate flight leadership events only in squadrons other than the one assigned. In cases where no external support is available, FLSEs may evaluate events in their own squadron, only after coordinating with Model Manager or MAW Program Coordinator. FLSE aircrew assigned as MAG/Wing staff may evaluate events in any unit approved by the FLSE Model Manager. The MAWTS-1 AV-8B Division is the FLSE Model Manager and will delegate FLSE responsibilities as appropriate.

General. See MAWTS-1 AV-8B Course Catalog Appendix A for specific FLSE information.

SFLSE-5900 1.5 * B (NS) S 2 RNAWST

Goal. Conduct an objective evaluation of the FLSEs knowledge of and adherence to AV-8B fleet air-to-surface standard operating procedures including mission planning, briefing, crew resource management, performance criteria, bomb hit analysis, and debriefing.

Requirements. See MAWTS-1 AV-8B Course Catalog.

Brief. See MAWTS-1 AV-8B Course Catalog.

Execution. See MAWTS-1 AV-8B Course Catalog.

Debrief. See MAWTS-1 AV-8B Course Catalog.

Performance Standards. See MAWTS-1 AV-8B Course Catalog.

Prerequisite. See MAWTS-1 AV-8B Course Catalog.

Ordinance. See MAWTS-1 AV-8B Course Catalog

SFLSE-5901 1.5 * B (NS) S 2 RNAWST

Goal. Conduct an objective evaluation of the FLSEs knowledge of and adherence to AV-8B fleet air-to-air standard operating procedures in defense of the Amphibious Task Force (DARG) against a maximum of two groups of adversaries.

Requirements. See MAWTS-1 AV-8B Course Catalog.

Brief. See MAWTS-1 AV-8B Course Catalog.

Execution. See MAWTS-1 AV-8B Course Catalog.

Debrief. See MAWTS-1 AV-8B Course Catalog.

Performance Standards. See MAWTS-1 AV-8B Course Catalog.

Prerequisite. See MAWTS-1 AV-8B Course Catalog.

Ordnance. See MAWTS-1 AV-8B Course Catalog.

2.15 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RCQD) PHASE

2.15.1 NATOPS/Core Skill Introduction Evaluation (NTPS)

Purpose. To evaluate the pilot's knowledge of aircraft systems, performance limitations, and both normal and emergency procedures.

General

NATOPS evaluators/instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

The NATOPS evaluator shall utilize the NATOPS model manager- generated NATOPS Aviation Training Form (ATF) and the evaluation metrics established for the accomplishment and performance of the standardized criterion to determine whether the pilot successfully completed the sortie. A letter designating the pilot as NATOPS qualified shall be placed in the NATOPS jacket upon successful completion.

NATOPS evaluatees shall complete and have a graded open book examination, a graded closed book examination, and an oral examination prior to commencement of the actual NATOPS evaluation event.

PUI shall complete all Core Skill Introduction stages prior to NATOPS/Core Skill Introduction Evaluation.

A designated AV-8B NATOPS check pilot will observe and certify that the PUI is NATOPS qualified per AV-8B NATOPS Manual, Chapter 10.

Ground/Academic Training

Readings. Review AV-8B NATOPS Manual (A1-AV8BB-NFM-000).

Exams

ANTPS-6000, Open Book AV-8B NATOPS exam.

ANTPS-6001, Closed Book AV-8B NATOPS exam.

ANTPS-6002, Ground Evaluation IAW AV-8B NATOPS Manual.

ANTPS-6000 1.5 365 B,R, M I GE

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

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

ANTPS-6001 1.0 365 B,R, M I GE

Goal. The closed book examination shall be limited to the NATOPS question bank. The purpose of the closed book examination portion of the written examination is to evaluate the pilot's knowledge concerning normal/emergency procedures and aircraft limitations.

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

ANTPS-6002 1.0 365 B,R,M I GE

Goal. The oral examination shall consist of, but not be limited to, the NATOPS question bank. The instructors/ evaluators may draw upon their experiences to propose questions concerning normal/emergency procedures, aircraft limitations, and performance.

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

SNTPS-6101 1.5 365 B,R,M I (N) S RNAWST/DMRT

Goal. Conduct an objective evaluation of the pilot's knowledge of mission planning, briefing, normal operating procedures, crew resource management, aircraft systems, performance criteria, emergency procedures, and debriefing.

Requirement. PUI will conduct flight brief. Sortie IAW one of the selected scenarios in Appendix A. Perform all takeoffs and landings. Instructor will select emergencies.

Ground Evaluation

Open Book Examination

Closed Book Examination

Emergency Egress Drill

Flight Evaluation

Mission Planning, Briefing, and Debriefing

Oral Examination

Flight Planning Standardized

Brief Standardized

Flight Equipment Knowledge

Flight Debrief Standardized

Ground Procedures

ADB Review

Engine Start Procedures and Checklists

Before Taxi Procedures and Checklists

Post Landing Procedures and Checklists

Shut Down Procedures and Checklists

Takeoff and Departure

CWAIVER

Takeoff Checklist

Heavy Weight STO

CTO

VTO

Crew Resource Management

10000 Foot Checklist

18000 Foot Checklist

Approach and Landing

Descent Checklist

CL

VNSL

RVL

VL

Communications

Standard Radio Communications

Standard Visual Signals

Emergency Procedures

Ground Emergency

Takeoff Emergency 1

Takeoff Emergency 2

Inflight Emergency to a Full Stop

Landing Emergency 1

Landing Emergency 2

Performance Standards. Execute all procedures IAW AV-8B NATOPS, Air NTTP, and applicable SOPs.

Prerequisite. NATOPS ground/academic training.

SNTPS-6103 0.0 365 B,R,M I (N) S NAWST/DMRT

Goal. Complete CRM training evaluation.

Requirement. Satisfactory completion of CRM training.

Performance Standard. Per syllabus description.

2.15.2 Instrument (INST)

Purpose. NATOPS instrument evaluation POI designed to evaluate the pilot's knowledge of and adherence to NATOPS instrument procedures.

General

NATOPS instrument evaluation events shall consist of those items delineated in OPNAVINST 3710.7 series (NATOPS), NAVAIR 00-80T-112 (NATOPS Instrument Flight Manual), and FAR/AIM.

NATOPS instrument POI should not solely focus on the assessment of the individual, but should also include an educational element.

The NATOPS instrument evaluator shall utilize the NATOPS model manager-generated NATOPS instrument Aviation Training Form (ATF)(see Appendix A of T&R Program Manual) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the aviator completed the sortie. A letter designating the pilot as NATOPS instrument qualified shall be placed in the NATOPS jacket upon successful completion.

NATOPS instrument evaluatees shall ensure that annual instrument minimums are in accordance with OPNAVINST 3710.7 series prior to commencement of event.

A designated AV-8B NATOPS instrument check pilot will observe and certify that the PUI is qualified per OPNAVINST 3710.7 series.

Ground/Academic Training

Readings. Review OPNAVINST 3710.7 series.

Lecture. AINST 6004, Instrument Ground School.

Exams. AINST-6005, Annual Instrument Ground School exam.

AINST-6004 8.0 365 B,R,M I GE

Goal. The Instrument Ground School shall be an approved Commander Naval Air Forces (CNAF)-approved syllabus.

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

AINST-6005 1.0 365 B,R,M I GE

Goal. The Instrument Ground School Exam shall be an approved Commander Naval Air Forces (CNAF)-approved syllabus.

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

SINST-6102 1.5 365 B,R,M I (N) S RNAWST/DMRT

Goal. Conduct an objective evaluation of the aviator's knowledge of and adherence to OPNAV instrument regulations, mission planning, briefing, crew resource management, performance criteria, emergency procedures in IMC conditions, approaches, SIDs, and debriefing.

Requirement. IAW gradesheet in Appendix A. Scenario IAW MAG SOPs.

Ground Evaluation

Instrument Ground School
Instrument Ground Written Examination

Basic Instrument Flying

Instrument Takeoff
Climbing Turns
Descending Turns
Timed Turns
Steep Turns

Recovery From Unusual
Attitudes
Positioning on TACAN Radial
Partial Panel Airwork

Instrument Flight in Controlled Airspace
Flight Planning

Clearance Compliance

Departure
Enroute
Instrument Approach

Usage of Comm / Nav Equipment
Emergencies During Instrument Flight
Voice Procedures

Performance Standard. Execute all procedures IAW AV-8B NATOPS and OPNAVINST 3710.

Prerequisites. AINST-6004, AINST-6005.

2.15.3 Section Leader Standardization And Designation Sorties

Section Leader

Purpose. Prepare and evaluate a prospective flight lead's ability to plan, brief, and lead a combat mission as a section lead.

General

A Section Lead Under Instruction (SLUI) shall conduct the following designation syllabus in order to develop flight leadership. Completion of this syllabus meets the requirements for being designated a Section Leader.

Minimum Requirements: The SLUI shall complete the pre-requisites, designation simulators, and designation sorties with the required instructor. Completion of all requirements listed below (2.14.3.5) may require work up sorties in addition to the designation sorties.

Recommended Build: The SLUI should complete a work up syllabus that mirrors the designation simulators and designation sorties.

Instructors: A section lead shall evaluate all work up simulators and sorties. A division lead shall evaluate all designation simulators and sorties. An ACTI shall evaluate the work up for SSL-6204 and SL-6208. A WTI or ACTI shall evaluate the designation for SSL-6204 and SL-6208. The designation SSL-6203 and any one of the designation flights shall be flown with a Flight Leadership Standardization Evaluator (FLSE).

A modified refresher syllabus will be tailored by the commanding officer based on experience level and time out of cockpit. For aircrew that require Core Skill Introduction Refresher training, per the T&R Program Manual, the minimum redesignation requirement for section lead is successful completion of the R-coded events.

If a networked simulator is available, SSL-6202 and SSL-6203 shall be flown as a networked simulator with the SLUI flying in the lead position.

The section lead exam will be owned and controlled by the MATSS FLSE Program Coordinator.

Once designated as a Section Lead by the commanding officer, the Section Lead may act as a flight lead for any 2000 or 3000 Phase event that does not require additional qualifications or certifications for the flight lead. A section lead may lead flights within the 4000 Phase syllabus that were completed as a wingman.

Prerequisites

200 hours in model, 400 hours total.

2000 level and 3000 level complete.

Receive a passing grade (80%) on the section lead exam.

Requirements. A SLUI shall complete the following items during the course of the Section Leader syllabus:

Two sorties shall be conducted at night.

Conduct the following departures:

Section Stream STO
Section CTO
Section RADAR Trail
Section SID

Conduct the following recoveries:

Section VFR overhead

Section VFR straight-in

Section approach to actual or simulated circling minimums

NORDO

Hung ordnance

Three events shall carry ordnance, at a minimum.

One event shall include aerial refueling.

One event shall be flown in conjunction with RF/IR emitters on a TACTS or EW range.

One event should be flown to a field other than home field.

One event should include a TACTS Debrief.

SSL-6203 and any one of the flights shall be flown with a FLSE, the FLSE should be external to the squadron if available.

A Strike Planning Lab shall be conducted with a WTI or MC in preparation for flying the SSL-6200.

Ground/Academic Training

Readings

AV-8B NATOPS

Chapter 6, Flight Preparation

Chapter 21, Extreme Weather Operation

Chapter 31, Crew Resource Management (CRM)

Air NTTP 3-22.3-AV8B

Chapter 2, Mission Planning, Briefing, and Debrief Standards

Chapter 3, Tactical Administration

Chapter 6, Air to Surface Fundamentals

Chapter 7, Air to Surface Employment

Chapter 8, CAS

Chapter 11, SCAR

Air NTTP 3-22.1-AV8B

Chapter 2, A/S Mission Planning

Chapter 4, Air Interdiction

Chapter 5, Threat Countertactics

Lectures

Receive the following AV-8B Courseware Lectures given by a WTI:

ASL-6020, Briefing and Debriefing

ASL-6021, AV-8B T&R Manual and Training Management

ACPM:

AACPM-8630, Tactical Air Command Center (TACC)

AACPM-8660, Joint Ops Intro

Exams:

ASL-6022, Section Lead Exam

The following matrix will be used to track academic and administrative training.

SELF-PACED READINGS		DATE COMP
AV-8B NATOPS Manual Chapter 6, Flight Preparation		
AV-8B NATOPS Manual Chapter 21, Extreme Weather Operation		
AV-8B NATOPS Manual Chapter 31, Aircrew Coordination		
Air NTTP 3-22.3-AV8B Chapter 2, Mission Planning, Briefing, and Debriefing		
Air NTTP 3-22.3-AV8B Chapter 3, Tactical Administration		
Air NTTP 3-22.3-AV8B Chapter 6, Air-to-Surface Fundamentals		
Air NTTP 3-22.3-AV8B Chapter 7, Air-to-Surface Employment		
Air NTTP 3-22.3-AV8B Chapter 8, Close Air Support		
Air NTTP 3-22.3-AV8B Chapter 11, SCAR		
Air NTTP 3-22.1-AV8B Chapter 2, Air-to-Surface Mission Planning		
Air NTTP 3-22.1-AV8B Chapter 3, Threat Countertactics		
Air NTTP 3-22.1-AV8B Chapter 4, Air Interdiction		
REQUIRED LECTURES RECEIVED	DATE COMP	INSTRUCTOR
Briefing and Debriefing		
AV-8B T&R Manual and Training Management		
ADMINISTRATIVE FLIGHT LEADERSHIP REQMTS	DATE COMP	INSTRUCTOR
NIGHT EVENT 1		
NIGHT EVENT 2		
SECTION STREAM STO		
SECTION CTO		
SECTION RADAR TRAIL		
SECTION SID		
SECTION VFR OVERHEAD		
SECTION VFR STRAIGHT-IN		
SECTION PAR/TACAN		
NORDO RECOVERY		
HUNG ORDNANCE RECOVERY		
ORDNANCE EVENT 1		
ORDNANCE EVENT 2		
ORDNANCE EVENT 3		
RF/IR EMITTER ON A TCTS OR EW RANGE		
SSL-6203 FLOWN WITH FLSE		
AAR EVENT		
LEAD TACTS FACILITY DEBRIEF		
RECOVER TO FIELD OTHER THAN HOMEFIELD		
SL SORTIE FLOWN WITH FLSE		

SSL-6200 1.5 * B (NS) S RNAWST/DMRT

Goal. Conduct medium altitude Strike.

Requirements

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponneering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Target Acquisition

Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reaction
IFREP

Debrief

Debrief Setup / Presentation
DAQ Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop a scenario to strike a stationary target that is defended by a surface-to-air and air-to-air threat. Scenario will include pre-mission aerial refueling, range known strategic SAMS, range unknown tactical SAMS, ADA, SAR-1 air threats, as well as a defined TOT. Develop a plan that includes a detailed air-to-surface game plan, a threat countertactics game plan, and weaponeering of the target. Ensure JMPS plan is IAW Air NTTP Chapter 2. JWS shall be used to ensure desired Pd.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize routing, go / no go criteria, air-to-surface timelines, systems optimization, threat countertactics, and contingencies. Contingencies must include defensive air-to-air countertactics from cold ops.

Execution. Conduct one pre-mission aerial refueling, ingress, strike, and egress.

Debrief. The sortie will be debriefed using DAQ and TEn feeds, if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate correct target and achieve desired Pd via a valid weapons release. Execute briefed surface-to-air and air-to-air countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to a C2 agency.

Prerequisite. 2000-3000 phase complete, ground/academic training complete, Strike Planning Lab complete.

Ordnance. As determined by flight lead based upon planning and mission analysis.

SSL-6201 1.5 * B D S RNAWST/DMRT

Goal. Conduct low altitude CAS with GP and FF ordnance in adverse weather.

Requirements

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponeering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Routing / SOF / Holding
CAS Check In
Systems Entry
MAW-T
External Correlation
Internal Correlation

CAS Timing Setup / Geometry
Attack / Weapons Employment
TOT
Mutual Support
IFREP
TPOD / VDL Usage
Threat Reactions
Low CAS Considerations
Urban CAS Considerations
Digital CAS Usage

Debrief

Debrief Setup / Presentation
DAQ Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop ROE, SPINS, gridded reference graphic (GRG), ground scheme of maneuver (SOM), and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM. Develop a game plan to counter the threat while meeting allowable risk standards. Ensure JMPS plan is IAW Air NTTP Chapter 2. Generate target area imagery, maps, and weaponeering that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize systems management, descent below an overcast layer, terrain clearance tasks, mission critical tasks, holding, target PID, GRG usage, correlation, low altitude weapons employment, SEAD timelines, threat countertactics, and standardized communication.

Execution. Conduct three attacks from a 300 ft AGL ingress. At least one attack shall be Type 1 control with a mark. At least one attack shall involve SEAD in the game plan. Maintain terrain clearance tasking and execute all mission critical tasks. Achieve desired level of destruction IAW ROE via a valid weapons release. Employ weapons on time (+/- 15 sec). Mitigate and counter the threat IAW allowable risk.

Debrief. The sortie will be debriefed using DAQ and TEn feeds, if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Maintain terrain clearance tasking and execute all mission critical tasks. Locate correct target and achieve ground commander's intent via a valid weapons release. Employ weapons on time (+/- 15 sec). Achieve desired level of destruction IAW. Mitigate and counter the threat IAW allowable risk. Communicate an accurate IFREP to a C2 agency.

Prerequisite. 2000-3000 phase complete, ground/academic training complete.

Ordnance. 3xMK-82 HD, 4x5" Rockets, 300x25MM, Expendables.

SSL-6202 1.5 * B,R D S 2 RNAWST/2 DMRT

Goal. Conduct SCAR with PGM and GP ordnance.

Requirements

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardizaion

Admin Brief
Tac Admin Brief
Mission Brief
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Strike Coordination Execution
Deconfliction
Minimize Time to Acquire/Detect
Minimize Time to Kill
Engage IAW Assets Available/PTL/ROE
Cataloging

Battlefield Handover
AR / AI Execution
Find
TPOD Usage
Visual Search
Minimize Time to Acquire/Detect
Fix / Assignment to PTL
Catalog Procedures
Track / Maintain PID
Target IAW Assets Available/PTL/ROE

Engage	Assess (BDA)
GP Employment / AS Timeline	IFREP Passage
PGM Employment / AS Timeline	Threat Reactions
FF Employment / AS Timeline	SEAD Usage
Debrief	
Debrief Setup / Presentation	Error Recognition
DAQ Debrief Usage	Root Cause Analysis
Tactical Reconstruction	Corrective Action / Quality of Instruction
Weapons Validation	Lessons Learned / Lessons Identified
Mission Analysis	Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop ROE, SPINS, NAIs, TAIs, threats, and a prioritized target list. Develop a plan to locate, ID, and kill enemy targets IAW PTL. The scenario shall include a C2 agency, one dissimilar fixed wing section, one rotary wing section, and one unmanned aerial system. Develop a game plan to counter a mobile RF tactical SAM threat system while meeting allowable risk standards. Ensure JMPS plan is IAW Air NTTP Chapter 2. Generate target area imagery, maps, and weaponeering that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize systems management, target PID, target coordinate generation accuracy, AR/AI asset management and deconfliction, weapons to target match, threat countertactics, and standardized communications.

Execution. Act as the SCAR for the duration of the simulator. Conduct at least two attacks. At least one attack shall include integration with a separate AR/AI asset. Conduct a battlefield handover with an oncoming SCAR.

Debrief. The sortie will be debriefed using DAQ and TEn feeds, if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate targets, pass SCAR attack brief, and facilitate target attacks per the PTL. Mitigate and counter the threat IAW the allowable risk. Deconflict all assets and assign appropriate tasking. Achieve desired level of destruction criteria via a valid weapons release. Execute briefed surface-to-air and air-to-air countertactics IAW allowable risk. Communicate necessary information to a C2 agency.

Prerequisite. 2000-3000 phase complete, ground/academic training complete.

Ordnance. TPOD, 2xMK-82, 2xGBU-54, 300x25MM, Expedables.

SSL-6203 1.5 * B NS S 2 RNAWST

Goal. Conduct night medium altitude CAS in an urban environment.

Requirement

Plan / Brief

Mission Planning	Mission Brief
Brief Preparation	Weaponeering
Mission / Training Objective Development	Target Area Analysis
Standardizaion	Air to Surface Timeline
Admin Brief	Mission Rehearsal
Tac Admin Brief	Contingencies

Execution

Standardizaion	External Correlation
Flight Leadership	Internal Correlation
Admin Excecution	CAS Timing Setup / Geometry
Tac Admin Execution	Attack / Weapons Employment
Mission Execution	TOT
Routing / SOF / Holding	Mutual Support
CAS Check In	IFREP
Systems Entry	TPOD / VDL Usage
MAW-T	Threat Reactions

Night Considerations	Digital CAS Usage
Urban CAS Considerations	
Debrief	
Debrief Setup / Presentation	Error Recognition
DAQ Debrief Usage	Root Cause Analysis
Tactical Reconstruction	Corrective Action / Quality of Instruction
Weapons Validation	Lessons Learned / Lessons Identified
Mission Analysis	Mission / Training Objective Assessment

Plan. The FLSE Program Coordinator will provide the ROE, SPINS, gridded reference graphic (GRG), ground scheme of maneuver (SOM), and threats to the SLUI. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM. Develop a game plan to counter the threat while meeting allowable risk standards. Ensure JMPS plan is IAW Air NTTP Chapter 2. Generate target area imagery, maps, and weaponeering that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize systems management, target PID, collateral damage and danger close considerations, GRG usage, correlation, target coordinate generation accuracy, PGM employment, threat countertactics, and standardized communications.

Execution. Conduct three attacks. Achieve desired level of destruction IAW ROE via a valid weapons release. Employ weapons on time (+/-15 sec). Mitigate and counter the threat IAW the allowable risk. Communicate IFREP to a C2 agency.

Debrief. The sortie will be debriefed using DAQ and TEN feeds, if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate correct target and achieve ground commander's intent via a valid weapons release. Employ weapons on time (+/- 15 sec). Achieve desired level of destruction IAW ROE via a valid weapons release. Mitigate and counter the threat IAW allowable risk. Communicate an accurate IFREP to a C2 agency.

Prerequisite. SSL-6200, SSL-6201, SSL-6202.

Ordnance. TPOD, external fuel tanks, 2xGBU-38, 2xGBU-54, 300x25MM, Expendables.

SSL-6204 1.5 * B,R D S 2 RNAWST/2 DMRT

Goal. Conduct 2v2 partial task training against a single group.

Requirement

Plan / Brief

Mission Planning	Admin Brief
Brief Preparation	Tac Admin Brief
Mission / Training Objective Development	Mission Brief
Standardizaion	Departure Avoidance
Adversary Brief	EM Concepts
AIC / C3 Brief	HSPG Timeline Knowledge

Execution

Standardizaion	Merge Mechanics
Flight Leadership	VID Mechanics
Admin Excecution	Actions at DR
Tac Admin Execution	Targeted/Abort Assessment at MAR
Mission Execution	Actions at MAR
CAP Setup/Maintenance	Staggerback / Notchback
Meld Mechanics	Expendables Usage
Sort Mechanics	C3 / AIC Integration
Valid Weapons Employment	Training Rule Adherence
Shot and Post-Shot Mechanics	Fox Comm
Flow Decision-Making	Shot Status Comm

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. SLUI will lead a section of fighters simulating leading an AA-2808 for proficiency. The intended audience is an ACM qualified wingman. Develop SPINS and plan for 2v2 partial task training against a single group. Develop Adversary and AIC SPINS. Develop a plan for bandit tasking to achieve training objectives (Level II maximum). Exercise control will be Single Shot Kill Employment Non-RTO. Focus for this sortie is on air-to-air tactical administration and Harrier Standard Game Plan adherence. Ensure JMPS plan is IAW Air NTTP Chapter 2.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Brief adversaries and AIC. ACM Training Rules shall be briefed. SLUI should demonstrate knowledge of tactical administration and the Harrier Standard Game Plan. SLUI shall discuss energy management concepts and departure avoidance. Mission rehearsal should discuss cap, commit, intercept flow, meld mechanics, sort mechanics, shot doctrine, targeting, and tactics.

Execution. Set the war with recommendations from the adversaries. Perform four intercepts demonstrating banazai and short skate flows. Air-to-air threat countertactics shall be demonstrated on both banzai and short skate intercepts.

Debrief. A mass debrief and fighter debrief will be conducted utilizing the DAQ and TEn recordings. Instructor will play the role of bandits. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standards. Execute proper tac admin. Maintain control of sortie evolution and adhere to training rules. Demonstrate ability to manage energy and adhere to briefed game plan.

Prerequisite. 2000-3000 phase complete, ground/academic training complete.

Ordnance

1xCATM-9, 2xCATM-120, TCTS Pod, 30 Chaff, 30 Flares. (reloads as required)

Range Requirement. As desired by the PUI. Must simulate an actual range that supports ACM training objectives.

External Syllabus Support. GCI.

SL-6205 1.3 * B (N) A 2 AV-8B

Goal. Conduct medium altitude AR.

Requirements

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Find
TPOD Usage

Visual Search
Minimize Time to Acquire/Detect
Fix / Assignment to PTL
Catalog Procedures
Track / Maintain PID
Target IAW Assets Available/PTL/ROE
Engage

GP Employment / AS Timeline	TPOD Usage
PGM Employment / AS Timeline	IFREP Passage
FF Employment / AS Timeline	Threat Reactions
Assess (BDA)	SEAD Usage
Debrief	
Debrief Setup / Presentation	Error Recognition
TCTS Facility Usage	Root Cause Analysis
Tactical Reconstruction	Corrective Action / Quality of Instruction
Weapons Validation	Lessons Learned / Lessons Identified
Mission Analysis	Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop ROE, SPINS, NAIs, TAIs, threats, and a prioritized target list. Develop a plan to locate, ID, and kill enemy targets IAW PTL. The scenario shall include a C2 agency. Develop a game plan to counter a mobile RF tactical SAM threat system while meeting allowable risk standards. Ensure JMPS plan is IAW Air NTTP Chapter 2. Generate target area imagery, maps, and weaponeering that enable mission success.

Brief. Execute IAW MAWTS-1 Briefing/Debriefing Guide. Mission rehearsal should emphasize systems management, target PID, target coordinate generation accuracy, weapons to target match, threat countertactics, and standardized communications.

Execution. Conduct at least two attacks. Locate targets, pass section attack brief, and facilitate target attacks. Mitigate and counter the threat IAW the allowable risk. Communicate IFREP to a simulated or actual tactical C2 agency.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate, catalog, and strike targets IAW PTL. Achieve desired level of destruction criteria via a valid weapons release. Execute briefed surface-to-air and air-to-air countertactics IAW allowable risk. Communicate an accurate IFREP.

Prerequisite. SSL-6202.

Ordnance

Desired: TPOD, 4xMK-82, 300x25MM, 10 Chaff, 20 Flare.

Acceptable substitutes: TPOD, any combination of GP and Forward Firing ordnance.

Range Requirement. RSTD, HE, EXP, STRAFE.

SL-6206 1.3 * B (N) A 2+ AV-8B

Goal. Conduct medium altitude Strike.

Requirements

Plan / Brief

Mission Planning	Mission Brief
Brief Preparation	Weaponeering
Mission / Training Objective Development	Target Area Analysis
Standardizaion	Air to Surface Timeline
Admin Brief	Mission Rehearsal
Tac Admin Brief	Contingencies

Execution

Standardizaion	Mission Execution
Flight Leadership	Target Acquisition
Admin Excecution	Target Area Tactics
Tac Admin Execution	Strike Timeline Adherence

Weapons Employment
AS Threat Reactions

AA Threat Reaction
IFREP

Debrief

Debrief Setup / Presentation
TCTS Facility Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop a scenario to strike a stationary target that is defended by a surface-to-air and air-to-air threat. Scenario will include range known strategic SAMS, range unknown tactical SAMS, ADA, SAR-1 air threats, as well as a defined TOT. Develop a plan that includes a detailed air-to-surface game plan, a threat countertactics game plan, and weaponeering of the target. Ensure JMPS plan is IAW Air NTTP Chapter 2. JWS shall be used to ensure desired Pd.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize routing, go / no go criteria, air-to-surface timelines, systems optimization, threat countertactics, and contingencies. Contingencies must include defensive air-to-air countertactics from cold ops.

Execution. Conduct one ingress, strike, and egress. Communicate IFREP to a simulated or actual C2 agency.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices. Use of a TACTS debrief is desired. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate correct target and achieve desired Pd via a valid weapons release. Execute briefed surface-to-air and air-to-air countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to a C2 agency.

Prerequisite. SSL-6200.

Ordnance

Desired: As requested by flight lead, TCTS pod.
Acceptable substitutes: Simulated ordnance acceptable.

Range Requirement. AA, TACTS, RSTD, EXP.

External syllabus support. TACTS facility, RTO, SAM threat emitters.

SL-6207 1.3 * B,R NS A 2 AV-8B

Goal. Conduct night medium altitude CAS.

Requirements

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponeering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Routing / SOF / Holding

CAS Check In
Systems Entry
MAW-T
External Correlation
Internal Correlation
CAS Timing Setup / Geometry

	Attack / Weapons Employment	Threat Reactions
	TOT	Night Considerations
	Mutual Support	Urban CAS Considerations
	IFREP	Digital CAS Usage
	TPOD / VDL Usage	
Debrief	Debrief Setup / Presentation	Error Recognition
	DAQ Debrief Usage	Root Cause Analysis
	Tactical Reconstruction	Corrective Action / Quality of Instruction
	Weapons Validation	Lessons Learned / Lessons Identified
	Mission Analysis	Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop ROE, SPINS, gridded reference graphic (GRG), ground scheme of maneuver (SOM), and threats. Develop a plan to locate, ID, and kill enemy targets IAW the ground SOM. Develop a game plan to counter the threat while meeting allowable risk standards. Ensure JMPS plan is IAW Air NTTP Chapter 2. Generate target area imagery, maps, and weaponeering that enable mission success.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize systems management, target PID, GRG or imagery usage, correlation, weapons employment, threat countertactics, and standardized communications.

Execution. Conduct at least two attacks. Achieve desired level of destruction IAW ROE via a valid weapons release. Employ weapons on time (+/-15 sec). Mitigate and counter the threat IAW the allowable risk. Communicate an IFREP to a C2 agency.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate correct target and achieve ground commander's intent via a valid weapons release. Employ weapons on time (+/- 15 sec). Achieve desired level of destruction IAW ROE via a valid weapons release. Mitigate and counter the threat IAW allowable risk. Communicate an accurate IFREP to a C2 agency.

Prerequisite. SSL-6201, SSL-6203.

Ordnance

Desired: TPOD, 1xGBU-12/16, 1xGBU-38/32/54, 300x25mm, 10 Chaff, 20 Flares.

Acceptable substitutes: Any combination of PGM and Forward Firing ordnance.

Range Requirement. RSTD, LSR, STRAFE, HE, EXP.

External Syllabus Support. JTAC or FAC(A).

SL-6208 1.3 * B,R D A 2+ AV-8B

Goal. Conduct 2v1+1 short range intercepts to section engaged maneuvering.

Requirements

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
LARs / Limitations
EM Concepts
Departure Avoidance
BVR/WVR transition
HABFM Game Plans

Execution

Standardizaion
Flight Leadership
Admin Execution
Tac Admin Execution

Mission Execution
Forward Quarter Intercepts
Rear Quarter Intercepts
Beam Intercepts

Post Engagement Flow	Comm
Training Rule Adherence	
Debrief	
Debrief Setup / Presentation	Error Recognition
TCTS Debrief Usage	Root Cause Analysis
Tactical Reconstruction	Corrective Action / Quality of Instruction
Weapons Validation	Lessons Learned / Lessons Identified
Mission Analysis	Mission / Training Objective Assessment

Plan. Develop a plan to lead a 2v1+1 short range intercept sortie, mirroring leading an AA-2807 for proficiency. Plan a CAP location that permits bandit freedom of movement outside of 15nm. Sortie construct is continuous vul, with bandit managing geometry to provide at least one of each required intercept. PHID via VID is required on all lines. GCI utilization is encouraged, but only contacts inside 15nm will be called.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. ACM Training Rules shall be briefed. SLUI should demonstrate knowledge of the AIM-9M, AIM-120, and GAU-12 launch acceptability regions and limitations. SLUI shall discuss energy management concepts and departure avoidance. Mission rehearsal should emphasize SRR mechanics, visual bracket geometry, post-merge gameplans, engaged and supporting fighter contracts and ACC communications.

Execution. From a tap-the-cap setup, perform at least 3 intercepts between 10 nm and 15 nm against an IR-2+ Category II-III adversary: 1 forward quarter entry, 1 beam entry, and 1 rear quarter entry. Execute procedures IAW Air NTTP. Utilize short-range RADAR mech, GCI, and RWR to gain SA to, and target threat groups.

Debrief. Execute IAW the MAWTS-1 AV-8B Briefing/Debriefing Guide. TACTS debrief should be utilized if available, otherwise whiteboard debrief required. Review tapes for game plan adherence and aircraft performance. Validate all shots and debrief missed shot opportunities, intercept geometry, communications, radar mechanics, and threat countertactics.

Performance Standard. Execute proper tac admin. Maintain control of sortie evolution, SA to wingman, and SA to bandits. Demonstrate ability to manage energy, control merges, and adhere to section engaged maneuvering gameplans.

Prerequisite. SSL-6204.

Ordnance

Desired: 1xCATM-9, 2xCATM-120, TCTS Pod, 30 Chaff, 30 Flares.

Required: 1xCATM-9, TCTS Pod, Expendables.

Range Requirement. RSTD, AA, EXP.

External syllabus support. TACTS Facility. 1 x adversary required, 2 desired (dissimilar preferred but not required).

2.15.4 Division Leader Standardization And Designation Sorties

Division Leader

Purpose. Prepare and evaluate a prospective flight lead's ability to plan, brief, and lead a combat mission as a division lead.

General

A Division Leader Under Instruction (DLUI) shall conduct the following designation syllabus in order to develop flight leadership. Completion of the DL syllabus meets the requirements for being designated a Division Leader.

Minimum Requirements: The DLUI shall complete the pre-requisites, designation simulators, and designation sorties with the required instructor. Completion of all requirements listed below (2.14.4.5) may require work up sorties in addition to the designation sorties.

Recommended Build: The DLUI should complete a work up syllabus that mirrors the designation simulators and designation sorties.

Instructors: A division lead shall evaluate all work up simulators and sorties. A mission commander shall evaluate all designation sorties. One of the designation sorties shall be flown with a Flight Leadership Standardization Evaluator (FLSE).

The Refresher POI will be tailored by the commanding officer based on experience level and time out of cockpit. It is assumed that the Refresher pilot has the prerequisite academic knowledge base and familiarity with SOPs to conduct the designation syllabus.

Prerequisites

Section Lead. 400 hours in model.

Receive a passing grade (80%) on the division leader exam.

Requirements

DLUI shall complete the following items during the course of the Division Lead syllabus:

Conduct the following departures:

Division stream STO.

Division RADAR trail.

Conduct the following recoveries:

Division overhead.

Division straight-in.

Two events shall carry ordnance, at a minimum.

One event will be flown in conjunction with RF/IR emitters on a TCTS or EW range.

One event should include AAR.

One event should be flown to a field other than homefield.

One event should be debriefed at a TACTS facility.

Either the DL-6302 or DL-6303 shall incorporate an actual adversary. This requirement can be satisfied in the work-up or designation.

Two events, at a minimum, shall be conducted with four aircraft.

One flight event shall be flown with an FLSE, the FLSE should be external to the squadron if available.

A Strike Planning Lab shall be conducted with a WTI or MC in preparation for flying the SDL-6300.

Ground/Academic Training

Readings. IAW Table below.

Exams. ADL-6031, Division Lead Exam.

Lectures:

ADL-6030, Division Target Area Mechanics

ACPM-8640, Joint Data Network.

ACPM-8641, MAGTF Theater & National ISR Employment.

Tracking. The following matrix will be used to track academic and administrative training.

SELF-PACED READINGS		DATE COMP
Air NTTP 3-22.3-AV8B, Chapter 3, Tactical Admin		
Air NTTP 3-22.1-AV8B, Chapter 5, SEAD		
ADMINISTRATIVE FLIGHT LEADERSHIP REQMTS	DATE COMP	INSTRUCTOR
DIVISION STREAM STO		
DIVISION RADAR TRAIL		
DIVISION OVERHEAD		
DIVISION STRAIGHT-IN		
ORDNANCE EVENT		
ORDNANCE EVENT		
RF/IR EMITTERS ON A TCTS OR EW RANGE		
4-SHIP EVENT		
4-SHIP EVENT		
FLSE SORTIE		
AAR EVENT		
LEAD TACTS DEBRIEF		
ACTUAL ADVERSARY EVENT		
EVENT FLOWN TO FIELD OTHER THAN HOMEFIELD		

SDL-6300 1.5 * B (NS) S 2+ RNAWST/2+ DMRT

Goal. Conduct medium altitude Strike.

Requirements

Plan / Brief

Mission Planning
Brief Preparation / Flight Member Tasking
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponneering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Target Acquisition

Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reaction
IFREP

Debrief

Debrief Setup / Presentation
DAQ Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. The FLSE Program Coordinator will develop and provide a scenario to strike a stationary target that is defended by a surface-to-air and air-to-air threat. Scenario will include pre-mission aerial refueling, range known strategic SAMS, range unknown tactical SAMS, ADA, SAR-1 air threats, as well as a defined TOT. Develop a plan that includes a detailed air-to-surface game plan, a threat countertactics game plan, and weaponneering of the target. Ensure JMPS plan is IAW Air NTTP Chapter 2. JWS shall be used to ensure desired Pd. Networked simulator will be flown with the pilot in the linked device acting as dash 3.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize routing, go / no go criteria, air-to-surface timelines, systems optimization, threat countertactics, and contingencies. Contingencies must include defensive air-to-air countertactics from cold ops.

Execution. Conduct one pre-mission aerial refueling, ingress, strike, and egress.

Debrief. The sortie will be debriefed using DAQ and TEn feeds, if available. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate correct target and achieve desired Pd via a valid weapons release. Execute briefed surface-to-air and air-to-air countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to a C2 agency.

Prerequisite. Section Lead, ground/academic training complete, Strike Planning Lab complete.

Ordnance. As determined by flight lead based upon planning and mission analysis.

DL-6301 1.3 * B (NS) A 3+ AV-8B

Goal. Conduct division target area mechanics.

Requirement

Plan / Brief

Mission Planning
Brief Preparation / Flight Member Tasking
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponneering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Tactical Maneuvering

Target Acquisition
Target Area Tactics
PGM Employment / Timeline Adherence
GP Employment / Timeline Adherence
FF Employment / Timeline Adherence
Rejoin

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Develop a plan to conduct target area mechanics with a division. The first portion of the sortie should emphasize tactical maneuvering of a division and the second portion of the sortie should be target area mechanics. Attack profiles should be a combination of level deliveries and dive deliveries using a mix of PGM, general purpose, and forward firing weapons. Specific consideration should be given to methods for rejoining the division between each individual attack.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize NATOPS specified procedures for division administrative and tactical maneuvering, deconfliction between elements and individual aircraft during target attacks, and methods for rejoining the division between attacks.

Execution. Conduct division administrative and tactical maneuvering. Conduct at least two level PGM attacks and two dive attacks using general purpose or forward firing ordnance. The division will be rejoined to a visual formation between each attack.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices. Use of a TACTS debrief is desired. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JWS, WARP, eSLIC, and NATIP. Proper use of TPOD and systems to optimize and support weapon. Comply with tactical abort parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Safely maneuver a division during administrative and tactical portions of the sortie.

Prerequisite. SDL-6300.

Ordnance. Desired: TPOD, 2xMK-82 HD, 1xGBU-54, 1xGBU-12, 100x25mm, 30 Flares.
Acceptable substitutes: 2xGP HD/LD (HE/Inert), 2xPGM (HE/Inert), CATM-65E/E2, Gun/Rockets.

Range Requirement. RSTD, HE, EXP, STRAFE.

External Syllabus Support. TACTS Debrief facility.

DL-6302 1.3 * B D A 3+ AV-8B

Goal. Conduct division day Strike.

Requirement

Plan / Brief

Mission Planning
Brief Preparation / Flight Member Tasking
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponeering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Target Acquisition

Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reaction
IFREP

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop a scenario to strike a stationary target that is defended by a surface-to-air and air-to-air threat. Scenario will include pre-mission aerial refueling, range known strategic SAMS, range unknown tactical SAMS, ADA, SAR-1 air threats, as well as a defined TOT. Develop a plan that includes a detailed air-to-surface game plan, a threat countertactics game plan, and weaponeering of the target. Ensure JMPS plan is IAW Air NTTP Chapter 2. JWS shall be used to ensure desired Pd.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize routing, go / no go criteria, air-to-surface timelines, systems optimization, threat countertactics, and contingencies. Contingencies must include defensive air-to-air countertactics from cold ops.

Execution. Conduct one ingress, strike, and egress. Communicate IFREP to a simulated or actual C2 agency.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices. Use of a TACTS debrief is desired. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate correct target and achieve desired Pd via a valid weapons release. Execute briefed surface-to-air and air-to-air countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to a C2 agency.

Prerequisite. DL-6301.

Ordnance

Desired: As requested by flight lead, TCTS pod, Expendables.

Acceptable substitutes: Simulated ordnance acceptable.

Range Requirement. AA, TCTS, RSTD, EXP.

External syllabus support. TACTS facility, RTO, SAM threat emitters, 1x RADAR equipped adversary desired.

DL-6303 1.3 * B,R NS A 3+ AV-8B

Goal. Conduct division night Strike.

Requirement

Plan / Brief

Mission Planning
Brief Preparation / Flight Member Tasking
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponeering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Target Acquisition

Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reaction
IFREP

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Use PTO, WTI, and Squadron S-2 to develop a scenario to strike a stationary target that is defended by a surface-to-air and air-to-air threat. Scenario will include pre-mission aerial refueling, range known strategic SAMS, range unknown tactical SAMS, ADA, SAR-1 air threats, as well as a defined TOT. Develop a plan that includes a detailed air-to-surface game plan, a threat countertactics game plan, and weaponeering of the target. Ensure JMPS plan is IAW Air NTTP Chapter 2. JWS shall be used to ensure desired Pd.

Brief. Execute IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Mission rehearsal should emphasize routing, go / no go criteria, air-to-surface timelines, systems optimization, threat countertactics, and contingencies. Contingencies must include defensive air-to-air countertactics from cold ops.

Execution. Conduct one ingress, strike, and egress. Communicate IFREP to a simulated or actual C2 agency.

Debrief. The sortie will be debriefed using aircraft and TPOD recording devices. Use of a TACTS debrief is desired. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validation of all weapons employments is required.

Performance Standard. Locate correct target and achieve desired Pd via a valid weapons release. Execute briefed surface-to-air and air-to-air countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to a C2 agency.

Prerequisite. DL-6302.

Ordnance

Desired: As requested by flight lead, TCTS pod, Expendables.

Acceptable substitutes: Simulated ordnance acceptable.

Range Requirement. AA, TCTS, RSTD, EXP.

External syllabus support. TACTS facility, RTO, SAM threat emitters 1x RADAR equipped adversary desired.

2.15.5 Mission Commander Standardization And Designation Sorties

Mission Commander

Purpose. Evaluate a prospective Mission Commander's ability to plan, brief, and lead a combat mission as the Mission Commander.

General

Completion of the syllabus meets the requirements for being designated as a Mission Commander. At the discretion of the squadron commanding officer, a letter designating the pilot as a Mission Commander shall be placed in the NATOPS jacket and APR.

The Refresher POI will be tailored by the commanding officer based on experience level and time out of cockpit. It is assumed that the refresher pilot has the prerequisite academic knowledge base and familiarity with SOPs to conduct the designation syllabus.

Minimum Requirements: The MCUI shall complete the pre-requisites, and designation sorties with the required instructor.

Recommended Build: The MCUI should complete a work up syllabus that mirrors the designation sorties.

One event shall be flown with an FLSE external to the squadron.

A Mission Commander shall instruct all events.

Prerequisites

500 hours in model
Division Leader
Range Training Officer (RTO)
AAD and OAAW complete

Ground/Academic Training

Lectures. Review the following AV-8B courseware lectures:

AMC-6040, Strike Mission Commander, Part 1

AMC-6041, Strike Mission Commander, Part 2

ACPM-8620, ESG/CSG Integration.

MC-6400	2.0	*	B	(NS) A	3+ AV-8B
----------------	------------	----------	----------	---------------	-----------------

Goal. Lead a day or night STK Element in an LFE as the Strike Flight Lead.

Requirement. Lead a Division as the Strike Flight Lead for a STK LFE. The mission shall be supported with command and control assets, SEAD, EA, ES, AAR, and OCA assets. Scenario per MC guidance. Emphasize flight leadership and tactical decision making. LFE planning should be conducted on a day prior to execution. MC will oversee mass brief and debrief, with SFL responsible for appropriate portions.

Mission Planning / Confirmation Brief

Tasking of other elements
C3 Integration
Strike Integration
Fighter Integration
Strike Integration

Target Area Analysis
Timeline Analysis
Threat Analysis
Coordination / Confirmation Brief
Planning Timeline Adherence

Element Brief

Mission Planning
Brief Preparation / Flight Member Tasking
Mission / Training Objective Development
Standardizaion
Admin Brief
Tac Admin Brief

Mission Brief
Weaponneering
Target Area Analysis
Air to Surface Timeline
Mission Rehearsal
Contingencies

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
Target Acquisition

Target Area Tactics
Strike Timeline Adherence
Weapons Employment
AS Threat Reactions
AA Threat Reaction
IFREP

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Performance Standard. Planning, briefing, execution, and debrief IAW the MAWTS-1 Mission Commander's Handbook. Develop a sound tactical game plan based on the scenario. Adhere to all applicable Rules of Conduct and Training Rules. Adhere to air-to-surface and/or air-to-air timelines. Adhere to surface-to-air and/or air-to-air threat countertactics gameplans. 100 percent valid air-to-surface and/or air-to-air weapon releases. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution. Participate in a mass debrief using a TACTS facility if available.

Prerequisites. See phase description.

Ordnance. As determined by mission analysis.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Adversaries, Tanker, Blue Air, GCI/AIC, TACTS facility, RTO, RF/EW emmitters.

MC-6401 2.0 * B (NS) A 4+ AV-8B

Goal. Lead a day or night STK LFE as the Mission Commander.

Requirement. Lead a STK LFE. MCUI may concurrently serve as the SFL or have that role assigned to another individual. The mission shall be supported with command and control assets, SEAD, EA, ES, AAR, and OCA assets. Scenario per MC guidance. Emphasize flight leadership and tactical decision making. LFE planning should be conducted on a day prior to execution. MCUI will oversee mass brief and debrief.

Mission Planning / Confirmation Brief

Tasking of other elements
C3 Integration
Strike Integration
Fighter Integration

Strike Integration
Target Area Analysis
Timeline Analysis
Threat Analysis

Coordination / Confirmation Brief		Planning Timeline Adherence	
Element Brief			
Mission Planning		Mission Brief	
Brief Preparation / Flight Member Tasking		Weaponneering	
Mission / Training Objective Development		Target Area Analysis	
Standardizaion		Air to Surface Timeline	
Admin Brief		Mission Rehearsal	
Tac Admin Brief		Contingencies	
Execution			
Standardizaion		Target Area Tactics	
Flight Leadership		Strike Timeline Adherence	
Admin Excecution		Weapons Employment	
Tac Admin Execution		AS Threat Reactions	
Mission Execution		AA Threat Reaction	
Target Acquisition		IFREP	
Debrief			
Debrief Setup / Presentation		Error Recognition	
TCTS Debrief Usage		Root Cause Analysis	
Tactical Reconstruction		Corrective Action / Quality of Instruction	
Weapons Validation		Lessons Learned / Lessons Identified	
Mission Analysis		Mission / Training Objective Assessment	

Performance Standard. Planning, briefing, execution, and debrief IAW the MAWTS-1 Mission Commander's Handbook. Develop a sound tactical game plan based on the scenario. Issue SPINS for all assets and oversee all subordinate flight leads. Coordinate and deconflict multiple elements. Adhere to all applicable Rules of Conduct and Training Rules. Adhere to air-to-surface and/or air-to-air timelines. Adhere to surface-to-air and/or air-to-air threat countertactics gameplans. 100 percent valid air-to-surface and/or air-to-air weapon releases. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution. Execute a mass debrief using TACTS facility.

Prerequisites. See phase description.

Ordnance. As determined by mission analysis.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Adversaries, Tanker, Blue Air, GCI/AIC, TACTS facility, RTO, RF/EW emmitters.

MC-6402 2.0 * B,R (NS) A 2+ AV-8B

Goal. Lead a day or night large force SCAR package as the Mission Commander.

Requirement. SCAR Mission Commander evaluation requires the MCUI to act as the SCAR for a minimum of 2 dissimilar striker elements in a confined airspace in a medium threat scenario with active RF SAM emitters. Scenario per MC guidance. Emphasize flight leadership and tactical decision making. LFE planning should be conducted on a day prior to execution. MCUI will oversee mass debrief.

Mission Planning / Confirmation Brief			
Tasking of other elements		Target Area Analysis	
C3 Integration		Timeline Analysis	
Strike Integration		Threat Analysis	
Fighter Integration		Coordination / Confirmation Brief	
Strike Integration		Planning Timeline Adherence	
Element Brief			
Mission Planning		Mission / Training Objective Development	
Brief Preparation / Flight Member Tasking		Standardizaion	

	Admin Brief	Target Area Analysis
	Tac Admin Brief	Air to Surface Timeline
	Mission Brief	Mission Rehearsal
	Weaponneering	Contingencies
Execution		
	Standardizaion	Target Area Tactics
	Flight Leadership	Strike Timeline Adherence
	Admin Excecution	Weapons Employment
	Tac Admin Execution	AS Threat Reactions
	Mission Execution	AA Threat Reaction
	Target Acquisition	IFREP
Debrief		
	Debrief Setup / Presentation	Error Recognition
	TCTS Debrief Usage	Root Cause Analysis
	Tactical Reconstruction	Corrective Action / Quality of Instruction
	Weapons Validation	Lessons Learned / Lessons Identified
	Mission Analysis	Mission / Training Objective Assessment

Performance Standard. Planning, briefing, execution, and debrief IAW the MAWTS-1 Mission Commander's Handbook. Develop a sound tactical gameplan based on the scenario. Coordinate and deconflict multiple elements. Issue SPINS to all assets. Adhere to all applicable Rules of Conduct and Training Rules. Adhere to air-to-surface and/or air-to-air timelines. Adhere to surface-to-air and/or air-to-air threat countertactics gameplans. Valid air-to-surface and/or air-to-air weapon releases. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisites. MC-6400.

Ordinance. As determined by mission analysis.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. GCI/AIC, TACTS facility, RF emitters. A minimum of 2 striker sections (at least one striker section shall be dissimilar and at least one striker section shall be fixed wing). UAS incorporation highly desired.

2.15.6 Range Training Officer (RTO) Standardization And Designation Events

Range Training Officer

Purpose. Evaluate and train a prospective RTO's ability to provide exercise control, safety of flight supervision, and weapons assessment.

General

Completion of the syllabus meets the requirements for being designated as a Range Training Officer. At the discretion of the squadron commanding officer, a letter designating the pilot as a Range Training Officer shall be placed in the NATOPS jacket and APR.

The Refresher POI will be tailored by the commanding officer based on experience level and time out of cockpit. It is assumed that the refresher pilot has the prerequisite academic knowledge base and familiarity with SOPs to conduct the designation syllabus.

A WTI, ACTI, or Mission Commander shall instruct all events.

Prerequisites

Section Leader

Ground/Academic Training

AFTTP 3-1.General Planning

Review General Planning, Attachment 1, USAF Communication Standards

AFTTP 3-1.Shot Kill

Review Chapter 2, Debrief and Range Training Officer/Nonrange Training Officer Procedures

Recieve the following chaltalks:

ARTO-6050, Intro to RTO Tables, TACTS Equipment, and the Role of the RTO

Review the following AV-8B courseware lectures:

ARTO-6051, TACTS Debrief Lab

RTO-6500 2.0 * B (N) G TACTS DEBRIEF FACILITY

Goal. Observe an RTO evolution.

Requirement. Observe an air-to-air event conducted utilizing shooter control / RTO assist. RTO under instruction shall observe RTO participation in both the brief and debrief in addition to execution. Demonstrate proficiency using TACTS console.

Brief / Execution / Debrief

Brief With Red RTO
Manage Air to Air Threat Presentations
Manage Surface To Air Threats
Relay War and Weather
Copy / Assess Shots

Relay Kills / Continue
Safety Of Flight Recognition
Note Taking
Identification Of Focus Points for Debrief
Support Debrief

Performance Standard. Demonstrate appropriate knowledge and proficiency utilizing the TACTS console. This may be done separately or concurrently with the debrief. At a minimum, in order to demonstrate console proficiency, DLUT must show the IP all playback modes and know when each is the most useful (BVR, BFM, etc), demonstrate pairing, show how to ID targeted fighters, change playback colors, and use playback/time search functionality.

Prerequisite. See phase description. Review appropriate AFTTP 3-1 Publications and AV-8B ANTP 3-22.1 Chapters 7-8.

External Syllabus Support. TACTS debrief facility.

RTO-6501 2.0 * B (N) G TACTS DEBRIEF FACILITY

Goal. Safely, effectively, and efficiently meet the requirements of RTO.

Requirement. Demonstrate the ability to act as a designated RTO on a sortie with an air-to-air and surface-to-air threats. DLUT/ RTOUI may conduct training during another aircrew's syllabus event or during a dedicated event. RTO under instruction shall observe RTO participation in both the brief and debrief in addition to execution.

Brief / Execution / Debrief

Brief With Red RTO
Manage Air to Air Threat Presentations
Manage Surface To Air Threats
Relay War and Weather
Copy / Assess Shots

Relay Kills / Continue
Safety Of Flight Recognition
Note Taking
Identification Of Focus Points for Debrief
Support Debrief

Performance Standard. Conduct RTO responsibilities for a flight which shall have an air-to-air threat and should have surface-to-air threats.

RTO receives brief from blue flight lead and briefs with red RTO.

RTOUI demonstrates the ability to relay the type of war/weather call, copy shots, assess shots, and relay any kill/continue calls.

The RTOUI demonstrates the ability to monitor and affect Safety of Flight. The event shall be conducted with live aircraft in a TCTS range, but may have simulated SA threats.

Review TCTS tape. RTOUI shall support the debrief. RTOUI provides detailed notes on potential SOF and training rule violations, passes times of all passed and copied shots, surface and air, provides sketch of key phases and, as directed by flight lead, provide timeline of events.

Provides debrief focal points for areas flight lead should review.

Supports mass debrief.

Prerequisite. RTO-6501.

Ordnance. Per scenario.

External Syllabus Support. TACTS debrief facility, RTO required event, Red RTO, AA and SA threat.

2.15.7 Air Defense Flight Leader Standardization and Designation Sortie

Air Defense Flight Leader

Purpose. Prepare and evaluate a prospective flight leads ability to plan, brief, and execute a Division AV-8B DARG/DCA mission as the flight lead. In conjunction with the Active Air Defense Stage, ADFL steps logically through 2-Ship Harrier Standard Gameplan against maneuvering adversaries, 4-ship Harrier Standard Gameplan as -3, and culminates at 4-Ship Harrier Standard Gameplan as the Flight Lead. The standard for Fleet Units should be completion of the 6603, with the understanding that the squadron ACTI will serve as the flight lead in these scenarios. Completion of the 6604 may be required for follow-on training as an AV-8B ACTI, or to meet squadron assigned MET requirements.

General

An Air Defense Flight Lead under instruction shall conduct the following designation syllabus in order to develop flight leadership.

Minimum Requirements: The ADFL under instruction shall complete the pre-requisites, and designation sorties with the required instructor. However, satisfactory performance may require work-up sorties in addition to the designation sorties.

Completion of the 6602 qualifies an AV-8B pilot to lead 2-Ship AAD sorties. Completion of the 6603 qualifies an AV-8B pilot to serve as -3 in a 4-Ship AAD event. Completion of the 6604 qualifies an AV-8B pilot to lead a 4-Ship AAD event.

If required, AAD-4403 may be logged simultaneously with ADFL-6603.

An ACTI shall instruct all events.

Prerequisites

Section lead, AAD-4402.

Requirements

For simulator events, the Air Defense Flight Lead under instruction shall provide a red air coordination brief and mass debrief. For flight events, the ADFL under instruction shall conduct a mass debrief and fighter scrub via a TACTS facility. If a TACTS facility is not available, then a face-to-face or phone debrief with the adversaries is required.

Ground/Academic Training

A practice mission rehearsal shall be completed with an ACTI prior to SADFL-6601.

SADFL-6600 1.5 * B (NS) S 2+ RNAWST/2+ DMRT

Goal. Lead HSGP line training against maneuvering adversaries.

Requirement

Plan / Brief

Mission Planning	Admin Brief
Brief Preparation	Tac Admin Brief
Mission / Training Objective Development	Mission Brief
Standardizaion	Departure Avoidance
Adversary Brief	EM Concepts
AIC / C3 Brief	HSPG Timeline Knowledge

Execution

Standardizaion	Merge Mechanics
Flight Leadership	VID Mechanics
Admin Excecution	Actions at DR
Tac Admin Execution	Targeted/Abort Assessment at MAR
Mission Execution	Actions at MAR
CAP Setup/Maintenance	Staggerback / Notchback
Meld Mechanics	Expendables Usage
Sort Mechanics	C3 / AIC Integration
Valid Weapons Employment	Training Rule Adherence
Shot and Post-Shot Mechanics	Fox Comm
Flow Decision-Making	Shot Status Comm

Debrief

Debrief Setup / Presentation	Error Recognition
TCTS Debrief Usage	Root Cause Analysis
Tactical Reconstruction	Corrective Action / Quality of Instruction
Weapons Validation	Lessons Learned / Lessons Identified
Mission Analysis	Mission / Training Objective Assessment

Plan. Linked simulator. From a CAP, perform 4 intercepts as a flight lead against Level II+ maneuvering adversaries representative of a pre-briefed threat country. Presentations shall include sweeper (SAR-1) and striker (IR-3) profiles. The sweeper section will demonstrate the following profiles, at a minimum, during the sortie: above 30,000 MSL, airspeed above 0.9 Mach, hot all the way, mutual crank, defensive maneuver SR+5. The striker section will demonstrate the following profiles, at a minimum, during the sortie: descend below Radar Coverage (nominally 5,000' AGL), lean away from sweepers, conduct a deception maneuver. Sortie will be conducted as line training. Exercise control is Single Shot Employment with Real-Time RTO Assessment. ROE should provide for a hostile declaration NLT than sort range.

Brief. S-2 shall be incorporated into the brief portion of the event by briefing the red threat. Conduct a GCI, fighter, red air, and RTO brief. GCI brief may be concurrent with fighter brief. Review admin, TACADMIN, and blue and red timelines. Mission rehearse each line and contingencies. If CAP to Meld is the same for more than one scenario, do not repeat those portions unless required for success. Ensure decision points and threat countertactics are thoroughly covered. Delouse and section staggerback/notchback must be briefed. Mandatory briefing items include training rules, departure prevention, and deconfliction.

Execution. . Must conduct 4 engagements. An engagement will equate to committing on a group. Target and achieve SA to all factor groups (visual or RADAR). No blue losses due to non-adherence to briefed TCT ranges or poor airmanship (i.e., a 2g abort).

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Validate shots. Review each line on the DAQ. ADFL under instruction will conduct a fighter scrub, mass debrief with bandits (console operator), and fighter debrief validating all shots, missed shot opportunities, flow decision points, gameplan execution, intercept geometry, communications, RADAR mechanics, and threat countertactics. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction.

Performance Standard. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Maintain SA to section throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP. Debrief should evaluate and assess blue fighter gameplan and draw out relevant debrief focus points.

Prerequisite. Section lead, AAD-4402.

Ordinance. TPOD, 2xAIM-120, 2xAIM-9, Tanks, SEL Best.

Range Requirement. RSTD, TCTS, EXP.

External Syllabus Support. GCI/AIC.

SADFL-6601 1.5 * B,R (NS) S 2+ RNAWST/2+ DMRT

Goal. Conduct section DCA.

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective Development
Standardizaion
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSGP Timeline Knowledge

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
CAP Setup/Maintenance
Meld Mechanics
Sort Mechanics
Valid Weapons Employment
Shot and Post-Shot Mechanics
Flow Decision-Making

Merge Mechanics
VID Mechanics
Actions at DR
Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Expendables Usage
C3 / AIC Integration
Training Rule Adherence
Fox Comm
Shot Status Comm

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Linked simulator. In a missionized simulator, defend an asset or area for 30 minutes against level II+ maneuvering adversaries. Utilize squadron S-2, PTO, and ACTI to develop a scenario based upon a pre-briefed threat country. Utilize the concepts outlined in the ANTPP Air-to-Air Planning Chapter. Incorporate GCI. SM-2 and Ship-based capabilities may be incorporated, but fighters must be driven to commit. Conduct 4 engagements against sortable and non-sortable groups. One engagement must be a VID. The sortie should incorporate increasing complexity and allowable risk with a maximum of 2 coordinated groups. The picture may incorporate white and red players. Groups will not split. SAR-2 and AR-1 threats may be introduced for advanced timeline awareness at the discretion of the instructor. ROE shall be incorporated. Exercise control should be Realistic Employment, BVR Option, with Real Time RTO assessment.

Brief. Red air should be tasked separately by squadron S-2 and PTO. GCI brief may be concurrent with fighter brief. Focus points should include area sanitization, flow decision points, RADAR mechanics, weapons employment, communications, threat countertactics, section engaged maneuvering, enemy MLCOA and MDCOA.

Execution. Must conduct three engagements. An engagement will equate to committing on a group. Target and achieve SA to all factor groups (visual or RADAR). No blue losses due to non-adherence to briefed TCT ranges or poor airmanship (i.e., a 2g abort). Workable RADAR, otherwise incomplete.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Debrief at TCTS facility desired. If not available, whiteboard debrief required. Validate shots. ADFL under-instruction will conduct a fighter scrub, mass debrief with bandits, and fighter debrief validating all shots, missed shot opportunities, flow decision points, game-plan execution, intercept geometry, communications, RADAR mechanics, and threat counter-tactics. Red Air threat, type, simulation and game-plan shall be covered to validate blue fighter planning assumptions. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction.

Performance Standard. Execute IAW Air NTPP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Valid A/A Weapons Employment. S/A Enhancing Communications IAW ALSA and ACC. TCT and Expendable Usage IAW Air NTPP. Maintain SA to wingman throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTPP. Debrief should evaluate and assess blue fighter gameplan and draw out relevant debrief focus points.

Mission Objectives.

Influence or destroy all factor groups.
No unnecessary blue losses.

Prerequisite. SADFL-6600.

Ordinance. TPOD, 2xAIM-120, 2xAIM-9, Tanks, SEL Best.

Range Requirement. RSTD, TCTS, EXP.

External Syllabus Support. Linked simulator, GCI/AIC.

ADFL-6602	1.3	*	B	(NS)	A	2+ AV-8B
------------------	------------	----------	----------	-------------	----------	-----------------

Goal. Conduct section DCA.

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardization
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSGP Timeline Knowledge

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution
Mission Execution
 CAP Setup/Maintenance
 Meld Mechanics
 Sort Mechanics
 Valid Weapons Employment
 Shot and Post-Shot Mechanics
 Flow Decision-Making

Merge Mechanics
VID Mechanics
Actions at DR
Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Expendables Usage
C3 / AIC Integration
Training Rule Adherence
Fox Comm
Shot Status Comm

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Error Recognition
Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Plan. Utilize squadron S-2, PTO, and ACTI to develop a scenario based upon a pre-briefed threat country. Utilize the concepts outlined in the ANTPP Air-to-Air Planning Chapter. SM-2 and Ship-based capabilities may be incorporated, but fighters must be driven to commit. Conduct a minimum of 3 engagements against sortable and non-sortable groups. One engagement must be a VID. The sortie should incorporate increasing complexity and allowable risk with a maximum of 2 coordinated groups. The picture may incorporate white and red players. Groups will not split. SAR-2, AR-1, and EW threats may be introduced for advanced tactic and timeline awareness at the discretion of the instructor. ROE shall be incorporated. The mission should be in conjunction with higher-level tasking defining the VUL, such as a NEO, HA/DR, straits transit, etc. The plan must provide an overall game-plan to exploit threat vulnerabilities. Exercise control should be Realistic Employment, BVR option, with Real Time RTO Assessment. A Blue and Red RTO shall be used.

Brief. Red air should be tasked separately by squadron S-2 and PTO. GCI brief may be concurrent with fighter brief. Focus points should include area sanitization, flow decision points, RADAR mechanics, weapons employment, communications, threat countertactics, section engaged maneuvering, enemy MLCOA and MDCOA.

Execution. Must conduct three engagements. An engagement will equate to committing on a group. Target and achieve SA to all factor groups (visual or RADAR). No blue losses due to non-adherence to briefed TCT ranges or poor airmanship (i.e., a 2g abort). Workable RADAR, otherwise incomplete.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Fighter scrub, Mass Debrief, and Fighter Debrief. Debrief at TCTS facility desired. If not available, whiteboard debrief required. Validate shots. Flight lead will conduct a fighter scrub, mass debrief with bandits, and fighter debrief validating all shots, missed shot opportunities, flow decision points, game-plan execution, intercept geometry, communications, RADAR mechanics, and threat counter-tactics. Red Air threat, type, simulation and game-plan shall be covered to validate blue fighter planning assumptions. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction.

Performance Standard. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Valid A/A Weapons Employment. S/A Enhancing Communications IAW ALSA and ACC. TCT and Expendable Usage IAW Air NTTP. Maintain SA to wingman throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP. Debrief should evaluate and assess blue fighter gameplan and draw out relevant debrief focus points.

Mission Objectives.

Influence or destroy all factor groups.
No unnecesary blue losses.

Prerequisite. SADFL-6601.

Ordnance

Desired: 1xCATM-9, 2xCATM-120, TCTS Pod, 30 Chaff, 30 Flares.

Required: 1xCATM-9, TCTS Pod, Expendables.

Range Requirement. RSTD, TCTS, EXP.

External Syllabus Support. 2+ adversaries (dissimilar, RADAR equipped desired), GCI/AIC, TACTS debrief facility.

ADFL-6603 1.3 * B,R (NS) A 3+ AV-8B

Goal. Conduct Division DCA as -3.

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardizaion
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSGP Timeline Knowledge

Execution

Standardizaion
Flight Leadership
Admin Exceution
Tac Admin Execution
Mission Execution
CAP Setup/Maintenance
Meld Mechanics
Sort Mechanics
Valid Weapons Employment
Shot and Post-Shot Mechanics
Flow Decision-Making
Merge Mechanics

VID Mechanics
Actions at DR
Targeted/Abort Assessment at MAR
Actions at MAR
Staggerback / Notchback
Expendables Usage
C3 / AIC Integration
Training Rule Adherence
Fox Comm
Shot Status Comm

Debrief

Debrief Setup / Presentation
TCTS Debrief Usage
Tactical Reconstruction
Weapons Validation
Mission Analysis

Root Cause Analysis
Corrective Action / Quality of Instruction
Lessons Learned / Lessons Identified
Mission / Training Objective Assessment

Error Recognition

Plan. Utilize squadron S-2, PTO, and ACTI to develop a scenario based upon a pre-briefed threat country. Utilize the concepts outlined in the ANTTP Air-to-Air Planning Chapter. SM-2 and Ship-based capabilities may be incorporated, but fighters must be driven to commit. Conduct a minimum of 3 engagements against sortable and non-sortable groups. One engagement must be a VID. The sortie should incorporate increasing complexity and allowable risk with a maximum of 2 coordinated groups. The picture may incorporate white and red players. Groups will not split. SAR-2, AR-1, and EW threats may be introduced for advanced tactic and timeline awareness at the discretion of the instructor. ROE shall be incorporated. The mission should be in conjunction with higher-level tasking defining the VUL, such as a NEO, HA/DR, straits transit, etc. The plan must provide an overall game-plan

to exploit threat vulnerabilities. Exercise control should be Realistic Employment, BVR option, with Real Time RTO Assessment. A Blue and Red RTO shall be used.

Brief. Red air should be tasked separately by squadron S-2 and PTO. GCI brief may be concurrent with fighter brief. Focus points should include area sanitization, flow decision points, RADAR mechanics, weapons employment, communications, threat countertactics, section engaged maneuvering, enemy MLCOA and MDCOA. Brief should also focus on four-ship deconfliction measures.

Execution. Must conduct three engagements. An engagement will equate to committing on a group. Target and achieve SA to all factor groups (visual or RADAR). No blue losses due to non-adherence to briefed TCT ranges or poor airmanship (i.e., a 2g abort). Workable RADAR, otherwise incomplete.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Fighter scrub, Mass Debrief, and Fighter Debrief. Debrief at TCTS facility desired. If not available, whiteboard debrief required. Validate shots. Flight lead will conduct a fighter scrub, mass debrief with bandits, and fighter debrief validating all shots, missed shot opportunities, flow decision points, game-plan execution, intercept geometry, communications, RADAR mechanics, and threat counter-tactics. Red Air threat, type, simulation and game-plan shall be covered to validate blue fighter planning assumptions. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction.

Performance Standard. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Valid A/A Weapons Employment. S/A Enhancing Communications IAW ALSA and ACC. TCT and Expendable Usage IAW Air NTTP. Maintain SA to wingman throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP. Debrief should evaluate and assess blue fighter gameplan and draw out relevant debrief focus points.

Mission Objectives.

Influence or destroy all factor groups.

No unnecessary blue losses.

Prerequisite. ADFL-6602.

Ordnance

Desired: 1xCATM-9, 2xCATM-120, TCTS Pod, 30 Chaff, 30 Flares.

Required: 1xCATM-9, TCTS Pod, Expendables.

Range Requirement. RSTD, TCTS, EXP.

External Syllabus Support. 2+ adversaries (dissimilar, radar equipped desired), GCI/AIC, TCTS debrief facility.

ADFL-6604 1.3 * B,R (NS) A 3+ AV-8B

Goal. Conduct Division DCA as the Division Lead.

Requirement

Plan / Brief

Mission Planning
Brief Preparation
Mission / Training Objective
Development
Standardizaion
Adversary Brief
AIC / C3 Brief

Admin Brief
Tac Admin Brief
Mission Brief
Departure Avoidance
EM Concepts
HSGP Timeline Knowledge

Execution

Standardizaion
Flight Leadership
Admin Excecution
Tac Admin Execution

Mission Execution
CAP Setup/Maintenance
Meld Mechanics
Sort Mechanics

Valid Weapons Employment	Staggerback / Notchback
Shot and Post-Shot Mechanics	Expendables Usage
Flow Decision-Making	C3 / AIC Integration
Merge Mechanics	Training Rule Adherence
VID Mechanics	Fox Comm
Actions at DR	Shot Status Comm
Targeted/Abort Assessment at MAR	
Actions at MAR	

Debrief

Debrief Setup / Presentation	Root Cause Analysis
TCTS Debrief Usage	Corrective Action / Quality of Instruction
Tactical Reconstruction	Lessons Learned / Lessons Identified
Weapons Validation	Mission / Training Objective Assessment
Mission Analysis	
Error Recognition	

Plan. Utilize squadron S-2 and PTO to develop a scenario based upon a pre-briefed threat country. Utilize the concepts outlined in the ANTTTP Air-to-Air Planning Chapter. SM-2 and Ship-based capabilities may be incorporated, but fighters must be driven to commit. Conduct a minimum of 3 engagements against sortable and non-sortable groups. One engagement must be a VID. The sortie should incorporate increasing complexity and allowable risk with a maximum of 2 coordinated groups. The picture may incorporate white and red players. Groups will not split. SAR-2, AR-1, and EW threats may be introduced for advanced tactic and timeline awareness at the discretion of the instructor. ROE shall be incorporated. The mission should be in conjunction with higher-level tasking defining the VUL, such as a NEO, HA/DR, straits transit, etc. The plan must provide an overall game-plan to exploit threat vulnerabilities. Exercise control should be Realistic Employment, BVR option, with Real Time RTO Assessment. A Blue and Red RTO shall be used.

Brief. Red air should be tasked separately by squadron S-2 and PTO. GCI brief may be concurrent with fighter brief. Focus points should include area sanitization, flow decision points, RADAR mechanics, weapons employment, communications, threat countertactics, section engaged maneuvering, enemy MLCOA and MDCOA. Brief should also focus on four-ship deconfliction measures.

Execution. Must conduct three engagements. An engagement will equate to committing on a group. Target and achieve SA to all factor groups (visual or RADAR). No blue losses due to non-adherence to briefed TCT ranges or poor airmanship (i.e., a 2g abort). Workable RADAR, otherwise incomplete.

Debrief. Debrief will be conducted IAW MAWTS-1 AV-8B Briefing/Debriefing Guide. Fighter scrub, Mass Debrief, and Fighter Debrief. Debrief at TCTS facility desired. If not available, whiteboard debrief required. Validate shots. Flight lead will conduct a fighter scrub, mass debrief with bandits, and fighter debrief validating all shots, missed shot opportunities, flow decision points, game-plan execution, intercept geometry, communications, RADAR mechanics, and threat counter-tactics. Red Air threat, type, simulation and game-plan shall be covered to validate blue fighter planning assumptions. Utilize AFTTP 3-1. Shot Kill CAT I/II Debrief Flow for reconstruction.

Performance Standard. Execute IAW Air NTTP. Generate accurate RAP and assign appropriate tactic/targeting. Demonstrate proficient management of division geometry and timeline IAW HSGP. Valid A/A Weapons Employment. S/A Enhancing Communications IAW ALSA and ACC. TCT and Expendable Usage IAW Air NTTP. Maintain SA to wingman throughout execution and task appropriately. Execute briefed communication IAW ALSA Communication Brevity and Air NTTP. Debrief should evaluate and assess blue fighter gameplan and draw out relevant debrief focus points.

Mission Objectives.

Influence or destroy all factor groups.
No unnecessary blue losses.

Prerequisite. Division lead, ADFL-6603.

Ordnance

Desired: 1xCATM-9, 2xCATM-120, TCTS Pod, 30 Chaff, 30 Flares.
Required: 1xCATM-9, TCTS Pod, Expendables.

Range Requirement. RSTD, TCTS, EXP.

External Syllabus Support. 2+ adversaries (dissimilar, radar equipped desired), GCI/AIC, TCTS debrief facility.

2.15.8 Functional Check Pilot (FCP)

Purpose. Evaluate a pilot's ability to execute a FCF.

General.

Completion of the syllabus meets the requirements to be designated a functional check pilot. A letter designating the pilot as a functional check pilot shall be placed in the NATOPS jacket at the discretion of the squadron commanding officer.

Prerequisites.

Section Leader.
500 Hours.

Ground/Academic Training.

Readings

AV-8B NATOPS Manual (A1-AV8BB-NFM-000):

Chapter 1 Aircraft and Engine
Chapter 2 Systems
Chapter 4 Operating Limitations
Chapter 7 Shore-Based Procedures
Chapter 10 Functional Check Flight Procedures
Chapter 11 Flight Characteristics
Chapter 12 General Emergencies
Chapter 13 Ground Emergencies
Chapter 14 Takeoff Emergencies
Chapter 15 In-Flight Emergencies
Chapter 16 Landing Emergencies
Chapter 17 Emergency Egress
Chapter 18 Emergency Procedures Checklist Display

CNAF 3710.7M, Section 3.10

OPNAV 4790.2A, Chapter 5.1.1.4

Rolls Royce AV-8B Hover Performance Presentation

British Aerospace Harrier FOD Avoidance

The Harrier Engine Book

The Harrier Book of Corporate Knowledge

SFCF-6700 1.5 * B D S RNAWST/DMRT

Goal. Functional Check Flight (FCF) workup simulator.

Requirement. Introduce an FCF ground profile in the simulator.

Plan/Brief

Mission Planning
Preparation
Familiarity with Appropriate Documents
Maintenance Brief

Flight Evaluation

Ground Procedures
ADB Review
Engine Start Procedures and Checklists
Before Taxi Procedures and Checklists

Post Landing Procedures and Checklists	Approach and Landing
Shut Down Procedures and Checklists	Landing Checklist
Takeoff and Departure	Waveoff
CTO	VL
Post Takeoff Checks	Performance Hovers
Climb Checks	TA/V-8B Rear Cockpit Checks
40000 Foot Checks	Emergency Procedures
25000-20000 Foot Checks	Ground Emergency
17000-10000 Foot Checks	Takeoff Emergency 1
5000 Foot Checks	Takeoff Emergency 2
3000-1000 Foot Checks	Inflight Emergency to a Full Stop
Approach and Landing	Landing Emergency 1
CTO	Landing Emergency 2
VTO	Crew Resource Management
10000 Foot Checklist	
18000 Foot Checklist	

Performance Standard. Complete A Card ground checks IAW the publications listed above.

Prerequisite. Ground and academics complete.

SFCF-6701 1.5 * B D S RNAWST/DMRT

Goal. FCF workup simulator.

Requirement. Introduce an FCF airborne profile in the simulator.

Plan/Brief	Approach and Landing
Mission Planning	CTO
Preparation	VTO
Familiarity with Appropriate Documents	10000 Foot Checklist
Maintenance Brief	18000 Foot Checklist
Flight Evaluation	Approach and Landing
Ground Procedures	Landing Checklist
ADB Review	Waveoff
Engine Start Procedures and Checklists	VL
Before Taxi Procedures and Checklists	Performance Hovers
Post Landing Procedures and Checklists	TA/V-8B Rear Cockpit Checks
Shut Down Procedures and Checklists	Emergency Procedures
Takeoff and Departure	Ground Emergency
CTO	Takeoff Emergency 1
Post Takeoff Checks	Takeoff Emergency 2
Climb Checks	Inflight Emergency to a Full Stop
40000 Foot Checks	Landing Emergency 1
25000-20000 Foot Checks	Landing Emergency 2
17000-10000 Foot Checks	Crew Resource Management
5000 Foot Checks	
3000-1000 Foot Checks	

Performance Standard. Complete A Card airborne checks to include performance hovers IAW the publications listed above.

Prerequisite. 6600.

SFCF-6702 1.5 365 B,R D S RNAWST/DMRT

Goal. FCF workup simulator.

Requirement. Review full FCF airborne profile in the simulator.

Plan/Brief	Approach and Landing
Mission Planning	CTO
Preparation	VTO
Familiarity with Appropriate Documents	10000 Foot Checklist
Maintenance Brief	18000 Foot Checklist
Flight Evaluation	Approach and Landing
Ground Procedures	Landing Checklist
ADB Review	Waveoff
Engine Start Procedures and Checklists	VL
Before Taxi Procedures and Checklists	Performance Hovers
Post Landing Procedures and Checklists	TA/V-8B Rear Cockpit Checks
Shut Down Procedures and Checklists	Emergency Procedures
Takeoff and Departure	Ground Emergency
CTO	Takeoff Emergency 1
Post Takeoff Checks	Takeoff Emergency 2
Climb Checks	Inflight Emergency to a Full Stop
40000 Foot Checks	Landing Emergency 1
25000-20000 Foot Checks	Landing Emergency 2
17000-10000 Foot Checks	Crew Resource Management
5000 Foot Checks	
3000-1000 Foot Checks	

Performance Standard. Complete a full A Card profile to include performance hovers IAW with the publications listed above. Sim completion shall be granted by the Squadron PMCF standardization pilot.

Prerequisite. 6601.

FCF-6703 1.5 180 B,R,M I D A AV-8B

Goal. Conduct an FCF.

Requirement. Complete a full A Card profile to include performance hovers. Initial event shall be in an FMC AV-8B. The Squadron PMCF standardization pilot shall conduct a VRS debrief of the flight. Separate Simulators shall be logged with an gradesheet for T/AV-8B and Shipboard FCF procedures.

Plan/Brief	25000-20000 Foot Checks
Mission Planning	17000-10000 Foot Checks
Preparation	5000 Foot Checks
Familiarity with Appropriate Documents	3000-1000 Foot Checks
Maintenance Brief	Approach and Landing
Flight Evaluation	CTO
Ground Procedures	VTO
ADB Review	10000 Foot Checklist
Engine Start Procedures and Checklists	18000 Foot Checklist
Before Taxi Procedures and Checklists	Approach and Landing
Post Landing Procedures and Checklists	Landing Checklist
Shut Down Procedures and Checklists	Waveoff
Takeoff and Departure	VL
CTO	Performance Hovers
Post Takeoff Checks	TA/V-8B Rear Cockpit Checks
Climb Checks	Emergency Procedures
40000 Foot Checks	Ground Emergency

Takeoff Emergency 1
Takeoff Emergency 2
Inflight Emergency to a Full Stop
Landing Emergency 1

Landing Emergency 2
Crew Resource Management

Performance Standard. Profile completion per appropriate card.

Prerequisite. SFCF-6702.

2.15.9 Landing Signal Officer (LSO), Landing Site Instructor (LSI), and Landing Site Supervisor (LSS) Designation and Tracking

Purpose. To track the designation and currency of LSOs, LSIs, and LSSs.

General. This section enables squadrons to document and track via M-SHARP the designation of pilots as LSOs, LSIs, and LSSs and currency intervals between "waiving" periods. The following additional guidance applies:

A pilot must complete the 2000-level syllabus prior to beginning any work-up for LSO or LSS designation.

This manual, the T&R Program Manual, the LSO NATOPS Manual, and MAG LSI/LSS Orders define the prerequisites to start LSO/LSS/LSI Under Training syllabus and designation requirements. A pilot should be a designated section lead, but this may be waived by the commanding officer.

Currency will be retained for 12 months following the last day of an LSO/LSI/LSS control for each specific designation. If currency is lost, the LSO/LSI/LSS shall attend academic ground school and regain currency as outlined in the above documents. No minimum number of controls is required as long as proficiency is exhibited to the Training LSO/LSS. VMAT-203 LSSs are not required to be road qualified to function as an LSS in the 1000 level syllabus.

Successful completion of all appropriate work-up events and designation by the squadron commander are required prior to exercising any designation.

Ground/Academic Training. Per LSO NATOPS or MAG LSI/LSS Order.

LSO-6750	0.0	*	G	<u>Designation</u>
-----------------	------------	----------	----------	---------------------------

Goal. Day Basic Field LSO.

Requirement. Per LSO NATOPS.

Performance Standard. Per LSO NATOPS.

Prerequisite. Per LSO NATOPS.

External Syllabus Support. FCLP Facility.

LSO-6751	0.0	*	G	<u>Designation</u>
-----------------	------------	----------	----------	---------------------------

Goal. Night Basic Field LSO.

Requirement. Per LSO NATOPS.

Performance Standard. Per LSO NATOPS.

Prerequisite. Per LSO NATOPS.

External Syllabus Support. FCLP Facility.

LSO-6752	0.0	*	G	<u>Designation</u>
-----------------	------------	----------	----------	---------------------------

Goal. Day Basic Ship LSO.

Requirement. Per LSO NATOPS.

Performance Standard. Per LSO NATOPS.

Prerequisite. Per LSO NATOPS.

External Syllabus Support. L-Class Ship.

LSO-6753	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Night Basic Ship LSO.

Requirement. Per LSO NATOPS.

Performance Standard. Per LSO NATOPS.

Prerequisite. Per LSO NATOPS.

External Syllabus Support. L-Class Ship.

LSO-6754	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Advanced LSO.

Requirement. Per LSO NATOPS.

Performance Standard. Per LSO NATOPS.

Prerequisite. Per LSO NATOPS.

External Syllabus Support. FCLP Facility and L-Class Ship.

LSO-6755	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Training LSO.

Requirement. Per LSO NATOPS.

Performance Standard. Per LSO NATOPS.

Prerequisite. Per LSO NATOPS.

External Syllabus Support. FCLP Facility and L-Class Ship.

LSI-6770	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Day Facility LSI.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. Main Facility.

LSI-6771	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Night Facility LSI.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. Main Facility.

LSS-6772	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Day Basic LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. FOB Training Facility.

LSS-6773	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Night Basic LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. FOB Training Facility

LSS-6774	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Advanced (Road) LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. Road Training Site.

LSS-6775	0.0	*	G	Designation
-----------------	------------	----------	----------	--------------------

Goal. Advacned (CAL Site) LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. CAL Site.

2.15.10 AV-8B Air Show Demonstration Pilot (Demo Pilot)

Demo Pilot

Purpose. To evaluate a prospective demonstration pilot's ability to conduct air show demonstration.

General. Completion of the syllabus meets the requirements to be designated an AV-8B Demo Pilot. At the discretion of the squadron commanding officer, a letter designating the pilot an AV-8B Demo Pilot shall be placed in the NATOPS jacket and APR.

Prerequisite. Per MCO and MAG order.

Academic Training. Per MCO and MAG order.

SDEMO-6800	1.5	*	B	D	S	RNAWST/DMRT
-------------------	------------	----------	----------	----------	----------	--------------------

Goal. Demo pilot workup simulator.

Requirement. Complete a Level III air show demonstration profile.

Ground Evaluation	Lateral Transitions
Familiarity with MAG SOP	VL
Preflight Prep/Knowledge	VTO
Level III Demo Brief	Pedal Turn
Fuel Planning	Accel
Flight Evaluation	Precision RVL
Ground Procedures	Emergency Procedures (Sim Only)
Airboss/Tower/LSS Integration	Ground Emergency
Level III Demo Execution	Takeoff Emergency
Max Perf STO	Inflight Emergency
Airspace Management	Landing Emergency
High Speed Pass	Crew Resource Management
Decel	

Performance Standard. Conducts all maneuvers correctly.

Prerequisite. Per MCO and MAG order.

DEMO-6801 0.8 365 B,R,M D A 1 AV-8B

Goal. Demonstration flight. Initial event shall be monitored by MAG commanding officer or his designated representative.

Requirement. Complete a Level III air show demonstration profile.

Ground Evaluation	Lateral Transitions
Familiarity with MAG SOP	VL
Preflight Prep/Knowledge	VTO
Level III Demo Brief	Pedal Turn
Fuel Planning	Accel
Flight Evaluation	Precision RVL
Ground Procedures	Emergency Procedures (Sim Only)
Airboss/Tower/LSS Integration	Ground Emergency
Level III Demo Execution	Takeoff Emergency
Max Perf STO	Inflight Emergency
Airspace Management	Landing Emergency
High Speed Pass	Crew Resource Manageme
Decel	

Performance Standard. Conducts all maneuvers correctly.

Prerequisite. Per MCO and MAG order.

2.15.11 Tracking Codes

Purpose. Track currency in various evolutions.

General. Tracking codes may or may not constitute a flight or simulator. They are logged concurrent with another code for the purpose of identifying why a code was not completed or as a specific tracking measure (i.e., Strat tanking). FAC(A) events in the JFAC(A) MOA that are not required to complete the FAC(A) syllabus are also listed as tracking codes.

TRK-6900 0.0 365 Tracking Day AAR

Goal. Conduct day aerial refueling.

Requirement. Conduct day aerial refueling.

Performance Standard. As outlined in ATP 3.3.4.2

Prerequisite. AAR-1340.

External Syllabus Support. Any Non-Strategic Tanker.

TRK-6901 0.0 365 Tracking Strategic Tanking

Goal. Conduct strategic tanking.

Requirement. Conduct aerial refueling from a strategic tanking platform.

Performance Standard. As outlined in ATP 3.3.4.2

Prerequisite. AAR-1340, (AAR-2700~N).

External Syllabus Support. Strategic Tanker.

TRK-6902 0.0 * Tracking ALQ-164

Goal. Employ ALQ-164.

Requirement. Tactically employ the ALQ-164.

Performance Standard. IAW the sortie performance standards.

Ordinance. 1 ALQ-164.

TRK-6903 0.0 * Tracking Air-to-Air Gunnery

Goal. Air-to-air gunnery.

Requirement. Air-to-air gunnery.

Performance Standard. IAW the sortie performance standards.

Prerequisite. ACM QUAL.

Ordinance. 300 25mm.

TRK-6904 0.0 * Tracking ALQ-231

Goal. Employ ALQ-231.

Requirement. Tactically employ the ALQ-231.

Performance Standard. IAW the sortie performance standards.

Ordinance. 1 ALQ-231.

TRK-6908 0.0 * Tracking PMCF A Card

Requirement. Conduct PMCF A Card flight.

TRK-6909 0.0 * Tracking PMCF B/C Card

Requirement. Conduct PMCF B/C Card flight.

TRK-6911 1.0 * Tracking Day CAL Site

Goal. Day CAL site operations.

External Syllabus Support. Approved CAL Site.

TRK-6912 0.0 * Tracking NS CAL Site

Goal. Night CAL site operations.

External Syllabus Support. Approved CAL Site.

TRK-6913 0.0 * Tracking Road Operations

Goal. Road operations.

External Syllabus Support. Approved Road.

TRK-6914 0.0 * Tracking NS Road Operations

Goal. Night road operations.

External Syllabus Support. Approved Road.

2.15.11 LSO, LSI, and LSS Tracking

Purpose. To enable squadrons to track LSO, LSI, and LSS.

TRK-6915 0.0 Tracking

Goal. Control Day FCLP LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. FCLP Facility.

TRK-6916 0.0 Tracking

Goal. Control Night FCLP LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. FCLP Facility.

TRK-6917 0.0 Tracking

Goal. Control Aided Night FCLP LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. FCLP Facility.

TRK-6918 0.0 Tracking

Goal. Control Day Ship LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. L-Class Ship.

TRK-6919 0.0 Tracking

Goal. Control Night Ship LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. L-Class Ship.

TRK-6920 0.0 Tracking

Goal. Control Night Aided Ship LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. L-Class Ship.

TRK-6921 0.0 Tracking

Goal. Control Day Training LSO.

External Syllabus Support. FCLP Facility or L-Class Ship.

TRK-6922 0.0 Tracking

Goal. Control Night Training LSO.

External Syllabus Support. FCLP Facility or L-Class Ship.

TRK-6923 0.0 Tracking

Goal. Control Day LSI Facility.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. Main Operating Facility.

TRK-6924 0.0 Tracking

Goal. Control Night LSI Facility.

Prerequisite. IAW V/STOL / LSI NATOPS

External Syllabus Support. Main Operating Facility.

TRK-6925 0.0 Tracking

Goal. Control Day LSS Road.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. Road Training Site or Road Site.

TRK-6926 0.0 Tracking

Goal. Control Night LSS Road.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. Road Training Site or Road Site.

TRK-6927 0.0 Tracking

Goal. Control Day LSS CAL Site.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. CAL site.

TRK-6928 0.0 Tracking

Goal. Control Night LSS CAL Site.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. CAL Site.

TRK-6929 0.0 Tracking

Goal. Control Day EP and approaches as LSO.

Prerequisite. IAW V/STOL / LSI NATOPS and MAG SOP.

External Syllabus Support. CAL Site.

TRK-6930 0.0 Tracking

Goal. Control Night EP and approaches as LSO.

Prerequisite. IAW V/STOL / LSI NATOPS and MAG SOP.

External Syllabus Support. CAL Site.

2.16 MISSION ESSENTIAL TASK (MET) PHASE (7000)

2.16.1 Purpose

To assess CMMR representative crews during the execution of the unit's specified METs in order to ensure standardization and combat readiness.

To fulfill the requirements of a Marine Corps Combat Readiness Evaluation (MCCRE) as specified in MCO 3502.1, Marine Corps Combat Readiness Evaluation.

2.16.2 General

Prerequisite. Aircrew assessed during this phase shall meet the requirements of a Force Generation Order. The crews should be comprised of deploying personnel to the maximum extent practical.

Admin Notes

The proficiency period for conducting elements of the 7000 phase are:

No less than once every 2 years for active components.

Units not scheduled to be assessed at a service level training venue, shall conduct elements of the 7000 phase as a minimum requirement for a unit to deploy.

The MAW Flight Leadership Standardization and Evaluation (FLSE) cadre is the resource used to assess Type/ Model/ Series units for MET capability in accordance with the MCCRE Order. The unit's assessor will be designated at the Wing level of the unit to be assessed.

Events in this Phase normally require a Force Generation Order prior to commencing the 7000 Stage. Once a unit deploys, is removed from the Force Generation Order, or completes the required 7000-Stage, 7000 Phase currency no longer needs to be maintained.

Multiple Events may be accomplished during the same sortie.

Results of the MCCRE assessment shall be formatted per Appendix D, 3500.14D and submitted to CG, MCCDC (via AMHS message attachment to CG TECOM MTESD) no later than 45 days after MCCRE completion.

2.16.3 Stages. The following stages are included in the Mission Essential Task (MET) Phase of training. Only METs required per the Force Generation Order shall be evaluated.

EVENT	STAGE NAME
MET-7001	CONDUCT CLOSE AIR SUPPORT
MET-7002	CONDUCT STRIKE COORDINATION AND RECONNAISSANCE
MET-7003	CONDUCT STRIKE

2.16.4 MISSION ESSENTIAL TASK (MET) STAGE

Purpose. To assess squadrons or detachments executing community specific MET(s) or MET preparatory Events.

General

Prerequisite. If an event requires prerequisites in addition to those listed for the MET Phase, they will be covered in the individual event.

Crew Requirements. The participants required for the 7000 Phase are the evaluated unit and the assessor. The crew requirement is based on the specific event. The assessment shall be conducted from a crew

position of the assessor's T/M/S. At the discretion of the assessor, observation of mission planning, briefing/debriefing, and execution from an OP may satisfy a portion of the assessment.

Respectively, the primary, alternate, and tertiary assessors shall be a MATSS representative, WTI (FLSE) from within the parent command designated by the owning Wing, or MAWTS-1 representative. The number of crews evaluated will be based on a percentage required to deploy per the Force Generation Order.

MET-7001	1.3	730	E	(NS)	A	2+	AV-8B
-----------------	------------	------------	----------	-------------	----------	-----------	--------------

Goal. Conduct Close Air Support

Requirement. Demonstrate the ability to conduct Close Air Support.

Performance Standard. Conduct Close Air Support per MCT 3.2.3.1.1 and the AV-8B specific T&R.

Instructor. Unit assessor designated by the responsible Wing of the assessed unit.

Prerequisites. Per applicable AV-8B T&R event.

Ordinance. Per applicable AV-8B T&R event.

Range Requirement. Per applicable AV-8B T&R event.

External Syllabus Support. Per applicable AV-8B T&R event.

Crew. Per applicable AV-8B T&R event.

Reference. Per applicable AV-8B T&R event.

MET-7002	1.3	730	E	(NS)	A	2+	AV-8B
-----------------	------------	------------	----------	-------------	----------	-----------	--------------

Goal. Conduct Strike Coordination and Reconnaissance

Requirement. Demonstrate the ability to conduct Strike Coordination and Reconnaissance.

Performance Standard. Conduct Strike Coordination and Reconnaissance per MCT 3.2.3.1.2.3 and the AV-8B specific T&R.

Instructor. Unit assessor designated by the responsible Wing of the assessed unit.

Prerequisites. Per applicable AV-8B T&R event.

Ordinance. Per applicable AV-8B T&R event.

Range Requirement. Per applicable AV-8B T&R event.

External Syllabus Support. Per applicable AV-8B T&R event.

Crew. Per applicable AV-8B T&R event.

Reference. Per applicable AV-8B T&R event.

MET-7003	1.3	730	E	(NS)	A	2+	AV-8B
-----------------	------------	------------	----------	-------------	----------	-----------	--------------

Goal. Conduct Strike

Requirement. Demonstrate the ability to conduct Strike.

Performance Standard. Conduct Strike per MCT 3.2.3.1.2.1 and the AV-8B specific T&R.

Instructor. Unit assessor designated by the responsible Wing of the assessed unit.

Prerequisites. Per applicable AV-8B T&R event.

Ordnance. Per applicable AV-8B T&R event.

Range Requirement. Per applicable AV-8B T&R event.

External Syllabus Support. Per applicable AV-8B T&R event.

Crew. Per applicable AV-8B T&R event.

Reference. Per applicable AV-8B T&R event.

2.17 AVIATION CAREER PROGRESSION MODEL (8000)

Purpose. To enhance professional understanding of Marine Aviation and the MAGTF, and to ensure individuals possess the requisite skills to fill battle command and battle staff positions in support of the ACE and the MAGTF in a joint environment. The focus of training in the Aviation Career Progression Model (ACPM) is on academic events in the following areas:

- Marine Air Command and Control System (MACCS)
- Aviation Ground Support
- Joint Air Operations
- ACE Battle Staff
- MAGTF
- Seabased Operations
- Combatant Commander Organizations

All tactical T/M/S T&R manuals have ACPM training requirements embedded within the progressive training phases, including the flight leadership POI. If not already completed prior to assignment to VMR-1 or a VMR det (C-9, UC-35, C-12, or C-20), pilots assigned to an OSA platform should complete ACPM training requirements as outlined per their original T/M/S MOS T&R manual. Refer to NAVMC 3500.14, Aviation T&R Program Manual, as a primary reference for ACPM training requirements.

General. The ACPM is intended to be an integrated series of academic events contained within each phase of training. Accordingly, ACPM academic events are like any other academic event in that they serve as pre-requisites to selected flight events or stages. Additionally, several ACPM academic events are integrated as prerequisites for flight leadership syllabi.

ACPM events may be conducted in group session with an assigned instructor teaching the period of instruction or they may be accomplished by self-paced instruction.

MAWTS-1 is responsible for the update and validity of the ACPM periods of instruction. In the future, courses may be consolidated or revised to meet changing requirements. Refer to the MAWTS-1 ACPM link for the current ACPM program of instruction:

<https://www.intranet.tecom.usmc.mil/sites/mawts1/aviation%20career%20progression%20model/forums/allitems.aspx>

Completed events shall be manually logged and tracked in M-SHARP.

ACPM academic events, along with their identifying prerequisite association with other training phases/stages/events, are listed below.

STAGE	TRNG CODE	T&R DESCRIPTION	ACAD TIME	TO BE COMPLETED DURING
ACPM	8200	MACCS AGENCIES, FUNCTIONS AND CONTROL OF AIRCRAFT AND MISSILES	0.6	2000 PHASE
ACPM	8201	MWCS BRIEF	0.4	2000 PHASE
ACPM	8202	ACA AND AIRSPACE	0.5	2000 PHASE
ACPM	8210	AVIATION GROUND SUPPORT	0.6	2000 PHASE

ACPM	8230	ACE BATTLESTAFF		0.6	2000 PHASE
ACPM	8231	BATTLE COMMAND DISPLAY		0.3	2000 PHASE
ACPM	8240	SIX FUNCTIONS OF MARINE AVIATION		1.5	2000 PHASE
ACPM	8241	JTAR/ASR INTRODUCTION AND PRACTICAL APPLICATION CLASS		0.5	2000 PHASE
ACPM	8242	SITE COMMAND PRIMER		0.7	2000 PHASE
ACPM	8250	THEATER AIR GROUND SYSTEM (TAGS)		0.6	2000 PHASE
ACPM	8300	AIR DEFENSE		0.6	3000 PHASE
ACPM	8310	FORWARD ARMING AND REFUELING POINT (FARP) OPERATIONS		0.4	3000 PHASE
ACPM	8311	MARINE CORPS TACTICAL FUEL SYSTEMS		0.2	3000 PHASE
ACPM	8320	JOINT STRUCTURE & JOINT AIR OPERATIONS		1.5	3000 PHASE
ACPM	8321	JOINT AIR TASKING CYCLE PHASE 1: STRATEGY DEVELOPMENT		0.3	3000 PHASE
ACPM	8322	JOINT AIR TASKING CYCLE PHASE 2: TARGET DEVELOPMENT		0.2	3000 PHASE
ACPM	8323	JOINT AIR TASKING CYCLE PHASE 3: WEAPONING AND ALLOCATION		0.2	3000 PHASE
ACPM	8324	JOINT AIR TASKING CYCLE PHASE 4: JOINT ATO PRODUCTION		0.2	3000 PHASE
ACPM	8325	JOINT AIR TASKING CYCLE PHASE 5:		0.2	3000 PHASE
ACPM	8326	JOINT AIR TASKING CYCLE PHASE 6: COMBAT ASSESSMENT		0.2	3000 PHASE
ACPM	8340	INTEGRATING FIRES AND AIRSPACE WITHIN THE MAGTF		0.5	3000 PHASE
ACPM	8350	PHASING CONTROL ASHORE		0.5	3000 PHASE
ACPM	8351	TACRON ORGANIZATIONS AND FUNCTIONS		TBD	3000 PHASE
ACPM	8630	TACTICAL AIR COMMAND CENTER (TACC)		0.7	6000 PHASE
ACPM	8660	JOINT OPS INTRO		0.4	6000 PHASE
ACPM	8640	JOINT DATA NETWORK		0.4	6000 PHASE
ACPM	8641	MAGTF THEATER		1.5	6000 PHASE
ACPM	8620	ESG/CSG INTEGRATION		TBD	6000 PHASE
TOTAL ACPM STAGE			28	13.5	

2.18 T&R SYLLABUS MATRIX

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
AFAM	FAM Stage Brief	0001	X								1.0					(N)	G			*					0001
AFAM	AV-8B Eng. pt 1 & 2	0002	X								1.0					(N)	G			*					0002
AFAM	Elec/Lighting Sys	0003	X								1.0					(N)	G			*					0003
AFAM	Fuel Sys	0004	X								1.0					(N)	G			*					0004
AFAM	Hyd Pwr/Ldg Sys	0005	X								1.0					(N)	G			*					0005
AFAM	Flt Cont Sys	0006	X								1.0					(N)	G			*					0006
AFAM	Life Support Sys	0007	X								1.0					(N)	G			*					0007
AFAM	Hazard Indic Sys	0008	X								1.0					(N)	G			*					0008
AFAM	AMPCD	0009	X								1.0					(N)	G			*					0009
AFAM	Standby Flt INST	0010	X								1.0					(N)	G			*					0010
AFAM	Mission Sys Comp	0011	X								1.0					(N)	G			*					0011
AFAM	Up Front Cont Set	0012	X								1.0					(N)	G			*					0012
AFAM	Comm/Ident Equip	0013	X								1.0					(N)	G			*					0013
AFAM	Heads Up Display	0014	X								1.0					(N)	G			*					0014
AFAM	INS Theory	0015	X								1.0					(N)	G			*					0015
AFAM	GPS Theory	0016	X								1.0					(N)	G			*					0016
AFAM	NAV Sys Pt 1	0017	X								1.0					(N)	G			*					0017
AFAM	NAV Sys Pt 2	0018	X								1.0					(N)	G			*					0018
AFAM	NAV Sys Pt 3	0019	X								1.0					(N)	G			*					0019
AFAM	NAV Sys Pt 4	0020	X								1.0					(N)	G			*					0020
AFAM	Ejection Seat	0021	X								1.0					(N)	G			*					0021
AFAM	Survival Equip	0022	X								1.0					(N)	G			*					0022
AFAM	Operating Limits	0023	X								1.0					(N)	G			*					0023
AFAM	Video Recording Sys	0024	X								1.0					(N)	G			*					0024
AFAM	Aerodynamics	0025	X								1.0					(N)	G			*					0025
AFAM	AV-8B/TAV-8B Diffs	0026	X								1.0					(N)	G			*					0026
AFAM	AV-8B Eng Handling	0027	X								1.0					(N)	G			*					0027
AFAM	AV-8B Preflight	0028	X								1.0					(N)	G			*					0028
AFAM	Normal Proc Pt 1	0029	X								1.0					(N)	G			*					0029
AFAM	Normal Proc Pt 2	0030	X								1.0					(N)	G			*					0030
AFAM	Normal Proc Pt 3	0031	X								1.0					(N)	G			*					0031

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	AFAM	Normal Proc Pt 4	0032	X							1.0					(N)	G			*					0032
	AFAM	Normal Proc Pt 5	0033	X							1.0					(N)	G			*					0033
	AFAM	Normal Proc Pt 6	0034	X							1.0					(N)	G			*					0034
	AFAM	Normal Proc Pt 7	0035	X							1.0					(N)	G			*					0035
	AFAM	Grd Emergencies	0036	X							1.0					(N)	G			*					0036
	AFAM	Takeoff Emergencies	0037	X							1.0					(N)	G			*					0037
	AFAM	In-Flt Emerg, Pt 1	0038	X							1.0					(N)	G			*					0038
	AFAM	In-Flt Emerg, Pt 2	0039	X							1.0					(N)	G			*					0039
	AFAM	In-Flt Emerg, Pt 3	0040	X							1.0					(N)	G			*					0040
	AFAM	Landing Emerg	0041	X							1.0					(N)	G			*					0041
	AFAM	Brief/Debrief	0042	X							1.0					(N)	G			*					0042
	AFAM	INST Procedures	0043	X							1.0					(N)	G			*					0043
	AFAM	A/C Service & Handli	0044	X							1.0					(N)	G			*					0044
	AFAM	AV-8B Flt Prep	0045	X							1.0					(N)	G			*					0045
	AFAM	Eng/Fuel Sys Trainer	0046	X							1.0					(N)	G			*					0046
	AFAM	Airframe Sys Trainer	0047	X							1.0					(N)	G			*					0047
	AFAM	Seat Brief, Survival	0048	X							1.0					(N)	G			*					0048
	AFAM	JMPS Intro AV-8B	0049	X							1.0					(N)	G			*					0049
	AFAM	VMAT-203 Flight SOP	0050	X							1.0					(N)	G			*					0050
	AFAM	Course Rules	0051	X							1.0					(N)	G			*					0051
	AFAM	NATOPS exams	0052	X							1.0					(N)	G			*			X		0052
	AFOB	FOB Stage Brief	0058	X							1.0					(N)	G			*					0058
	AFOB	V/STOL Concept of Op	0059	X							1.0					(N)	G			*					0059
	AFOB	FOB Ops	0060	X							1.0					(N)	G			*					0060
	AFCLP	FCLP Stage Brief	0061	X							1.0					(N)	G			*					0061
	AFCLP	FCLP	0062	X							1.0					(N)	G			*					0062
	AFCLP	MCALF Bogue Proced	0063	X							1.0					(N)	G			*					0063
	AFCLP	FCLP Grd Sch Exam	0064	X							1.0					(N)	G			*			X		0064
	AFORM	FORM/TACFORM Brief	0066	X							1.0					(N)	G			*					0066
	AFORM	Admin Form	0067	X							1.0					(N)	G			*					0067
	AFORM	Section TACFORM	0068	X							1.0					(N)	G			*					0068
	AFORM	Div TACFORM	0069	X							1.0					(N)	G			*					0069
	AFORM	FORM Grd Sch Exam	0070	X							1.0					(N)	G			*			X		0070
	AAAH	AAH Stage Brief	0072	X							1.0					(N)	G			*					0072

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	AAAH	A/C Performance	0073	X							1.0					(N)	G			*					0073
	AAAH	AV-8B Depart Avoidan	0074	X							1.0					(N)	G			*					0074
	AAAH	A/C Handling Exam	0075	X							1.0					(N)	G			*			X		0075
	ANAV	NAV Stage Brief	0082	X							1.0					(N)	G			*					0082
	ANAV	Low Level NAV	0083	X							1.0					(N)	G			*					0083
	ANAV	JMPS Low Level Plan	0084	X							1.0					(N)	G			*					0084
	ANAV	NAv Grd Sch exam	0085	X							1.0					(N)	G			*			X		0085
	AAAR	AAR Stage Brief	0087	X							1.0					(N)	G			*					0087
	AAAR	Aerial Refueling	0088	X							1.0					(N)	G			*					0088
	AAAR	AR Grd Sch Exam	0089	X							1.0					(N)	G			*			X		0089
	ATCT	TCT Stage Brief	0090	X							1.0					(N)	G			*					0090
	ATCT	Intro to ALE-47	0091	X							1.0					(N)	G			*					0091
	ATCT	AV-8B ASE (MAWTS)	0092	X							1.0					(N)	G			*					0092
	ATCT	Threat Analysis Lab	0093	X							1.0					(N)	G			*					0093
	ATCT	Non-RF S-A Missiles	0094	X							1.0					(N)	G			*					0094
	ATCT	RF S-A Missiles	0095	X							1.0					(N)	G			*					0095
	ATCT	TCT (MAWTS)	0096	X							1.0					(N)	G			*					0096
	ATCT	TCT exam	0097	X							1.0					(N)	G			*					0097
	AAS	AS Stage Brief	0102	X							1.0					(N)	G			*			X		0102
	AAS	Intro Msn Pubs	0103	X							1.0					(N)	G			*					0103
	AAS	A/G WPNS Delivery	0104	X							1.0					(N)	G			*					0104
	AAS	Computed Del Theory	0105	X							1.0					(N)	G			*					0105
	AAS	Suspension Equip	0106	X							1.0					(N)	G			*					0106
	AAS	GP Bombs	0107	X							1.0					(N)	G			*					0107
	AAS	GP Fuzing	0108	X							1.0					(N)	G			*					0108
	AAS	25mm Gun	0109	X							1.0					(N)	G			*					0109
	AAS	Rockets	0110	X							1.0					(N)	G			*					0110
	AAS	WNP Limits & Restric	0111	X							1.0					(N)	G			*					0111
	AAS	WEAPONEERING	0112	X							1.0					(N)	G			*					0112
	AAS	Multi-WPNS Release	0113	X							1.0					(N)	G			*					0113
	AAS	Fwd-Firing Ord	0114	X							1.0					(N)	G			*					0114
	AAS	WARP	0115	X							1.0					(N)	G			*					0115
	AAS	Laser Theory	0116	X							1.0					(N)	G			*					0116

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
AAS	ARBS		0117	X							1.0					(N)	G			*					0117
AAS	Height Above Tgt		0118	X							1.0					(N)	G			*					0118
AAS	Tgt Desig Method		0119	X							1.0					(N)	G			*					0119
AAS	SMS & WPN Sys Prog		0120	X							1.0					(N)	G			*					0120
AAS	Computed WPN Del Mod		0121	X							1.0					(N)	G			*					0121
AAS	Degraded WPN Del Mod		0122	X							1.0					(N)	G			*					0122
AAS	WPN Del Proc Pt 1		0123	X							1.0					(N)	G			*					0123
AAS	WPN Del Proc Pt 2		0124	X							1.0					(N)	G			*					0124
AAS	JMPS Lab, Adv Msn Pl		0125	X							1.0					(N)	G			*					0125
AAS	A-S Grd Sch Exam		0126	X							1.0					(N)	G			*			X		0126
ALAT	LAT Stage Brief		0127	X							1.0					(N)	G			*					0127
ALAT	MAWTS-1 LAT ASP I-IV		0128	X							1.0					(N)	G			*					0128
ALAT	3D Maneuvering		0129	X							1.0					(N)	G			*					0129
ALAT	Mission X-check Time		0130	X							1.0					(N)	G			*					0130
ALAT	LAT Stage Exam		0131	X							1.0					(N)	G			*			X		0131
AMECH	MECH Stage Brief		0132	X							1.0					(N)	G			*					0132
AMECH	LGW (MAWTS-1)		0133	X							1.0					(N)	G			*					0133
AMECH	Tgt Acquisition/Det		0134	X							1.0					(N)	G			*					0134
AMECH	Attack Profiles		0135	X							1.0					(N)	G			*					0135
AMECH	LGTR		0136	X							1.0					(N)	G			*					0136
AMECH	JDAM		0137	X							1.0					(N)	G			*					0137
AMECH	Std Tgt Area TAC		0138	X							1.0					(N)	G			*					0138
AMECH	A/S Planning & Time		0139	X							1.0					(N)	G			*					0139
AMECH	Reactive Weaponing		0140	X							1.0					(N)	G			*					0140
AMECH	JMEN/JAWS		0141	X							1.0					(N)	G			*					0141
AMECH	AGM-65E		0142	X							1.0					(N)	G			*					0142
AMECH	Cluster Wep & Fuzing		0143	X							1.0					(N)	G			*					0143
AMECH	Trans Profiles Plan		0144	X							1.0					(N)	G			*					0144
AMECH	PGM Planning Lab		0145	X							1.0					(N)	G			*					0145
AMECH	Mech Stage Exam		0146	X							1.0					(N)	G			*			X		0146
ACAS	CAS Stage Brief		0147	X							1.0					(N)	G			*					0147
ACAS	OAS Overview		0148	X							1.0					(N)	G			*					0148
ACAS	CAS		0149	X							1.0					(N)	G			*					0149
ACAS	CAS Execution		0150	X							1.0					(N)	G			*					0150

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	ACAS	CAS Planning Lab	0151	X							1.0					(N)	G			*					0151
	ACAS	CAS Grd Sch Exam	0152	X							1.0					(N)	G			*			X		0152
	ASTK	AI Stage Brief	0153	X							1.0					(N)	G			*					0153
	ASTK	AI Planning	0154	X							1.0					(N)	G			*					0154
	ASTK	AI Planning Lab	0155	X							1.0					(N)	G			*					0155
	AAA	A/A Stage Brief	0160	X							1.0					(N)	G			*					0160
	AAA	Depart Avoid Review	0161	X							1.0					(N)	G			*					0161
	AAA	ACM Safety	0162	X							1.0					(N)	G			*					0162
	AAA	A/A Drills and Proc	0163	X							1.0					(N)	G			*					0163
	AAA	AIM-9 Sidewinder	0164	X							1.0					(N)	G			*					0164
	AAA	Combat Gunnery	0165	X							1.0					(N)	G			*					0165
	AAA	Shot Validation	0166	X							1.0					(N)	G			*					0166
	AAA	CMBT Thrust Vector	0167	X							1.0					(N)	G			*					0167
	AAA	Threat A/C	0168	X							1.0					(N)	G			*					0168
	AAA	1v1 Basic Maneuvers	0169	X							1.0					(N)	G			*					0169
	AAA	SEM	0170	X							1.0					(N)	G			*					0170
	AAA	2V1 SEM	0171	X							1.0					(N)	G			*					0171
	AAA	A/A Stage Exam	0172	X							1.0					(N)	G			*			X		0172
	ANS	NS Stage Brief	0180	X							1.0					(N)	G			*					0180
	ANS	Night Fly Enviro	0181	X							1.0					(N)	G			*					0181
	ANS	IR Theory	0182	X							1.0					(N)	G			*					0182
	ANS	NAVFLIR	0183	X							1.0					(N)	G			*					0183
	ANS	Night Flt Procedures	0184	X							1.0					(N)	G			*					0184
	ANS	Aided Night Flt Proc	0185	X							1.0					(N)	G			*					0185
	ANS	Nite Lab	0186	X							1.0					(N)	G			*					0186
	ANS	NS Grd Sch Exam	0187	X							1.0					(N)	G			*			X		0187
	ARDR	Radar Fund Stage Brf	0200	X							1.0					(N)	G			*					0200
	ARDR	Intro to Radar	0201	X							1.0					(N)	G			*					0201
	ARDR	Radar Theory	0202	X							1.0					(N)	G			*					0202
	ARDR	Radar Display Interp	0203	X							1.0					(N)	G			*					0203
	ARDR	A/S Radar Cont & Disp	0204	X							1.0					(N)	G			*					0204
	ARDR	A/S Radar Procedures	0205	X							1.0					(N)	G			*					0205
	ARDR	A/A Radar Cont & Disp	0206	X							1.0					(N)	G			*					0206

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	ARDR	Basic Intercept Pt 1	0207	X							1.0					(N)	G			*					0207
	ARDR	Basic Intercept Pt 2	0208	X							1.0					(N)	G			*					0208
	ARDR	A/A Search Techniques	0209	X							1.0					(N)	G			*					0209
	ARDR	Intro to AIC	0210	X							1.0					(N)	G			*					0210
	ARDR	Radar Chalk Talk	0211	X							1.0					(N)	G			*					0211
	ARDR	Basic Int Chalk Talk	0212	X							1.0					(N)	G			*					0212
	ARDR	Radar Stage Exam	0213	X							1.0					(N)	G			*			X		0213
	ASENS	A/S Sensor Stage Brf	0220	X							1.0					(N)	G			*					0220
	ASENS	Intro to LITENEING	0221	X							1.0					(N)	G			*					0221
	ASENS	TPOD Opt (MAWTS-1)	0222	X							1.0					(N)	G			*					0222
	ASENS	JDAM Empl (MAWTS-1)	0223	X							1.0					(N)	G			*					0223
	ASENS	DMW (MAWTS-1)	0224	X							1.0					(N)	G			*					0224
	ASENS	TPOD Chalk Talk	0225	X							1.0					(N)	G			*					0225
	ASENS	A/S Sensor Stage Exam	0226	X							1.0					(N)	G			*			X		0226
	ATCT	ALE-39 CMDS	0227	X							1.0					(N)	G			*					0227
	ATCT	ALR-67 RWR	0228	X							1.0					(N)	G			*					0228
	ATCT	ALQ-164 DECM	0229	X							1.0					(N)	G			*					0229
	ATCT	Expendable Decoys	0230	X							1.0					(N)	G			*					0230
1000 ACAD SKILL TOTAL										180	180.0	0	0.0	0	0.0										
1000 FAM	SFAM	(S) COCKPIT PRE-STAR	S1100	X	X		X	X					2.0			D	S	1		365					1100
	SFAM	COCKPIT PRE-START	S1101	X									2.0			D	S	1		*	1100				1101
	SFAM	TAKEOFF INTRO	S1102	X									2.0			D	S	1		*	1101				1102
	SFAM	TAKEOFF CHECKS	S1103	X	X		X	X					2.0			D	S	1		365	1102				1103
	SFAM	INTRO LANDINGS	S1104	X	X		X	X					2.0			D	S	1		365	1103				1104
	SFAM	VFR INTRO	S1105	X									2.0			D	S	1		*	1104				1105
	SFAM	RVTO INTRO	S1106	X									2.0			D	S	1		*	1105				1106
	SFAM	VTO INTRO	S1107	X									2.0			D	S	1		*	1106				1107
	SFAM	EP INTRO	S1108	X									2.0			D	S	1		*	1107				1108
	SFAM	FCS EP INTRO	S1109	X									2.0			D	S	1		*	1108				1109
	SFAM	DECS EP INTRO	S1110	X									2.0			D	S	1		*	1109				1110
	SFAM	ENG EP INTRO	S1111	X	X		X	X					2.0			D	S	1		365	1110				1111
	SFAM	EP PROGRESS CHECK	S1112	X	X		X	X					2.0			D	S	1		365	1111				1112
	FAM	CTO INTRO	1113	X	X		X	X						1.3		D	A	1		365	1112				1113

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	FAM	TACAN INTRO	1114	X	X		X	X							1.3	D	A	1		365	1113				1114
	FAM	PAR INTRO	1115	X	X		X	X							1.3	D	A	1		365	1114				1115
	FAM	RVL INTRO	1116	X											1.3	D	A	1		*	1115				1116
	FAM	RVTO INTRO	1117	X											1.3	D	A	1		*	1116				1117
	FAM	PEDAL TURN INTRO	1118	X											1.3	D	A	1		*	1117				1118
	FAM	SAAHS-OFF RVL INTRO	1119	X	X		X								1.3	D	A	1		365	1118				1119
1000 FAM SKILL TOTAL										0	0.0	13	26.0	7	9.1										
1000 INST	SINST	INST PROCEDURE INTRO	S1120	X									2.0			D	S	1		*	1119				1120
	SINST	AIRWAYS NAV INTRO	S1121	X	X		X						2.0			D	S	1		485	1120				1121
	SINST	MIN FUEL PAR INTRO	S1122	X									2.0			D	S	1		*	1121				1122
	INST	INST FLIGHT INTRO	1123	X											1.5	D	A	1		*	1122				1123
	INST	AIRWAYS INTRO	1124	X	X										1.5	D	A	1		730	1123				1124
	SINST	INSTRUMENT CHECK	S1125	X	X		X						1.5			D	S	1		485	1124				1125
	FAM	INTRO VFR STRAIGHT-I	1126	X											1.3	D	A	1		*	1125				1126
	SFAM	COMPOUND EMERGENCIES	S1127	X	X		X						2.0			D	S	1		485	1126				1127
	INST	SAFE FOR SOLO CHECK	1128	X	X		X	X							1.3	D	A	1		365	1127				1128
	INST	SOLO FLIGHT	1129	X	X		X	X							1.3	D	A	1		365	1128				1129
1000 INST SKILL TOTAL										0	0.0	5	9.5	5	6.9										
1000 FOB	SFOB	INTRO FBO AND EP	S1200	X									1.0			D	S			*	1129				1200
	FOB	PRACTICE FBO	1201	X											1.2	D	A	1		*	1200				1201
	FOB	REVIEW FBO	1202	X											0.8	D	A	1		*	1201				1202
1000 FOB SKILL TOTAL										0	0.0	1	1.0	2	2.0										
1000 FCLP	SFCLP	FCLP INTRO SIM	S1210	X									1.0			D	S	1		*	1129				1210
	FCLP	PRACTICE FCLP	1211	X											1.0	D	A	1		*	1210				1211
	FCLP	REVIEW FCLP	1212	X											1.0	D	A	1		*	1211				1212
	FCLP	REVIEW FCLP	1213	X											1.0	D	A	1		*	1212				1213
	FCLP	REVIEW FCLP	1214	X											1.0	D	A	1		*	1213				1214
	FCLP	REVIEW FCLP	1215	X											1.0	D	A	1		*	1214				1215
	FCLP	FCLP (D) QUAL	1216	X											1.0	D	A	1		*	1215				1216

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV			
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME													
1000 FCLP SKILL TOTAL										0	0.0	1	1.0	6	6.0													
1000 VCON	VCON	V/STOL CONSOLIDATION	1220	X											1.3	D	A	1		*	1129				1220			
	SVCON	EMERGENCY PROCEDURES	S1221	X									1.0			(NS)	S	1		*	1129				1221			
	VCON	V/STOL CONSOLIDATION	1222	X											1.3	D	A	1		*	1220				1222			
	VCON	V/STOL CONSOLIDATION	1223	X											1.3	(N)	A	1		*	1222,1606-N				1223			
1000 VCON SKILL TOTAL										0	0.0	1	1.0	3	3.9													
1000 FORM	FORM	ADMIN FORM INTRO	1300	X											1.3	D	A	2		*	1129				1300			
	FORM	PRACTICE ADMINISTRAT	1301	X											1.3	D	A	2		*	1300				1301			
1000 FORM SKILL TOTAL										0	0.0	0	0.0	2	2.6													
1000 AAH	SAAH	AEROBATICS INTRO	S1310	X									1.0			D	S	1		*	1129				1310			
	AAH	PRACTICE AAH	1311	X											1.0	D	A	1		*	1310				1311			
	AAH	PRACTICE AAH LAT	1312	X											1.0	D	A	2		*	1311, 1301				1312			
1000 AAH SKILL TOTAL										0	0.0	1	1.0	2	2.0													
1000 TACFOR M	TACFORM	INTRO FORM MED ALT	1320	X	X		X								1.1	D	A	2		485	1301				1320			
	TACFORM	INTRO COMM-OUT TURNS	1321	X											1.1	D	A	2		*	1312,1320				1321			
	TACFORM	LL SEC TACFORM	1322	X											1.1	D	A	2		*	1321				1322			
	TACFORM	HIGH SEC TACFORM	1323	X											1.1	D	A	2		*	1321				1323			
	TACFORM	MED DIV TACFORM	1324	X											1.1	D	A	4		*	1322,1323				1324			
1000 TACFORM SKILL TOTAL										0	0.0	0	0.0	5	5.5													
1000 NAV	SNAV	INTRO LOW ALT NAV	S1330	X									0.5			D	S	1		*	1129				1330			
	SNAV	INTRODUCE LOW LEVEL	S1331	X									1.5			D	S			*	1330				1331			
	NAV	INTR LOW LEVEL NAV	1332	X											1.3	D	A	1		*	1331				1332			
1000 NAV SKILL TOTAL										0	0.0	2	2.0	1	1.3													
1000 AAR	AAR	DAY AAR QUAL	1340	X											1.5	D	A	2		*	1321				1340			
1000 AAR SKILL TOTAL										0	0.0	0	0.0	1	1.5													
1000 RAD	SRAD	INTRO RADAR	S1350	X									1.5			D	S	1		*	1301				1350			
	SRAD	INTRO AWI	S1351	X									1.5			D	S	1		*	1350				1351			

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV			
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME													
1000 RAD SKILL TOTAL										0	0.0	2	3.0															
1000 TCT	STCT	INTRO EW/SA	S1360	X	X		X						1.5			D	S	1		485	1312, 1351				1360			
	TCT	INTRO MED ALT TCT	1361	X										1.0	D	A	2		*	1360				1361				
	TCT	INTRO MED ALT TCT IN SXN	1362	X										1.0	D	A	2		*	1361, 1324				1362				
1000 RAD SKILL TOTAL										0	0.0	1	1.5	2	2.0													
1000 AS	SAS	INTRO COMPUTED DELIVERIES	S1400	X									1.5			D	S	1		*	1324				1400			
	SAS	REVIEW COMPUTED DELIVERIES	S1401	X									1.0			D	S	1		*	1400				1401			
	SAS	INTRO 10 DEG LD COMPUTED	S1402	X									1.0			D	S	1		*	1400				1402			
	SAS	INTRO 10 DEG HD COMPUTED	S1403	X									1.0			D	S	1		*	1402				1403			
	SAS	INTRO GAU-12 & RKT	S1404	X									1.0			D	S	1		*	1401				1404			
	AS	INTRODUCE COMPUTED W	1405	X										1.0	D	A	1		*	1401				1405				
	AS	PRACTICE MED ANGLE	1406	X										1.0	D	A	2		*	1405				1406				
	AS	PRACTICE MED ANGLE	1407	X										1.0	D	A	2		*	1406				1407				
	AS	INTRO 10 DEG LD	1408	X										1.0	D	A	1		*	1402				1408				
	AS	INTRO 10 DEG HD	1409	X										1.0	D	A	2		*	1403,1408				1409				
	AS	INTRO GAU-12	1410	X										1.0	D	A	2		*	1404,1407				1410				
1000 AS SKILL TOTAL										0	0.0	5	5.5	6	6.0													
1000 LAT	SLAT	BASIC LAT INTRO	S1420	X									1.0			D	S	1		*	1324				1420			
	SLAT	INTRODUCE ADVANCED A	S1421	X									1.0			D	S	1		*	1420				1421			
	SLAT	INTRO TXRX	S1422	X									1.0			D	S	1		*	1420,1351				1422			
	LAT	INTRO BASIC	1423	X										1.0	D	A	1		*	1421				1423				
	LAT	PRACTICE AAH PROCEDU	1424	X										1.0	D	A	2		*	1423				1424				
	LAT	INTRO TXRX	1425	X										1.0	D	A	2		*	1422,1424,1362				1425				
	LAT	INTRO SECT TXRX	1426	X										1.0	D	A	2		*	1422,1425,1362				1426				
1000 LAT SKILL TOTAL										0	0.0	3	3.0	4	4.0													
1000 MECH	SMECH	INTRO CC RD & LOFT	S1430	X									1.0			D	S	1		*	1409,0141				1430			
	SMECH	INTRO LGB AND LMAV	S1431	X									1.0			D	S	1		*	1430				1431			

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	SMECH	INTRO ABSOLUTE JDAM	S1432	X									1.0			D	S	1		*	1431				1432
	MECH	INTRO CC RD & LOFT	1433	X										1.0		D	A	1		*	1430,1425				1433
	MECH	INTRO MED ALT MECH	1434	X										1.0		D	A	2		*	1433				1434
	MECH	REVIEW MED ALT MECH	1435	X										1.0		D	A	2		*	1434				1435
	SMECH	INTRO LOW ALT POPS	S1436	X	X								1.0			D	S	1		730	1433,1425				1436
	MECH	INTRO LOW ALT POPS	1437	X										1.0		D	A	1		*	1436				1437
	MECH	INTRO SXN LOW MECH	1438	X										1.0		D	A	2		*	1437				1438
	MECH	INTRO LGW & JDAM	1439	X										1.0		D	A	2		*	1432				1439
1000 MECH SKILL TOTAL										0	0.0	4	4.0	6	6.0										
1000 CAS	SCAS	INTRO CAS PAGE PROG	S1440	X									0.5			D	S	1		*	1438,0147				1440
	SCAS	INTRO MEDIUM ALT TYPE 1	S1441	X	X								1.0			D	S	1		730	1440				1441
	SCAS	INTRO MAD ALT CAS TYPE 2	S1442	X									1.0			D	S	1		*	1439,1441				1442
	SCAS	INTRODUCE LOW LEVEL TYPE 1	S1443	X									1.0			D	S	1		*	1438,1442				1443
	CAS	INTRODUCE MEDIUM ALT	1444	X										1.0		D	A	1		*	1441				1444
	CAS	INTRO TRPE 2 CNTRL	1445	X										1.0		D	A	1		*	1442				1445
	CAS	REVIEW MEDIUM ALTITUDE	1446	X										1.0		D	A	2		*	1444				1446
	CAS	INTRODUCE LOW CAS	1447	X										1.0		D	A	2		*	1443,1446				1447
1000 CAS SKILL TOTAL										0	0.0	4	3.5	4	4.0										
1000 AI	SAI	INTRO LOW ALT AI	S1450	X									1.5			D	S	2	X	*	0148,1438				1450
1000 AI SKILL TOTAL										0	0.0	1	1.5												
1000 SEN	SSEN	INTRO TPOD CONT/DISP	S1460	X									0.5			D	S	1		*	1439				1460
	SSEN	INTRO RELATIVE JDAM	S1461	X	X		X						1.0			D	S	1		485	1460				1461
	SSEN	INTRO SELF_LASE LGW	S1462	X	X								1.5			D	S	1		730	1461				1462
	SSEN	INTRO GP/FFO RAMP LAUT/LCIP	S1463	X	X								1.0			D	S	1		730	1462				1463
	SSEN	INTRO GP RAKED RANGE	S1464	X	X		X						1.0			D	S	1		485	1463				1464
	SEN	INTRO TPOD EMPLOYMENT	1465	X										1.3		D	A	1		*	1464				1465
	SEN	INTRO SELF-LASE LGW	1466	X										1.3		D	A	2		*	1461,1465				1466

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	SEN	INTRO GP/FFO RAMP LAUT/LCIP	1467	X										1.3		D	A	2		*	1466				1467
	SEN	INTRO SXN GP W/TPOD	1468	X	X									1.3		D	A	2		730	1467				1468
	SSEN	INTRO NS ATTACK PROFILES	S1469	X								1.0				NS	S	1		*	1468,1606				1469
	SSEN	INTRO NS GP	1470	X								1.0				NS	S	1		*	1469				1470
	SEN	INTRO NS TPOD/PGM	1471	X										1.3		NS	A	2		*	1470				1471
	SEN	INTRO NIGHT GP/FFO RAMPS	1472	X										1.3		NS	A	2		*	1471				1472
	1000 SEN SKILL TOTAL									0	0.0	7	7.5	9	11.7										
1000 AA	SAA	INTRO A/A WEPS PROG	S1500	X									1.5			D	S	1		*	1361,1324				1500
	AA	INTRODUCE TVC	1501	X										1.0		D	A	2		*	1500				1501
	AA	IV1 OFFENSIVE BFM	1502	X										1.0		D	A	2		*	1501				1502
	AA	IV1 OFFENSIVE BFM	1503	X										1.0		D	A	2		*	1502				1503
	AA	IV1 DEFENSIVE BFM	1504	X										1.0		D	A	2		*	1503				1504
	AA	IV1 DEFENSIVE BFM	1505	X										1.0		D	A	2		*	1504				1505
	AA	INTRO IV1 HI ASPECT	1506	X										1.0		D	A	2		*	1505				1506
	AA	REVIEW IV1 HI ASPECT	1507	X										1.0		D	A	2		*	1506				1507
	AA	INTRO 2V1 SEM	1508	X										1.3		D	A	2+		*	1507				1508
	SAA	REVIEW AWI	S1509	X								1.0				D	S	1		*	1500,1351				1509
	SAA	INTRO HSGP	S1510	X								1.0				D	S	1		*	1509				1510
	SAA	REVIEW HSGP	S1511	X	X							1.0				D	S	1		730	1510				1511
	1000 AA SKILL TOTAL									0	0.0	4	4.5	8	8.3										
1000 NS	SNS	INTRO NIGHT V/STOL	S1600	X								1.0				N	S	1		*	1324				1600
	SNS	INTRODUCE NS V/STOL	S1601	X								1.0				NS	S	1		*	1600				1601
	NS	INTRO NIGHT V/STOL	1602	X										1.3		N	A	1		*	1601				1602
	NS	INTRO NIGHT FORM	1603	X										1.3		N	A	2		*	1602				1603
	NS	NIGHT SYSTEM V/STOL	1604	X										1.3		NS	A	1		*	1602				1604
	NS	INTRO NS FORM	1605	X										1.3		NS	A	2		*	1603,1604				1605
	NS	NS SOLO	1606	X										1.3		NS	A	1		*	1605				1606
	1000 NS SKILL TOTAL									0	0.0	2	2.0	5	6.5										

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	AINT	ACM SAFETY	2020	X						1	1.0					(N)	G			*					2039
	AINT	AIRCRAFT PERFORMANCE	2021	X						1	1.0					(N)	G			*					2040
	AINT	A/A RADAR CONTROLS AND DISPLAYS	2022	X						1	1.0					(N)	G			*					2049
	AINT	BASIC INTERCEPT GEOMETRY 1 & 2	2023	X						1	1.0					(N)	G			*					2050
	AINT	A/A SEARCH TECHNIQUES	2024	X						1	1.0					(N)	G			*					2051
	AINT	AIR INTERCEPT CONTROL	2025	X						1	1.0					(N)	G			*					2054
	AINT	APG-65 OPTIMIZATION (MAWTS ASP)	2026	X						1	1.0					(N)	G			*					2055
	ATCT	TACAIR SACT (MAWTS ASP)	2030	X						1	1.0					(N)	G			*					2014
	ATCT	AV-8B ASE (MAWTS ASP)	2031	X						1	1.0					(N)	G			*					2045, 2046, 2047
	ATCT	TCT GAMEPLAN CHALKTALK	2032	X						1	1.0					(N)	G			*					
	ALAT	TACAIR LAT PT 1	2040	X						1	1.0					(N)	G			*					2010
	ALAT	TACAIR LAT PT 2	2041	X						1	1.0					(N)	G			*					2011
	ALAT	TACAIR LAT PT 3	2042	X						1	1.0					(N)	G			*					2012
	ALAT	TACAIR LAT PT 4	2043	X						1	1.0					(N)	G			*					2013
	ALAT	LAT STAGE EXAM	2044	X						1	1.0					(N)	G			*			X		2015
	AAS	HEIGHT ABOVE TARGET	2050	X						1	1.0					(N)	G			*					2016
	AAS	GP BOMBS	2051	X						1	1.0					(N)	G			*					2017
	AAS	25MM GUN	2052	X						1	1.0					(N)	G			*					2019
	AAS	ROCKETS	2053	X						1	1.0					(N)	G			*					2020
	AAS	FORWARD FIRING ORDNANCE	2054	X						1	1.0					(N)	G			*					2021
	AAS	CLUSTER WEAPONS & MU	2055	X						1	1.0					(N)	G			*					2026
	AAS	INERTIALLY AIDED MUNITIONS	2056	X						1	1.0					(N)	G			*					2027
	AAS	LASER-GUIDED WEAPONS	2057	X						1	1.0					(N)	G			*					2028
	AAS	JMEMS A/S WEAPONER1	2058	X						1	1.0					(N)	G			*					2032
	ANS	INFRARED THEORY	2060	X						1	1.0					(N)	G			*					2034
	ANS	NAVFLIR	2061	X						1	1.0					(N)	G			*					2035
	ANS	PARACHUTE FLARES	2062	X						1	1.0					(N)	G			*					2036
	ANS	NITE LAB	2063	X						1	1.0					(N)	G			*					2037
	ANS	NS MISHAPS (MAWTS ASP)	2064	X						1	1.0					(N)	G			*					2038

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV			
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME													
	ANS	AV-8B AERIAL REFUELI	2070	X						1	1.0					(N)	G			*					2009			
	AAA	AV-8B DEPARTURE AVOIDANCE	2080	X						1	1.0					(N)	G			*					2048			
	AAA	AIM-120 (MAWTS ASP)	2081	X						1	1.0					(N)	G			*								
	AAA	APG-65 OPTIMIZATION (MAWTS ASP)	2082	X						1	1.0					(N)	G			*					2055			
	AAA	AV-8B AIR-TO-AIR EMPLOYMENT (MAWTS ASP)	2083	X						1	1.0					(N)	G			*					2058			
	AAA	OFFENSIVE BFM CT.	2084	X						1	1.0					(N)	G			*								
	AAA	DEFENSIVE BFM CT.	2085	X						1	1.0					(N)	G			*								
	AAA	HABFM CT.	2086	X						1	1.0					(N)	G			*								
	AAA	2v1 SEM CT.	2087	X						1	1.0					(N)	G			*					2059			
	AAA	ACM SAFETY	2088	X						1	1.0					(N)	G			*					2039			
	AAA	COMBAT GUNNERY	2089	X						1	1.0					(N)	G			*					2041			
	AAA	COMBAT TVC	2090	X						1	1.0					(N)	G			*					2042			
	AAA	1V1 BFM	2091	X						1	1.0					(N)	G			*					2052			
	AAA	2V1 SEM	2092	X						1	1.0					(N)	G			*					2053			
	AAA	ENERGY MANEUVERABILITY	2093	X						1	1.0					(N)	G			*								
	AAA	AIM-9M-8	2094	X						1	1.0					(N)	G			*					2043			
	AAA	A/A RADAR CONTROLS AND DISPLAYS	2095	X						1	1.0					(N)	G			*					0204			
	AAA	A/A SEARCH TECHNIQUES	2096	X						1	1.0					(N)	G			*					2051			
	AAA	INTRO TO LINK-16	2097	X						1	2.0					(N)	G			*								
AAA	TACTS DEBRIEF LAB	2098	X						1	1.0					(N)	G			*					2056				
2000 ACAD SKILL TOTAL										59	60.0	0	0.0	0	0.0													
2000 FAM	SFAM	NORM/INST/EP PROCEDURES	2100	X	X	X						1	1.5			(NS)	S	1		60	2603~NS				2101			
	FAM	FAM VSTOL NAV IN	2101	X	X	X								1	1.3	(NS)	A	1		60	2100,2603~NS				2102			
2000 FAM SKILL TOTAL										0	0.0	1	1.5	1	1.3													
2000 INT	INT	REVIEW 1V1 INTERCEPTS	2200	X	X	X								1	1.3	(NS)	A/S	1+		180	2101,2603~NS	2101~A			2200			
2000 INT SKILL TOTAL										0	0.0	0	0	1	1.3													
2000 TCT	TCT	REVIEW S/A TCT	2300	X	X	X								1	1.3	(NS)	A/S	2		180	2101,2603~NS	2101~A			2300			
2000 TCT SKILL TOTAL										0	0.0	0	0	1	1.3													

NAVMC 3500.51D

19 Mar 21

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
2000 LAT	SLAT	REVIEW ADV LAT AND TCT	2400	X	X							1	1.5			D	S	1		365	2300				2400
	LAT	REVIEW SECTION LAT	2401	X	X	X								1	1.3	D	A	2		365	2400	2101,2300,2400			2401
2000 LAT SKILL TOTAL										0	0.0	1	1.5	1	1.3										
2000 AS	SAS	INTRO ADVANCED PGM AGAINST STATIC AND MOVING TARGETS	2500	X	X							1	1.5			D	S	1		365	2100				2500
	SAS	REVIEW LOW ALT GP/FF TGT AREA TACTICS	2501	X	X							1	1.5			D	S	2	X	365	2400	2400			2501
	AS	REVIEW MED ALT GP/FF TGT AREA TACTICS	2502	X	X	X								1	1.3	D	A	2+		90	2101,2500	2101			2502
	AS	REVIEW LOW ALT GP/FF TGT AREA TACTICS	2503	X	X	X								1	1.3	D	A	2+		365	2401,2501,2502	2101,2401,2501			2503
	AS	REVIEW PGM TGT AREA TACTICS	2504	X	X	X								1	1.3	D	A	2+		90	2502	2101,2500			2504
2000 AS SKILL TOTAL										0	0.0	2	3.0	3	3.9										
2000 NS	SNS	REVIEW GPFF ATTACK PROFILES	2600	X	X							1	1.5			NS	S	1		180	AS stage complete				2600
	SNS	INTRO COMPUTED DELIVERIES FROM MED AND LOW ALT	2601	X								1	1.5			NS	S	2	X	*	2600	2600,2500			2601
	NS	INTRO NIGHT GP COMPUTED DELIVERIES	2602	X	X									1	1.3	NS	A	2		180	2601	2101,2502,2600			2602
	NS	INTRO TGT AREA TACTICS	2603	X	X	X								1	1.3	NS	A	2		180	2602	2101,2500,2502,2504,2600,2602			2603
2000 NS SKILL TOTAL										0	0.0	2	3.0	2	2.6										
2000 AAR	AAR	INTRO NIGHT AAR	2700	X	X	X								1	1.3	NS	A	2+		365	1340,2101,2603~NS	2101,6900			2700
2000 AAR SKILL TOTAL														1	1.3										
2000 AA	SAA	TVC / AIRCRAFT HANDL	2800	X	X							1	1.0			D	S	1		365	2200	2100			2800
	SAA	INTRO HSGP	2801	X								1	1.5			(NS)	S	1		*	2800	2200, 2800			2802
	SAA	INTRO 2V1+1	2802	X	X							1	1.0			D	S	2	X	365	2801	2200, 2800			2803
	SAA	INTRO HSGP IN SXN	2803	X	X							1	1.5			(NS)	S	2	X	365	2802	2200, 2800			2804
	AA	REVIEW 1V1 OFFENSIVE BFM	2804	X										1	1.3	D	A	1+		*	2800	2101, 2200, 2800			2805
	AA	REVIEW 1V1 DEFENSIVE BFM	2805	X										1	1.3	D	A	1+		*	2800	2101, 2200, 2800			2806

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	AA	REVIEW 1V1 HIGH ASPECT BFM	2806	X	X									1	1.3	D	A	1+		365	2804,2805	2101, 2200, 2800			2807
	AA	REVIEW 2V1 SHORT RANGE INTERCEPTS	2807	X	X	X								1	1.3	D	A	2		180	2802,2806	2101, 2200, 2800, 2802, 2806			2809
	AA	REVIEW HSGP IN SECTION	2808	X	X	X								1	1.3	(NS)	A/S	2		180	2807	2101~A, 2200, 2800, 2803			2810
2000 AA SKILL TOTAL										0	0.0	4	5.0	5	6.5										
3000	ACAS	CAS EXECUTION	3010	X							1.0					(N)	G			*					3001
	ACAS	URBAN CAS (MAWTS ASP)	3011	X							1.0					(N)	G			*					3002
	ASCAR	ARMED RECONNAISSANCE	3030	X							1.0					(N)	G			*					3004
	ASCAR	TACAIR SCAR (MAWTS ASP)	3031	X							1.0					(N)	G			*					3005
	ASCAR	SCAR PLANNING LAB	3032	X							1.0					(N)	G			*					
	ASTK	Strike PLANNING LAB	3040	X							6.0					(N)	G			*					3007
3000 ACAD SKILL TOTAL										5	11.0	0	0.0	0	0.0										
3000 CAS	SCAS	INTRO MED ALT CAS WITH PGM/GP/FF	3100	X								1.5				D	S	1		*	AS stage complete	2500			3100
	SCAS	INTRO LOW ALT GP/FF CAS	3101	X	X							1.5				D	S	1		365	2401, 3100	2400, 2500, 2501			3101
	SCAS	INTRO MED ALT NIGHT CAS WITH PGM/GP/FF	3102	X	X							1.5				NS	S	1		365	2603, 3100	2500, 2600, 2601			3102
	SCAS	INTO MED ALT NIGHT CAS AS WINGMAN	3103	X								1.5				NS	S	2	X	*	3102	2500, 2600, 2601, 3102			3103
	CAS	INTRO MED ALT CAS WITH PGM/GP/FF	3104	X	X	X								1.3		D	A	2		180	3101	2101, 2500, 2502, 2504			3104
	CAS	INTRO LOW ALT CAS WITH GP/FF	3105	X	X	X								1.3		(NS)	A/S	2	X	365	3104	2101~A, 2501, 2502~A, 2503~A, 3101			3105
	CAS	INTRO MED ALT NIGHT CAS WITH PGM	3106	X	X	X								1.3		NS	A	2		180	3103, 3104	2101, 2500, 2504, 2603, 3102, 3104, 3107			3106
	CAS	INTRO MED ALT NIGHT CAS WITH GP/FF	3107	X	X	X								1.3		NS	A	2		180	3103, 3104	2101, 2502, 2600, 2602, 3102, 3104, 3106			3107

NAVMC 3500.51D

19 Mar 21

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	CAS	INTRO MED ALT CAS IN URBAN	3108	X	X	X									1.3	(N)	A/S	2	X	365	3104, 3103~NS	2101~A, 2500, 2502~A, 2504~A, 3104~A			3108
	SCAS	INTRO MED ALT NIGHT CAS NON-PERMISSIVE	3109	X	X	X							1.5			NS	S	1		365	3103	2300, 2500, 2600, 2601, 3102			
3000 CAS SKILL TOTAL										0	0.0	5	7.5	5	6.5										
3000 SCAR	SSCAR	CONDUCT DAY MED ALT AR	3200	X									1.5			D	S	1		*	AS stage complete	2500			3200
	SCAR	CONDUCT MED ALT AR WITH PGM/GP	3201	X	X	X									1.3	(N)	A	2+		180	3200	2101, 2500, 2502, 2504, 2600~NS, 2602~NS, 2603~NS			3201
	SSCAR	INTRO NS SCAR EXECUTION	3300	X	X	X							1.5			NS	S	2	X	270	2603, 3200	2500, 2600, 2602, 2603			3300
	SCAR	CONDUCT DAY SCAR	3301	X											1.3	D	A	2+		*	3201, 3300	2101, 2500, 2502, 2504, 3201			3301
	SCAR	CONDUCT NIGHT SCAR	3302	X	X	X									1.3	NS	A/S	2+		270	3202, 3301	2101, 2500, 2502, 2504, 2600, 2602, 2603, 3201, 3202, 3300			3302
3000 SCAR SKILL TOTAL										0	0.0	2	3.0	4	5.2										
3000 STK	SSTK	REVIEW MED ALT STK	3400	X									1.5			(NS)	S	2	X	*	AS stage complete, 2803 (2603~NS)	2300,2500			3400
	SSTK	INTRO NIGHT LOW ALT STK	3401	X	X								1.5			NS	S	2	X	365	2401, 2603, 3400	2300,2501			
	STK	REVIEW NIGHT LOW ALT STK	3402	X	X	X									1.3	NS	A/S	2		180	3401	2101,2300,2401,2503,2504,2600,2602,2603			
	STK	INTRO DIVISION AI	3403	X	X	X									1.3	(NS)	A	3+		365	3400, (2603~NS), (3402 if NS low altitude)	2101, 2300, 2502, 2504, 2600~NS,2603~NS			3404
3000 STK SKILL TOTAL										0	0.0	2	3.0	2	2.6										
4000	AFCLP	VSTOL/LSO NATOPS PT1	4000	X						1	1.0					(N)	G			*					
	AFCLP	VSTOL/LSO NATOPS PT2	4001	X						1	1.0					(N)	G			*					
	AFCLP	LHA/LHD/MCS NATOPS	4002	X						1	1.0					(N)	G			*					
	AFCLP	DAY FCLP	4003	X						1	1.0					(N)	G			*					0062
	AFCLP	NIGHT FCLP, UNAIDED	4004	X							1.0					(N)	G			*					4004
	AFCLP	NIGHT FCLP, AIDED	4005	X							1.0					(N)	G			*					4005
	ACQD	DAY CQ	4010	X							1.0					(N)	G			*					4006
	ACQN	NIGHT CQ	4011	X							1.0					(N)	G			*					4007

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	AFOB	FORWARD BASE OPERATI	4015	X							1.0					(N)	G			*					4008
	ANSLAT	NS LAT CONSIDERATION	4030	X							1.0					(N)	G			*					4009
	AAAD	AV-8B AIR TO AIR EMPLOYMENT	4040	X							1.0					(N)	G			*					4015
	AAE	ASSAULT SUPPORT ESCORT (MAWTS ASP)	4060	X							1.0					(N)	G			*					4010
	ACFF	CALL FOR FIRE	4070	X							1.0					(N)	G			*					
	AFACA	JFAC(A) COMMONS	4080	X							3.0					(N)	G			*					
	AFACA	AV-8B FAC(A) (MAWTS ASP)	4081	X							2.0					(N)	G			*					
	AFACA	JCAS STAN (MAWTS ASP)	4082	X							1.0					(N)	G			*					
	AFACA	CAS AIRCRAFT (MAWTS ASP)	4083	X							1.0					(N)	G			*					
	AFACA	URBAN CAS (MAWTS ASP)	4084	X							1.0					(N)	G			*					
	AFACA	9-LINE GENERATION CT	4085	X							1.0					(N)	G			*					
	AFACA	FAC(A) EXECUTION CT.	4086	X							1.0					(N)	G			*					
4000 ACAD SKILL TOTAL										14	14.0	0	0.0	0	0.0										
4000 FCLP(D)	SFCLP	DAY FCLP SIM	4100	X	X								1.5			D	S	1		*	2101				4100
	FCLP	DAY FCLP QUAL	4101	X	X	X								2.0		D	A	1		365	4100	2101			4101
4000 FCLP(D) SKILL TOTAL										0	0.0	1	1.5	1	2.0										

NAVMC 3500.51D

19 Mar 21

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
4000 FCLP(N)	SFCLP	NIGHT UNAIDED FCLP SIM	4102	X	X								1.5			N*	S	1		*	4100				4102
	FCLP	NIGHT UNAIDED FCLP	4103	X	X	X								2.0		N*	A	1		365	4101, 4102	2101, 4101			4103
	SFCLP	NIGHT AIDED FCLP SIM	4104	X	X								1.5			NS	S	1		*	2603, 4102				4104
	FCLP	NIGHT AIDED FCLP	4105	X	X	X								2.0		NS	A	1		365	4103, 4104	2101, 4101			4105
4000 FCLP(N) SKILL TOTAL										0	0.0	2	3.0	2	4.0										
4000 CQ(D)	SCQ	DAY CQ SIM	4130	X	X								1.5			D	S	1		*	4100				4130
	CQ	DAY CQ QUAL	4131	X	X	X								3.0		D	A	1		365	4101, 4130	2101, 4101			4131
	CQ	CQ INSTRUMENT APPROACHES	4132	X	X	X								1.3		(N)	A	1		365	4130	2101, 4101, 4131			4132
4000 CQ(D) SKILL TOTAL										0	0.0	1	1.5	2	4.3										
4000 CQ(N)	SCQ	NIGHT UNAIDED	4133	X	X								1.5			N*	S	1		*	4103				4133
	SCQ	NIGHT AIDED CASE 1 SIM	4134	X	X								1.5			NS	S	1		*	4133				4131
	CQ	NIGHT UNAIDED/AIDED CQ	4135	X	X	X								2.0		N	A	1		365	4105, 4134	2101, 4101, 4103, 4105, 4131, 4132			4135
	CQ	NIGHT AIDED CQ	4136	X	X	X								2.0		NS	A	1		365	4105, 4134	2101, 4101, 4103, 4105, 4132, 4135			4136
4000 CQ(N) SKILL TOTAL										0	0.0	2	3.0	2	4.0										
4000 FOB	SFOB	DAY FBO SIM	4160	X	X								1.0			D	S	1		*	2101				4160
	FOB	DAY FBO	4161	X	X	X								2.0		D	A	1		365	4160	2101, 3500			4161
	SFOB	NIGHT FBO SIM	4162	X	X								1.0			NS	S	1		*	2603, 4160				4162
	FOB	NIGHT FBO	4163	X	X	X								2.0		NS	A	1		365	4161, 4162, 2603	2101, 3500, 4161			4163

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV			
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME													
4000 FOB SKILL TOTAL										0	0.0	2	2.0	2	4.0													
4000 NS LAT	SNS LAT	INTRO BASIC/ADV NS LAT	4300	X								1.5			NS	S	1		*	2401, 2603	2400			4300				
	SNS LAT	REV BASIC/ADV NS LAT. INTRO TGT ATTACKS AND TCT.	4301	X	X	X						1.5			NS	S	1		365	4300	2400, 2501, 2600			4301				
	NS LAT	INTRO BASIC/ADV NS LAT	4302	X	X	X								1.3	NS	A	2		365	4301	2101, 2400, 2401			4302				
	NS LAT	REV ADV LAT / INTRO TCT	4303	X										1.3	NS	A	2		*	4302	2101, 2400, 2401, 4302			4303				
	NS LAT	INTRO TGT AREA TACTICS	4304	X	X	X								1.3	NS	A	2		365	4303	2101, 2400, 2401, 2501, 2503, 2600, 2602, 2603, 4301, 4302, 4303			4304				
4000 NS LAT SKILL TOTAL										0	0.0	2	3.0	2	2.6													
4000 AAD	SAAD	INTRO HSGP AGAINST MANEUVERING ADVERSARIES	4400	X								1.5			(NS)	S	2	X	*	2808	2800, 2803			4400				
	SAAD	INTRO SECTION DCA	4401	X	X	X						1.5			(NS)	S	2+	X	365	4400	2800, 2803			4401				
	AAD	REVIEW SECTION DCA	4402	X	X	X								1.3	(NS)	A/S	2+		365	4401	2101~A, 2200, 2801, 2803, 2808							
	AAD	INTRO DIVISION DCA	4403	X	X	X								1.3	(NS)	A	3+		365	4402	2101, 2200, 2800, 2803, 2808			4402				
4000 AAD SKILL TOTAL										0	0.0	2	3.0	2	3.0													
4000 OAAW	SOAAW	STK WITH MRM	4500	X	X	X						1.5			(NS)	S	2	X	365	STK stage and AA stage complete, 4402	2300, 2500, 2800, 2803			4500				
	OAAW	DIV STK WITH MRM	4501	X	X	X								1.3	(NS)	A	3+		365	4500	2101, 2300, 2502, 2504, 2600~NS, 2603~NS, 2800, 2803, 2808			4501				
4000 OAAW SKILL TOTAL										0	0.0	1	1.5	1	1.3													
4000 AESC	SAESC	CONDUCT ASE WITH AIR SUPERIORITY	4600	X	X	X						1.5			(NS)	S	1		365	3000 phase complete	2300, 2500, 2600~NS			4600				
	SAESC	CONDUCT ASE WITHOUT AIR SUPERIORITY	4601	X	X	X						1.5			(NS)	S/A	2+	X	365	3000 phase complete, 4401 (4402~A)	2500, 2600~NS, 2602~NS, 2603~NS, 2800, 2801, 2802, 2803			4601				
	AESC	CONDUCT ASE WITH AIR SUPERIORITY	4602	X										1.3	(NS)	A	2+		*	4600	2101, 2300, 2500, 2502, 2504, 4600, 2600~NS, 2602~NS, 2603~NS, 3202~NS, 3107~NS, 3108~NS			4602				
4000 AESC SKILL TOTAL										0	0.0	2	3.0	1	1.3													

NAVMC 3500.51D

19 Mar 21

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
4000 CFF	SCFF	CALL FOR FIRE	4700	X									1.5			(NS)	S	1		*	AS stage complete				4700
	CFF	CALL FOR FIRE	4701	X											1.3	(NS)	A	2+		*	4700	2101, 4200, 4700			4701
4000 CFF SKILL TOTAL										0	0.0	1	1.5	1	1.3										
4000 FAC(A)	SFAC(A)	INTRO TYPE 1 AND 2 FW CONTROL	4800	X									1.5			D	S	1		*	WTO W/ FAC EXPERIENCE OR DIV LEAD, 4700	2500, 3100			4800
	SFAC(A)	INTRO TYPE 1 AND 3 CONTROL WITH GP/FF MARKING	4801	X	X	X							1.5			D	S	2	X	180	4800	3100			4801
	FAC(A)	REVIEW TYPE 1 AND 2 FW	4802	X	X									1.3		D	A	2		180	4801	2101, 2502, 2504, 3104			4802
	FAC(A)	REV TYPE 1, 2, AND 3 CONTROL WITH GP/FF MARKING	4803	X	X	X								1.3		D	A	2		180	4802	2101, 2502, 3104, 4802			4803
	SFAC(A)	INTRO TYPE 1, 2, AND 3 FW AND RW CONTROL, URBAN	4804	X									1.0			(NS)	S	1		*	4803	2500, 2600-NS, 3100, 3103-NS			4804
	FAC(A)	FW TYPE 1/2 AT NIGHT	4805	X	X	X									1.3	NS	A	2		180	4804	2101, 2504, 2602, 2603, 3106, 3107			4805
	SFAC(A)	INTRO TYPE 2 AND 3 FW/RW CONTROL, NON-PERMISSIVE	4806	X									1.0			(NS)	S	1		*	4804	2500, 2600-NS, 3100, 3103-NS, 4804			4806
	FAC(A)	REVIEW MULT ASSET INTEGRATION	4807	X											1.3	(NS)	A	2		*	4806	2101, 2502, 2504, 2603-NS, 3104, 4803			4807
	SFAC(A)	INTRO MULT ASSET INTEGRATION AT NIGHT, NON-PERMISSIVE, URBAN	4808	X	X	X							1.5			NS	S	2	X	180	4806	2500, 2600, 3102, 3103, 3108, 4700			4808
	FAC(A)	FAC(A) REASSESSMENT	4809	X	X	X							1.5			(NS)	S	1		730	4807, 4808	2500, 2600-NS, 3100			
	FAC(A)	FAC(A) ESCORT	4851	X											1.3	(NS)	A	2		*	Section Lead	2101, 2500, 2502, 2504, 2600-NS, 2602-NS, 2603-NS, 3104, 3103-NS			4851
4000 FAC(A) SKILL TOTAL										0	0.0	5	6.5	4	5.2										
4000 LFE	LFE	DAY LFE	4900	X	X	X									1.3	D	A	3+		365	Applicable 3000 stage complete	2101			4900
	LFE	NIGHT LFE	4901	X	X	X									1.3	NS	A	3+		365	2603, applicable 3000 stage complete	2101			4901
4000 LFE SKILL TOTAL										0	0.0	0	0.0	2	2.6										

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
5000 WTO	SWTO	MAWTS-1 PROGRAM GUIDE	5100	X									1.5			D	S	2	X	*	See MAWTS-1 CC				5100
	SWTO	MAWTS-1 PROGRAM GUIDE	5101	X									1.5			D	S	1		*	See MAWTS-1 CC				5101
	SWTO	MAWTS-1 PROGRAM GUIDE	5102	X	X								1.5			D	S	1		*	See MAWTS-1 CC				5102
	WTO	MAWTS-1 PROGRAM GUIDE	5103	X											1.3	D	A	2		*	See MAWTS-1 CC	2101			5103
	WTO	MAWTS-1 PROGRAM GUIDE	5104	X											1.3	D	A	2		*	See MAWTS-1 CC	2101			5104
5000 WTO SKILL TOTAL										0	0.0	3	4.5	2	2.6										
5000 LATI	SLATI	MAWTS-1 PROGRAM GUIDE	5200	X	X								1.5			D	S	2	X	*	See MAWTS-1 CC				5200
	SLATI	MAWTS-1 PROGRAM GUIDE	5201	X									1.5			D	S	1		*	See MAWTS-1 CC				5201
	LATI	MAWTS-1 PROGRAM GUIDE	5202	X	X										1.3	D	A	2		*	See MAWTS-1 CC	2101, 2401			5202
	LATI	MAWTS-1 PROGRAM GUIDE	5203	X											1.3	D	A	2		*	See MAWTS-1 CC	2101, 2401			5203
	LATI	MAWTS-1 PROGRAM GUIDE	5204	X											1.3	D	A	2		*	See MAWTS-1 CC	2101, 2401			5204
5000 LATI SKILL TOTAL										0	0.0	2	3.0	3	3.9										
5000 NSI	SNSI	MAWTS-1 PROGRAM GUIDE	5300	X									1.5			NS	S	1		*	See MAWTS-1 CC				5300
	SNSI	MAWTS-1 PROGRAM GUIDE	5301	X	X								1.5			NS	S	2	X	*	See MAWTS-1 CC				5301
	NSI	MAWTS-1 EPROGRAM GUID	5302	X	X										1.3	NS	A	2		*	See MAWTS-1 CC	2101			5302
	NSI	MAWTS-1 PROGRAM GUIDE	5303	X											1.3	NS	A	2		*	See MAWTS-1 CC	2101			5303
5000 NSI SKILL TOTAL										0	0.0	2	3.0	2	2.6										
5000 NSLATI	SNSLATI	MAWTS-1 PROGRAM GUIDE	5400	X									1.5			NS	S	2	X	*	See MAWTS-1 CC				5400
	SNSLATI	MAWTS-1 PROGRAM GUIDE	5401	X	X								1.5			NS	S	1		*	See MAWTS-1 CC				5401
	NSLATI	MAWTS-1 PROGRAM GUIDE	5402	X	X										1.3	NS	A	2		*	See MAWTS-1 CC	2101, 2401			5402
5000 NSLATI SKILL TOTAL										0	0.0	2	3.0	1	1.3										
5000 ACTI	SACTI	MAWTS-1 PROGRAM GUIDE	5500	X	X								2.0			D	S	2	X	*	See MAWTS-1 CC				5500
	SACTI	MAWTS-1 PROGRAM GUIDE	5501	X									2.0			D	S	2	X	*	See MAWTS-1 CC				5501
	ACTI	MAWTS-1 PROGRAM GUIDE	5502	X											1.3	D	A	2		*	See MAWTS-1 CC	2101			5502
	ACTI	MAWTS-1 PROGRAM GUIDE	5503	X											1.3	D	A	2		*	See MAWTS-1 CC	2101			5503
	ACTI	MAWTS-1 PROGRAM GUIDE	5504	X	X										1.3	D	A	4		*	See MAWTS-1 CC	2101			5504

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	ACTI	MAWTS-1 PROGRAM GUIDE	5505	X											1.3	D	A	2+			See MAWTS-1 CC	2101			5505
5000 ACTI SKILL TOTAL										0	0.0	2	4.0	3	3.9										
5000 FAC(A)I	SFAC(A)I	MAWTS-1 PROGRAM GUIDE	5600	X	X								2.0			D	S	2	X	*	See MAWTS-1 CC				5600
	SFAC(A)I	MAWTS-1 PROGRAM GUIDE	5601	X									2.0			NS	S	2	X		See MAWTS-1 CC				5600
	FAC(A)I	MAWTS-1 PROGRAM GUIDE	5602	X	X										1.3	D	A	2		*	See MAWTS-1 CC	2101			5601
	FAC(A)I	MAWTS-1 PROGRAM GUIDE	5603	X											1.3	NS	A	2		*	See MAWTS-1 CC	2101			5602
	FAC(A)I	MAWTS-1 PROGRAM GUIDE	5604	X											1.3	NS	A	2		*	See MAWTS-1 CC	2101			5603
5000 FAC(A)I SKILL TOTAL										0	0.0	2	4.0	3	3.9										
5000 WTI	WTI	MAWTS-1 PROGRAM GUIDE	5677	X							1.0					D	G			*	See WTI Course Catalog/WTTP				5677
5000 WTI SKILL TOTAL										1	1.0	0	0.0	0	0.0										
5000 LSI	LSI		5700	X							1.3					D	G			*					5700
	LSI		5701	X							1.3					D	G			*					5701
	LSI		5702	X							1.3					N*	G			*					5702
	LSI		5703	X							1.3					D	G			*					5703
	LSI		5704	X							2.0					D	G			*					5704
FRSI SKILL TOTAL										0	0.0	3	4.5	5	6.5										
FRSI	SIUT	PRACTICE NORMAL PROC	5800	X									1.5			D	S			*					5800
	SIUT	REV NORMAL PROC	5801	X									1.5			D	S			*					5801
	IUT	INTRO REAR SEAT TAV-8B	5802	X											1.3	D	A	1		*					5802
	IUT	REV REAR SEAT TAV-8B	5803	X											1.3	D	A	1		*					5803
	SIUT	SIM TECHNIQUES	5804	X									1.5			D	S			*					5804
	IUT	BASIC AND TAC FORM	5805	X											1.3	D	A	2		*					5805
	IUT	DIV FORM	5806	X											1.3	D	A	4		*					5806
	IUT	REV DIV FORM	5807	X											1.3	D	A	4		*					5807
FRSI SKILL TOTAL										0	0.0	3	4.5	5	6.5										
AARI	IUT	AARI	5808	X											1.3	D	A	1		*					5808
5808 IUT SKILL TOTAL										0	0.0	0	0.0	1	1.3										
TCTI	SIUT	REV TCT	5809	X									1.5			D	S			*					5809

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	IUT	INTRO TCT CHASE	5810	X											1.3	D	A	1		*					5810
TCCI TOTAL										0	0.0	1	1.5	1	1.3										
ASI	SIUT	REV HIGH AND LOW ANGLE	5811	X									1.5			D	S			*					5811
	SIUT	REV TRANS PROFILES	5812	X									1.5			D	S			*					5812
	IUT	REV HIGH AND LOW ANGLE	5813	X											1.1	D	A	1		*					5813
ASI TOTAL										0	0.0	2	3.0	1	1.1										
TATI	IUT	REV TARGET AREA TACTICS	5814	X											1.1	D	A	2		*					5814
	IUT	REV TPOD ATTACKS	5815	X											1.1	D	A	2		*					5815
TATI TOTAL										0	0.0	0	0.0	2	2.2										
CASI	SIUT	MED ALT CAS SIM	5816	X									1.5			D	S			*					5816
	IUT	REV CAS AS SCAR	5817	X											1.1	D	A	1		*					5817
	IUT	LOW ALT CAS (REAR SEAT)	5818	X											1.1	D	A	2		*					5818
CASI TOTAL										0	0.0	1	1.5	2	2.2										
LFAMI	IUT	INTRO FAM STAGE MAN	5819	X											1.3	D	A	1		*					5819
	IUT	PRAC FAM STAGE MAN	5820	X											1.3	D	A	1		*					5820
	SIUT	ERROR DETECTION	5821	X									1.5			D	S			*					5821
	SIUT	LATE STAGE FAM	5822	X									1.5			D	S			*					5822
	IUT	REV INST PROC	5823	X											1.3	D	A	1		*					5823
LFAMI TOTAL										0	0.0	2	3.0	3	3.9										
EFAMI	SIUT	MONITOR FAM SIM	5824	X									1.5			D	S			*					5824
	SIUT	ERROR DETECTION	5825	X									1.5			D	S			*					5825
EFAMI TOTAL										0	0.0	2	3.0	0	0.0										
NSFI	IUT	INTRO NS STAGE MAN	5826	X											1.3	NS	A	1		*					5826
	IUT	MONITOR NS FORM	5827	X											1.3	NS	A	2		*					5827
	IUT	INTRO NS FORM	5828	X											1.3	NS	A	2		*					5828
NSFI TOTAL										0	0.0	0	0.0	3	3.9										
AAHI	SIUT	MONITOR AAH SIM	5829	X									1.5			D	S			*					5829
	IUT	INTRO AAH CHASE	5830	X											1.1	D	A	2		*					5830

NAVMC 3500.51D

19 Mar 21

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	IUT	REV AAH MAN	5831	X										1.1		D	A	1		*					5831
AAHI TOTAL										0	0.0	1	1.5	2	2.2										
AAI	SIUT	MONITOR TVC SIM	5832	X									1.5			D	S			*					5832
	IUT	REV TVC BFM	5833	X										1.1		D	A	2		*					5833
	IUT	CHASE TVC MAN	5834	X										1.1		D	A	2		*					5834
	IUT	REV 1V1 BFM	5835	X										1.1		D	A	2		*					5835
AAI TOTAL										0	0.0	1	1.5	3	3.3										
FRSLATI	SIUT	REV BASIC AND ADV LAT	5836	X									1.5			D	S			*					5836
	SIUT	LOW ALT TR	5837	X									1.5			D	S			*					5837
	IUT	REV BASIC AND ADV LAT	5838	X										1.3		D	A	1		*					5838
	IUT	REV LOW ALT TR	5839	X										1.3		D	A	2		*					5839
FRSLATI TOTAL										0	0.0	2	3.0	2	2.6										
FOBI	SIUT	MONITOR FBO SIM	5840	X									1.5			D	S			*					5840
FOBI TOTAL										0	0.0	1	1.5	0	0.0										
NATOPS IP	SIUT	NATOPS EVAL W PROG MGR	5841	X									1.5			D	S			*					5841
NATOPS IP TOTAL										0	0.0	1	1.5	0	0.0										
NAVI	SIUT	MONITOR SNAV- 1331	5842	X									1.5			D	S			*					5842
NAVI TOTAL										0	0.0	1	1.5	0	0.0										
RADI	SIUT	MONITOR SRAD- 1361	5843	X									1.5			D	S			*					5843
RADI TOTAL										0	0.0	1	1.5	0	0.0										
SENI	SIUT	REV GP PGM W TPOD	5844	X									1.5			NS	S			*					5844
SEMI TOTAL										0	0.0	1	1.5	0	0.0										
FRSBQ	IUT	2V1 BANDIT PROFILE	5845	X										1.1		D	A	3		*					5845
FRSBQ TOTAL										0	0.0	2	3.0	0	0.0										
5000 FLSE	SFLSE	FLSE DESIGNATION FLT	5900	X									1.5			(NS)	S	2	X	*					5900
	SFLSE	FLSE DESIGNATION FLT	5901	X									1.5			(NS)	S	2	X	*					5910
5000 FLSE SKILL TOTAL										0	0.0	2	3.0	0	0.0										
6000 NTPS	ANTPS	OPEN BOOK NATOPS	6000	X	X	X	X	X			1.5					(N)	G			365			X		6000

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV			
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME													
	ANTPS	CLSD BOOK NATOPS	6001	X	X	X	X	X			1.0					(N)	G			365			X	6001				
	ANTPS	GRND EVAL NATOPS	6002	X	X	X	X	X			1.0					(N)	G			365			X	6002				
	SNTPS	A/C SYSTEMS & EPS	6101	X	X	X	X	X					1.5			(N)	S/A	1		365	1507, 1606,6000,6001,6002	2100		X	6101			
	SNTPS	CRM	6103	X	X	X	X	X					1.0			(N)	S/A	1		365			X	6103				
6000 NTPS SKILL TOTAL										3	3.5	2	2.5	0	0.0													
6000 INST	AINST	INST GRND SCHOOL	6004	X	X	X	X	X			8.0					(N)	G			365			X	6004				
	AINST	INST GRND SCH EXAM	6005	X	X	X	X	X			1.0					(N)	G			365			X	6005				
	SINST	INSTRUMENT CHECK	6102	X	X	X	X	X					1.5			(NS)	S	1		365	6004, 6005		X	6102				
6000 INST SKILL TOTAL										2	9.0	1	1.5	0	0.0													
6000 SL	ASL	BRIEF/DEBRIEF	6009	X						1	1.0						G			*				6009				
	ASL	T&R TRAINING MANAGEMENT	6010	X						1	1.0						G			*				6010				
	ASL	SECTION LEAD EXAM	6011	X						1	1.0						G			*			X	6011				
	SSL	CONDUCT MED ALT STRIKE	6200	X								1	1.5			(NS)	S	1	(X)	*	2000-3000 phase complete	2300,2500,3400,3401~NS			6200			
	SSL	CONDUCT LOW ALT CAS IN ADVERSE WEATHER	6201	X								1	1.5			D	S	1	(X)	*	2000-3000 phase complete	2300,2400,2501,3101			6201			
	SSL	CONDUCT SCAR WITH PGM/GP	6202	X	X							1	1.5			D	S	2	X	*	2000-3000 phase complete	2500,3200			6202			
	SSL	CONDUCT NIGHT MED ALT URBAN CAS	6203	X								1	1.5			NS	S	2	X	*	2000-3000 phase complete	2500,2600,3102,3103			6203			
	SSL	CONDUCT 2V2 PTT	6204	X	X							1	1.5			D	S	2	X	*	2000-3000 phase complete	2200,2808			6208			
	SL	CONDUCT MEDIUM ALT AR	6205	X										1	1.3	(NS)	A	2		*	6202	2101,2502,2504,3201			6204			
	SL	CONDUCT MEDIUM ALT STRIKE	6206	X										1	1.3	(NS)	A	2+		*	6200	2101,2502,2504,3402,~3403			6205			
	SL	CONDUCT NIGHT CAS	6207	X	X									1	1.3	NS	A	2		*	6201,6203	2101,2500,2502,2504,2600,2602,2603,3102,3104, 3106,3107			6206			

NAVMC 3500.51D

19 Mar 21

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	SL	CONDUCT 2V1	6208	X	X									1	1.3	D	A	2+		*	6204	2200,2807			
6000 SL SKILL TOTAL										3	3.0	5	7.5	4	5.2										
6000 DL	DL	CONDUCT MED ALT STRIKE	6300	X								1	1.5			(NS)	S	2	X	*	Section lead	2500,3400			6300
	DL	CONDUCT DIVISION TARGET AREA MECH	6301	X										1	1.3	(NS)	A	3+		*	6300	2101,2500,2502,2504			6301
	DL	CONDUCT DIVISION DAY STRIKE	6302	X										1	1.3	D	A	3+		*	6301	2101,2500,2504,3403			6302
	DL	CONDUCT DIVISION NIGHT STRIKE	6303	X	X									1	1.3	NS	A	3+		*	6302	2101,2500,2504,2602,2603,3403			6303
6000 DL SKILL TOTAL												1	1.5	3	3.9										
6000 MC	AMC	STRIKE MC, PART 1	6013	X							1.0					(N)	G			*					6013
	AMC	STRIKE MC, PART 2	6014	X							1.0					(N)	G			*					6014
	MC	SFL LFE (STRIKE)	6400	X											2.0	(NS)	A	4+		*		2101, 2500, 2504, 3402, 3404			
	MC	MC LFE (STRIKE)	6401	X											2.0	(NS)	A	4+		*	6400	2101, 2500, 2504, 3402, 3404			6400
	MC	MC LFE (SCAR)	6402	X	X										2.0	(NS)	A	2+		*		2101, 2500, 2502, 2504, 3201, 3301			6401
6000 MC SKILL TOTAL										2	2.0	0	0.0	2	4.0										
6000 RTO	ARTO	INTO TO RTO	6050	X							1.0					(N)	G			*					
	ARTO	TACTS DEBRIEF LAB	6051	X							1.0					(N)	G			*					
	RTO	RTO DEMONSTRATION	6500	X							2.0					(N)	G								6500
	RTO	RTO EXECUTION	6501	X							2.0					(N)	G								6501
6000 RTO SKILL TOTAL										4	6.0														
6000 ADFL	ADFL	HSGP VS MANEUVERING ADVERSARIES	6600	X									1.5			(NS)	S	2+	X	*	Section Lead, 4402	2200, 2800, 2803			6600
	ADFL	SECTION DCA	6601	X	X								1.5			(NS)	S	2+	X	*	6600	2200, 2800, 2803, 2808, 4401			6601
	ADFL	SECTION DCA	6602	X											1.3	(NS)	A	2+		*	6601	2200, 2800, 2803, 2808, 4401, 4402			
	ADFL	DIVISION DCA -3	6603	X	X										1.3	(NS)	A	3+		*	6602	2200, 2800, 2803, 2808, 4402, 4403			6602
	ADFL	DIVISION DCA -LD	6604	X											1.3	(NS)	A	3+		*	Division Lead, 4403, 6603	2200, 2800, 2803, 2808, 4402, 4403			
6000 ADFL SKILL TOTAL												2	3.0	3	3.9										
6000 FCP	SFCF	PMCF SIMULATOR	6700	X									1.5			D	S	1		*					6700
	SFCF	PMCF SIMULATOR	6701	X									1.5			D	S	1		*	6700				6701
	SFCF	PMCF SIMULATOR	6702	X	X								1.5			D	S	1		*	6701				6702

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	FCF	CONDUCT FCF	6703	X	X	X								1.5		D	A	1		180	6702	2101		X	6703
6600 FCP SKILL TOTAL										0	0.0	4	6.0	2	3.0										
6000 DEMO	SDEMO	AIR SHOW DEMO SIMULATOR	6800	X									1.5			D	S	1		*	Per MCO and MAG order				6800
	DEMO	LEVEL III AIR SHOW D	6801	X	X	X								0.8		D	A	1		365	6800	2101			6801
6000 DEMO SKILL TOTAL										0	0.0	1	1.5	1	0.8										
6000 LSO	LSO	LSO: DAY BASIC FIELD	6750	X										0.0		D	G	1		*					6750
	LSO	LSO: NITE BASIC FIELD	6751	X										0.0		N	G	1		*					6751
	LSO	LSO: DAY BASIC SHIP	6752	X										0.0		D	G	1		*					6752
	LSO	LSO: NITE BASIC SHIP	6753	X										0.0		N	G	1		*					6753
	LSO	LSO: ADVANCED	6754	X										0.0		D	G	1		*					6754
	LSO	LSO: TRAINING	6755	X										0.0		N	G	1		*					6755
6000 LSO SKILL TOTAL										0	0.0	0	0.0	6	0.0										
6000 LSI	LSI	LSI: DAY FACILITY	6770	X										0.0		D	G	1		*					6770
	LSI	LSI: NITE FACILITY	6771	X										0.0		N	G	1		*					6771
6000 LSI SKILL TOTAL										0	0.0	0	0.0	2	0.0										
6000 LSS	LSS	BASIC LSS: DAY	6772	X										0.0		D	G	1		*					6772
	LSS	BASIC LSS: NIGHT	6773	X										0.0		N	G	1		*					6773
	LSS	ADV LSS (ROAD)	6774	X										0.0		D	G	1		*					6774
	LSS	LADV LSS (CAL)	6775	X										0.0		N	G	1		*					6775
6000 LSS SKILL TOTAL										0	0.0	0	0.0	4	0.0										
6000 TRK	TRK	Day Aerial Refueling	6900	X										0.0		D	A	1		365	1340	2101			6900
	TRK	Strategic Tanking	6901	X										0.0		(NS)	A	1		365	1340,2300	2101,6900			6901
	TRK	ALQ-164 EMPLOYMENT	6902	X										0.0		(NS)	A	1		180					6902
	TRK	A/A Gunnery	6903	X										0.0		D	A	1		*					6903
	TRK	ALQ-231 EMPLOYMENT	6904	X										0.1		(NS)	A	1		*					4250
	TRK	PMCF A CARD	6908	X										0.1		D	A	1		*					6908
	TRK	PMCF B/C CARD	6909	X										0.1		D	A	1		*					6909
	TRK	DAY CAL SITE OPS	6911	X										0.0		D	A	1		*					6911
	TRK	NITE CAL SITE OPS	6912	X										0.0		NS	A	1		*	6900				6912

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C or Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	TRK	DAY ROAD OPS	6913	X										0.0	D	A	1		*					6913	
	TRK	NITE ROAD OPS	6914	X										0.0	NS	A	1		*					6914	
	TRK	LSO: N* FCLP CTRL	6915	X							0.0				N*	G	1		*					6915	
	TRK	LSO: CNTL UNAID FCLP	6916	X							0.0				N*	G	1		*					6916	
	TRK	LSO: NS FCLP CTRL	6917	X							0.0				NS	G	1		*					6917	
	TRK	LSO: DAY SHIP CTRL	6918	X							0.0				D	G	1		*					6918	
	TRK	LSO: N* SHIP CTRL	6919	X							0.0				NS	G	1		*					6919	
	TRK	LSO: NS SHIP CTRL	6920	X							0.0				N*	G	1		*					6920	
	TRK	LSO UT: DAY CTRL	6921	X							0.0				D	G	1		*					6921	
	TRK	LSO UT: NITE CTRL	6922	X							0.0				D	G	1		*					6922	
	TRK	LSI: DAY FACIL CTRL	6923	X							0.0				D	G	1		*					6923	
	TRK	LSI: NITE FACIL CTRL	6924	X							0.0				N	G	1		*					6924	
	TRK	LSS: DAY ROAD CTRL	6925	X							0.0				D	G	1		*					6925	
	TRK	LSS: NITE ROAD CTRL	6926	X							0.0				N	G	1		*					6926	
	TRK	LSS: DAY CAL CTRL	6927	X							0.0				D	G	1		*					6927	
	TRK	LSS CNTL NITE CAL	6928	X							0.0				(N)	G	1		*					6928	
	TRK	LSO: DAY APPR & EPS	6929	X							0.0				(N)	G			180					6929	
	TRK	LSO: NT APPR & EPS	6930	X							0.0				(N)	G			180					6930	
6000 TRK SKILL TOTAL										2	0.0	0	0.0	29	2.9										
MET	MET	CAS MET EVAL	7001	X										1.3	(NS)	A	2+		730				X	7001	
	MET	SCAR MET EVAL	7002	X										1.3	(NS)	A	2+		730				X	7002	
	MET	STK MET EVAL	7003	X										1.3	(NS)	A	2+		730				X	7003	
MISSION ESSENTIAL TASK PHASE TOTAL										0	0.0	0	0.0	5	6.5										
8000 ACPM	ACPM	MACCS AGENCIES, FUNC	8200	X							0.5				(N)	G			*					8200	
	ACPM	MWCS BRIEF	8201	X							0.5				(N)	G			*					8201	
	ACPM	ACA AND AIRSPACE	8202	X							0.8				(N)	G			*					8202	
	ACPM	AVIATION GROUND SUPP	8210	X							0.7				(N)	G			*					8210	
	ACPM	ACM BATTLESTAFF	8230	X							1.0				(N)	G			*					8230	
	ACPM	BATTLE COMMAND DISPL	8231	X							1.0				(N)	G			*					8231	
	ACPM	SIX FUNCTIONS OF MAR	8240	X							1.7				(N)	G			*					8240	
	ACPM	JTAR/ASR INTRO AND P	8241	X							1.3				(N)	G			*					8241	
	ACPM	SITE COMMAND PRIMER	8242	X							1.0				(N)	G			*					8242	

SKILL	PREFIX	T&R DESCRIPTION	EVENT NUMBER	ATTAIN		MAINTAIN	FRS ONLY			ACAD/GRND		SIM		FLIGHT		COND	TYPE	# A/C for Sim	NETWORK	REFLY	PREREQUISITE	CHAINING	EOM	EVAL	EVENT CONV
				B	R		MR	SS	CI	#	TIME	#	TIME	#	TIME										
	ACPM	THEATER AIR GROUND S	8250	X							0.9					(N)	G			*					8250
	ACPM	AIR DEFENSE	8300	X							0.9					(N)	G			*					8300
	ACPM	FORWARD ARMING AND R	8310	X							0.8					(N)	G			*					8310
	ACPM	MARINE CORPS TACTICA	8311	X							0.9					(N)	G			*					8311
	ACPM	ACE BATTLE STAFF	8320	X							1.0					(N)	G			*					8320
	ACPM	JOINT AIR TASKING 1	8321	X							0.4					(N)	G			*					8321
	ACPM	JOINT AIR TASKING 2	8322	X							0.4					(N)	G			*					8322
	ACPM	JOINT AIR TASKING 3	8323	X							0.4					(N)	G			*					8323
	ACPM	JOINT AIR TASKING 4	8324	X							0.4					(N)	G			*					8324
	ACPM	JOINT AIR TASKING 5	8325	X							0.4					(N)	G			*					8325
	ACPM	JOINT AIR TASKING 6	8326	X							0.4					(N)	G			*					8326
	ACPM	INTEGRATING FIRES AN	8340	X							0.5					(N)	G			*					8340
	ACPM	ESTABLISHING CONTROL	8350	X							0.9					(N)	G			*					8350
	ACPM	TACRON ORGANIZATIONS	8351	X							1.0					(N)	G			*					8351
	ACPM	ESG/CSG INTEGRATION	8620	X							1.0					(N)	G			*					8620
	ACPM	TACTICAL AIR COMMAND	8630	X							1.0					(N)	G			*					8630
	ACPM	JOINT DATA NETWORK	8640	X							0.9					(N)	G			*					8640
	ACPM	MAGTF THEATER AND NA	8641	X							1.3					(N)	G			*					8641
	ACPM	JOINT OPS INTRO	8660	X							0.5					(N)	G			*					8660
8000 ACPM SKILL TOTAL										28	22.5	0	0.0	0	0.0										

2.19 T&R RANGE AND ORDNANCE MATRIX

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SFAM	S1100							
SFAM	S1101							
SFAM	S1102							
SFAM	S1103							
SFAM	S1104							
SFAM	S1105							
SFAM	S1106							
SFAM	S1107							
SFAM	S1108							
SFAM	S1109							
SFAM	S1110							
SFAM	S1111							
SFAM	S1112							
FAM	1113							
FAM	1114				MOA, RSTD			
FAM	1115				MOA, RSTD			
FAM	1116							
FAM	1117							
FAM	1118							
FAM	1119							
SINST	S1120							
SINST	S1121							
SINST	S1122							
INST	1123							
INST	1124							
SINST	S1125							
INST	1126							
SINST	S1127							
INST	1128							
INST	1129							
SFOB	S1200							
FOB	1201							
FOB	1202							
SFCLP	S1210							

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
FCLP	1211							
FCLP	1212							
FCLP	1213							
FCLP	1214							
FCLP	1215							
FCLP	1216							
VCON	1220							
SVCON	S1221							
VCON	1222							
VCON	1223							
FORM	1300				MOA, RSTD			
FORM	1301				MOA, RSTD			
SAAH	S1310							
AAH	1311				MOA, RSTD			
AAH	1312				MOA, RSTD			
TACFORM	1320				MOA, RSTD			
TACFORM	1321				MOA, RSTD			
TACFORM	1322				MOA, RSTD			
TACFORM	1323				MOA, RSTD			
TACFORM	1324				MOA, RSTD			
SNAV	S1330							
SNAV	S1331R							
NAV	1332				MTR			
AAR	1340				AAR			
SRAD	S1350							
SRAD	S1351							
STCT	S1360							
TCT	1361	TCTS Pod, Chaff, Flares	1/30/30		TACTS, EW			
TCT	1362	TCTS Pod, Chaff, Flares	1/30/30		TACTS, EW			
SAS	S1400							
SAS	S1401							
SAS	S1402							
SAS	S1403							
SAS	S1404							
AS	1405	Mk-76	6		RKD RNG			

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
AS	1406	Mk-76, Flares	6/30		RKD RNG, EXP			
AS	1407	Mk-76, Flares	6/30		RKD RNG, EXP			
AS	1408	Mk-76, Flares	6/30		RKD RNG, EXP			
AS	1409	BDU-45, Flares	4/30		RKD RNG			
AS	1410	25mm, 2.75in Rkts, Flares	300/7/30		STRAFE, HVY INERT, WISS, EXP			
SLAT	S1420							
SLAT	S1421							
SLAT	S1422							
LAT	1423				MOA, RSTD, LAT			
LAT	1424				MOA, RSTD, LAT			
LAT	1425	TCTS Pod	1		TACTS, MOA, RSTD, LAT, EW			
LAT	1426	TCTS Pod	1		TACTS, MOA, RSTD, LAT, EW			
SMECH	S1430							
SMECH	S1431							
SMECH	S1432							
MECH	1433	Mk-76	6		TGT, WISS			
MECH	1434	Mk-76	6		TGT, WISS			
MECH	1435	Mk-82, Flares	4/30		TGT, WISS, EXP			
SMECH	S1436							
MECH	1437	Mk-76	6		TGT, WISS, EXP			
MECH	1438	CBU-99, Mk-77, Flares	2/2/30		TGT, HE, WISS, EXP			
MECH	1439	GBU-38, GBU-12, CAGM-65, Flares	1/1/1/30	1 GBU-38/1 GBU-38I, 1 GBU-32/1 GBU-32I, 1 GBU-12/1 GBU-12, 1 GBU-16/1 GBU-16I/1 LGTR	TGT, HE, JDAM, LSR			
SCAS	S1440							
SCAS	S1441							
SCAS	S1442							
SCAS	S1443							
CAS	1444	Mk-76, 5in Rkts	6/3	Rockets allocated to support aircraft for marking tgt	TGT		FAC(A) OR FAC, OR SIM FAC(A)	
CAS	1445	LGTR, SIM GBU-12 AND SIM GBU-38	1		TGT		FAC(A) OR FAC, OR SIM FAC(A)	
CAS	1446	Mk-76, 5in Rkts, Flares	6/3/20	Rockets allocated to support aircraft for marking tgt	TGT, EXP		FAC(A) OR FAC, OR SIM FAC(A)	
CAS	1447	Mk-76, 5in Rkts, Flares	6/3/20	Rockets allocated to support aircraft for marking tgt	TGT, EXP		FAC(A) OR FAC, OR SIM FAC(A)	

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SAI	S1450							
SSEN	S1460							
SSEN	S1461							
SSEN	S1462							
SSEN	S1463							
SSEN	S1464							
SEN	1465	TPOD	1		LSR			
SEN	1466	TPOD, GBU-12, CAGM-65, Chaff, Flares	1/1/20/40	GBU-12/GBU-12I, GBU-16/GBU-16I (MAY BE COMPLETED WITH SIMULATED ORDNANCE)	TGT, LSR, RSTD			
SEN	1467	TPOD, GBU-38	1/1	GBU-38/GBU-38I, GBU-32/GBU-32I (MAY BE COMPLETED WITH SIMULATED ORDNANCE)	TGT, LSR, JDAM, RSTD			
SEN	1468	TPOD, Mk-76, 25MM, Flares	1/6/300/30	Mk-82/BDU-45/Rkts	TGT, STRAFE, LSR, RSTD			
SEN	1469	TPOD, Mk-76, Chaff, Flares	1/6/20/60	Mk-82/BDU-45	RKD RNG, LSR, RSTD			
SEN	1470	TPOD, Mk-76, 25MM	1/6/300	Mk-82/BDU-45/Rkts (MAY BE COMPLETED WITH SIMULATED ORDNANCE)	TGT, LSR, RSTD			
SSEN	S1471							
SSEN	S1472							
SEN	1473	TPOD, GBU-12, GBU-38	1/1/1		TGT, LSR, Restricted			
SEN	1474	TPOD, Mk-76, 25MM	1/6/100		TGT, STRAFE, LSR, RSTD			
SEN	1475	TPOD, Mk-76, LGTR, Chaff, Flares	1/3/1/10/20	GBU-12/GBU-12I, GBU-16/GBU-16I, GBU-32/GBU-32I, GBU-38/GBU-38I (MAY BE COMPLETED WITH SIMULATED ORDNANCE)	TGT, LSR, RSTD			
SAA	S1500							
AA	1501	CATM-9	1		AA			
AA	1502	CATM-9, Flares, TCTS Pod	1/30/1		AA, TACTS, EXP		TACTS DEBRIEF FACILITY	
AA	1503	CATM-9, Flares, TCTS Pod	1/30/1		AA, TACTS, EXP		TACTS DEBRIEF FACILITY	
AA	1504	CATM-9, Flares, TCTS Pod	1/30/1		AA, TACTS, EXP		TACTS DEBRIEF FACILITY	
AA	1505	CATM-9, Flares, TCTS Pod	1/30/1		AA, TACTS, EXP		TACTS DEBRIEF FACILITY	
AA	1506	CATM-9, Flares, TCTS Pod	1/30/1		AA, TACTS, EXP		TACTS DEBRIEF FACILITY	
AA	1507	CATM-9, Flares, TCTS Pod	1/30/1		AA, TACTS, EXP		TACTS DEBRIEF FACILITY	
AA	1508	CATM-9, Flares, TCTS Pod	1/30/1		AA, TACTS, EXP		TACTS DEBRIEF FACILITY, 1 ADVERSARY A/C	

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SAA	S1509							
SAA	S1510							
SAA	S1511							
SNS	S1600							
SNS	S1601							
NS	1602				MOA, RSTD			
NS	1603				MOA, RSTD			
NS	1604				MOA, RSTD			
NS	1605				MOA, RSTD			
NS	1606							
SFAM	2100							
SFAM	2101							
INT	2200	TCTS Pod	1		MOA, Restricted, Warning		GCI/AIC, TACTS facility	
TCT	2300	TPOD, Expendables	1	ALQ-164	EXP			
SLAT	S2400							
LAT	2401	TCTS Pod, Chaff, Flares	1/30/30		RSTD, EXP	MRR acceptable		
SAS	S2500							
SAS	S2501							
AS	2502	TPOD, Mk-82, 25MM, Flares	1/4/100/30	4 GP (HE/I), Rkts	RSTD, EXP, STRAFE, HE			
AS	2503	TPOD, Mk-82, 25MM, Flares	1/4/100/30	4 GP (HE/I), Rkts	RSTD, EXP, STRAFE, HE			
AS	2504	TPOD, APKWS, GBU-54, GBU-12, Flares	1/1/1/1/30	2 PGM	RSTD, EXP, STRAFE, HE			
SNS	S2600							
SNS	2601							
NS	2602	TPOD, Mk-76, Flares	1/6/30	4 GP	RSTD, EXP			
NS	2603	TPOD, GBU-38, GBU-12, Mk-82, 25MM, Flares	1/1/1/2/100/30	2 GP, 2 PGM, Rkts	RSTD, EXP, STRAFE, HE			
AAR	2700				MOA	Compatible tanker IAW ATP 3.3.4.2		
SAA	2800							

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SAA	2801							
SAA	2802							
SAA	2803							
AA	2804	CATM-9, TCTS Pod, Chaff, Flares	1/1/30/30		RSTD, EXP, TACTS		TACTS Facility	
AA	2805	CATM-9, TCTS Pod, Chaff, Flares	1/1/30/30		RSTD, EXP, TACTS		TACTS Facility	
AA	2806	CATM-9, TCTS Pod, Chaff, Flares	1/1/30/30		RSTD, EXP, TACTS		TACTS Facility	
AA	2807	CATM-9, CATM-120, TCTS Pod, Chaff, Flares	1/2/1/30/30		RSTD, EXP, TACTS, AA	MOA if AA approved	TACTS Facility, GCI/AIC, 1 Adversary	GCI Desired, Dissimilar Preferred
AA	2808	CATM-9, CATM-120, TCTS Pod, Chaff, Flares	1/2/1/30/30		RSTD, EXP, TACTS, AA	MOA if AA approved	TACTS Facility, GCI/AIC, 2xSAR-1 capable radar-equipped adversaries	Dissimilar Preferred
SCAS	S3100							
SCAS	S3101							
SCAS	S3102							
SCAS	S3103							
CAS	3104	TPOD, MK-82, GBU-12, GBU-38, 25MM, Expendables	1/2/1/1/300/30	TPOD, 2xGP, 2xPGM, FF	RSTD, HE, EXP		JTAC or FAC(A)	
CAS	3105	Mk-82(HD), 5" Rkts, 25MM, Expendables	3/4/300/30	TPOD, 4xGP(HD), FF	RSTD, HE, EXP, STRAFE		JTAC or FAC(A)	
CAS	3106	TPOD, GBU-12, GBU-38, GBU-16, GBU-32, Expendables	1/1/1/1/1/30	TPOD, 4xPGM	RSTD, HE, EXP, STRAFE, LSR		JTAC or FAC(A)	
CAS	3107	TPOD, Mk-82, 2.75" RKTS, 25MM, Expendables	1/3/2/300/30	TPOD, 4xGP, FF	RSTD, HE, EXP, STRAFE, LSR		JTAC or FAC(A)	
CAS	3108	TPOD, Mk-82, GBU-54, APKWS, 25MM, Expendables	1/2/1/2/300/30	TPOD, 2xGP, 2xPGM, FF (MAY BE COMPLETED WITH SIMULATED ORDNANCE IF URBAN RANGE COMPLEX DOES NOT PERMIT LIVE OR INERT ORDNANCE)	RSTD, HE, EXP, STRAFE, LSR, Moving Target		JTAC or FAC(A) (Refresh and Maintain POIs may be conducted in the simulator)	
CAS	3109	TPOD, Mk-82, APKWS, 25MM, Expendables	1/3/2/300/30	TPOD, 4xGP, FF	RSTD, HE, EXP, STRAFE, LSR		JTAC or FAC(A)	

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SSCAR	S3200							
SCAR	3201	TPOD, MK-82, JDAM, LGB, Chaff, Flares	1/2/1/1/30/30	TPOD, 2xGP, 2xPGM, FF	RSTD, HE, EXP, STRAFE, LSR			
SSCAR	S3300							
SCAR	3301	TPOD, Mk-82, JDAM, LGB, Chaff, Clares	1/2/1/1/30/30	TPOD, 2xGP, 2xPGM, FF	RSTD, HE, EXP		One section of AR assets	
SCAR	3302	TPOD, Mk-82, JDAM, LGB, Chaff, Clares	1/2/1/1/30/30	TPOD, 2xGP, 2xPGM, FF	RSTD, HE, EXP		One section of AR assets	
SSTK	S3400							
SSTK	S3401							
STK	3402	TPOD, GBU-38, TCTS Pod, Chaff, Flares	1/2/1/60/30	ALQ-164, 2xPGM	RSTD, HE, EXP, LSR		TACTS facility, SAM threat emitters	
STK	3403	TPOD, GBU-32, TCTS Pod, Chaff, Flares	1/2/1/60/30	ALQ-164, 2xPGM	RSTD, HE, EXP, LSR		TACTS facility, SAM threat emitters, Adversary Air	
SFCLP	S4100						LSO	
FCLP	4101						LSO, FCLP facility	
SFCLP	S4102						LSO	
FCLP	4103						LSO, FCLP facility	
SFCLP	S4104						LSO	
FCLP	4105						LSO, NVD-compatible FCLP facility	
SCQ	S4130						LSO	
CQ	4131						LSO, L-Class Ship	
CQ	4132						LSO, L-Class Ship	

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SCQ	S4133						LSO	
SCQ	S4134						LSO	
CQ	4135						LSO, L-Class Ship	
CQ	4136						LSO, L-Class Ship	
SFOB	S4160						LSS	
FOB	4161						LSS, Air Facility or Road	
SFOB	S4162						LSS	
FOB	4163						LSS, Air Facility OR Road	
SNS LAT	S4300							
SNS LAT	S4301							
NS LAT	4302	TPOD	1		RSTD			
NS LAT	4303	TPOD, Chaff, Flares	1/30/30	(Flares should be loaded in bottom buckets)	RSTD, EXP			
NS LAT	4304	TPOD, Mk-82 HD, Chaff, Flares	1/4/30/30	4x GP HD (Flares should be loaded in bottom buckets)	RSTD, EXP, HE			
SAAD	S4400						GCI/AIC	
SAAD	S4401						GCI/AIC	
AAD	4402	CATM-120, CATM-9, TCTS Pod, Tanks, Chaff, Flares	2/1/1/2/30/30	CATM-9, TCTS Pod	RSTD, EXP	MOA if AA approved	TACTS Facility, GCI/AIC, RADAR-equipped adversary	Dissimilar preferred, 2 minimum
AAD	4403	CATM-120, CATM-9, TCTS Pod, Tanks, Chaff, Flares	2/1/1/2/30/30	CATM-9, TCTS Pod	RSTD, EXP	MOA if AA approved	TACTS Facility, GCI/AIC, RADAR-equipped adversary	Dissimilar preferred, 2 minimum
SOAAW	S4500						Linked simulator is required	GCI desired.
OAAW	4501	Any AG Ordnance, CATM-120, CATM-9, TCTS Pod, Chaff, Flares	1/1/30/30	CATM-9, TCTS Pod, CATM-120 Can be simulated with empty station.	RSTD, EXP, AA	Warning if simulated ordnance	GCI, TACTS Facility, 1xSEAD platform (F-35, F/A-18, F-16, etc), and 2xSAR-1 capable bandits. Blue and Red RTOs	Dissimilar bandits preferred.
SAESC	S4600						GCI/AIC	
SAESC	S4601						GCI/AIC	

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
AESC	4602	TPOD, GBU-12, 25MM, Chaff, Flares	1/2/300/20/60	2xPGM	RSTD, EXP, HE, LSR		Assault support assets	
SCFF	S4700							
CCF	4701	TPOD, Expendables	1/30		RSTD, EXP		Indirect fire support assets must consist of either 155mm artillery, 81mm mortars or 120mm expeditionary fire support system. Indirect fire support asset requires a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds	
SFAC(A)	S4800							
SFAC(A)	S4801							
FAC(A)	4802	TPOD, Tanks, GBU-12, 25mm, Expendables	1/2/2/300/60	TPOD, Tanks,PGM	RSTD, HE, EXP, LSR		One FW CAS element with HE or inert GP ordnance and LGWs. Ground FAC/JTAC.	
FAC(A)	4803	TPOD, Tanks, Mk-82, 5" WP Rockets, Expendables	1/2/1/4/60	TPOD, Tanks, Rkts, GP	RSTD, HE, EXP, LSR		One FW CAS element with GP and FF ordnance. Ground FAC/JTAC	
SFAC(A)	4804							
FAC(A)	4805	TPOD, Tanks, GBU-12, 25MM, Expendables	1/2/2/300/60	PGM,GP, FF	RSTD, HE, EXP, LSR		One FW CAS element with HE or inert GP ordnance and LGWs. Ground FAC/JTAC	
SFAC(A)	4806							
FAC(A)	4807	TPOD, Tanks, GBU-12, Expendables	1/2/2/60	PGM, GP, FF	RSTD, HE, EXP, LSR		One FW CAS element with GP and PGM ordnance, and one RW CAS element with live/captive Hellfire, and live rockets and/or guns. Threat emitters. Ground Fac/JTAC	

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SFAC(A)	4808							
SFAC(A)	4809	TPOD, GP/PGM As Desired		PGM, GP, FF	RDTD, HE, EXP, LSR		External FAC(A)I	IAW JFAC(A) MOA
FAC(A)	4851	TPOD, Mk-76, LGTR, Expendables	1/6/1/60	PGM, GP, FF	RSTD, HE, EXP, LSR			
LFE	4900	Per applicable MCT T&R code being executed.			RSTD, Warning, MOA		Per Scenario	4 of the following: strike element, sweep element, SEAD element, EA/ES assets, AAR assets, and command and control assets
LFE	4901	Per applicable MCT T&R code being executed.			RSTD, Warning, MOA		Per Scenario	4 of the following: strike element, sweep element, SEAD element, EA/ES assets, AAR assets, and command and control assets
SWTO	S5100							
SWTO	S5101							
SWTO	S5102							
WTO	5103			GP, FF	RSTD, EXP, LSR			
WTO	5104			PGM, GP, FF	RSTD, EXP, LSR			
SLATI	S5200							
SLATI	S5201							
LATI	5202				RSTD, MOA			
LATI	5203				RESD, MOA			
LATI	5204			PGM, GP, FF	RSTD, EXP, LSR			
SNSI	S5300						MAWTS-1	
SNSI	S5301						MAWTS-1	
NSI	5302				RSTD, EXP, LSR		MAWTS-1	
NSI	5303				RSTD, EXP, LSR		MAWTS-1	
SNSLATI	S5400						MAWTS-1	
SNSLATI	S5401						MAWTS-1	
NSLATI	5402				RSTD, Warning, MOA, EXP		MAWTS-1	
SACTI	S5500						MAWTS-1	
SACTI	S5501						MAWTS-1	
ACTI	5502				RSTD, Warning, MOA, EXP		MAWTS-1	

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
ACTI	5503				RSTD, Warning, MOA, EXP	TACTS	MAWTS-1	
ACTI	5504				RSTD, Warning, MOA, EXP	TACTS	MAWTS-1	
ACTI	5505				RSTD, Warning, MOA, EXP	TACTS	MAWTS-1	
SFAC(A)I	S5600						MAWTS-1	
SFAC(A)I	S5601						MAWTS-1	
FAC(A)I	5602				RSTD, EXP, LSR		MAWTS-1	
FAC(A)I	5603				RSTD, EXP, LSR		MAWTS-1	
WTI	5677						MAWTS-1	Upon Completion of POI
SIUT	5800							
SIUT	5801							
IUT	5802							
IUT	5803							
SIUT	5804							
IUT	5805							
IUT	5806							
IUT	5807							
IUT	5808							
SIUT	5809							
IUT	5810							
SIUT	5811							
SIUT	5812							
IUT	5813							
IUT	5814							
IUT	5815							
SIUT	5816							
IUT	5817							
IUT	5818							
IUT	5819							
IUT	5820							
SIUT	5821							
SIUT	5822							
IUT	5823							
SIUT	5824							
SIUT	5825							

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
IUT	5826							
IUT	5827							
IUT	5828							
SIUT	5829							
IUT	5830							
IUT	5831							
SIUT	5832							
IUT	5833							
IUT	5834							
IUT	5835							
SIUT	5836							
SIUT	5837							
IUT	5838							
IUT	5839							
SIUT	5840							
SIUT	5841							
SIUT	5842							
SIUT	5843							
SIUT	5844							
IUT	5845							
SFLSE	5900	TPOD, GBU-12, GBU-38, 25mm, Expendables	1/1/2/300					
SFLSE	5901	25mm, AIM-9M, AIM-120, ALQ-164, Expendables.	300/2/2/1					
ANTPS	6000							
ANTPS	6001							
ANTPS	6002							
SNTPS	6101							
SNTPS	6103							
AINST	6004							
AINST	6005							
SINST	6102							
SSL	S6200							
SSL	S6201							
SSL	S6202							
SSL	S6203							
SSL	S6204							

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SL	6205	TPOD, MK-82, 25mm, Chaff, Flares	1/4/300/10/20	6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert/2 GBU-12/2 GBU-12 inert/1 GBU-16/1 GBU-16 inert/2 LGTR/2, GBU-32/2 GBU-32 inert/2 GBU-38/2 GBU-38 inert/2 CBU-99/2 Mk-77, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 4 LUU-2/4 LUU-19	Restricted, HE, STRAFE, EXP, LSR			
SL	6206	As determined by flight lead based upon JWS planning, TCTS pod, Chaff, Flares	1/30/30	Simulated ordnance acceptable	Restricted, Warning, MOA, TCTS, EXP		TCTS facility, SAM threat emitters	
SL	6207	TPOD, GBU-12/GBU-16, GBU-38/GBU-32/GBU-54, 25mm, Chaff, Flares	1/1/1/300/10/20	2 GBU-32/2 GBU-32 inert/2 GBU-38/2 GBU-38 inert/2 GBU-12/2 GBU-12 inert/2 GBU-16/2 GBU-16 inert/2 LGTR, Rockets	Restricted, Warning, MOA, TCTS, EXP, LSR		JTAC or FAC(A)	
SL	6208	CATM-9, TCTS Pod, Chaff, Flares	1/1/30/30		Restricted, Warning, TCTS, EXP, AA	MOA if AA approved	GCI Desired, Min 1 Red Air	Dissimilar desired, 2x Red Air Desired
SDL	S6300							
DL	6301	TPOD, MK-82, GBU-54, GBU-12, 25mm, Flares	1/2/1/1/100/30		Restricted, HE, LSR, STRAFE, EXP		TCTS facility	
DL	6302	As determined by flight lead based upon JWS planning, TCTS pod, Chaff, Flares	1/30/30		Restricted, HE, LSR, STRAFE, EXP		TCTS facility, SAM threat emitters. RADAR-equipped adversary	
DL	6303	As determined by flight lead based upon JWS planning, TCTS pod, Chaff, Flares	1/30/30		Restricted, HE, LSR, TCTS, EXP		TCTS facility, SAM threat emitters. RADAR-equipped adversary	
SFL	6400	As determined by mission analysis		1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert/2 GBU-12/2 GBU-12 inert/1 GBU-16/1 GBU-16 inert/2 LGTR/2 GBU-32/2 GBU-32 inert/2 GBU-38/2 GBU-38 inert, 1 CATM-9, 1 TACTS Pod, 1 ALQ-164, 20 Chaff, 60 Flares	Restricted, Warning, MOA		Per Scenario	External or separate MC.
MC	6401	As determined by mission analysis		1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert/2 GBU-12/2 GBU-12 inert/1 GBU-16/1 GBU-16 inert/2 LGTR/2 GBU-32/2 GBU-32 inert/2 GBU-38/2 GBU-38 inert, 1 CATM-9, 1 TACTS Pod, 1 ALQ-164, 20 Chaff, 60 Flares	Restricted, Warning, MOA		Per Scenario	External SEAD, Fighters, Red Air, Threats per scenario
MC	6402	As determined by mission analysis		1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert/2 GBU-12/2 GBU-12 inert/1 GBU-16/1 GBU-16 inert/2 LGTR/2 GBU-32/2 GBU-32 inert/2 GBU-38/2 GBU-38 inert, 1 CATM-9, 1 TACTS Pod, 1 ALQ-164, 20 Chaff, 60 Flares	Restricted, Warning, MOA		Per Scenario	
RTO	6500							
RTO	6501							
SADFL	S6600							

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
SADFL	S6601							
ADFL	6602	CATM-120, 1 CATM-9, TCTS Pod, Chaff, Flares, Chaff	2/1/1/30/30		Restricted,HE,LSR,TCTS,EXP	MOA if AA approved	TACTS range, GCI/AIC, RADAR-equipped adversary	Dissimilar preferred, 2 minimum
ADFL	6603	CATM-120, 1 CATM-9, TCTS Pod, Chaff, Flares, Chaff	2/1/1/30/30		Restricted,HE,LSR,TCTS,EXP	MOA if AA approved	TACTS range, GCI/AIC, RADAR-equipped adversary	Dissimilar preferred, 2 minimum
ADFL	6604	CATM-120, 1 CATM-9, TCTS Pod, Chaff, Flares, Chaff	2/1/1/30/30		Restricted,HE,LSR,TCTS,EXP	MOA if AA approved	TACTS range, GCI/AIC, RADAR-equipped adversary	Dissimilar preferred, 2 minimum
SFCF	S6700							
SFCF	S6701							
SFCF	S6702							
FCF	6703							
FCF	6704							
SFCF	S6705							
SDEMO	S6800							
DEMO	6801							
LSO	6750						FCLP Facility	
LSO	6751						FCLP Facility	
LSO	6752							
LSO	6753						LHA/D	
LSO	6754						FCLP Facility, LHA/D	
LSO	6755						FCLP Facility, LHA/D	
LSI	6770							
LSI	6771							
LSS	6772							
LSS	6773							
LSS	6774							
LSS	6775							
TRK	6900							
TRK	6901R							
TRK	6902							
TRK	6904	ALQ-231	1					
TRK	6908							
TRK	6909							
TRK	6911							
TRK	6912							
TRK	6913							
TRK	6914							

STAGE	EVENT NUMBER	ORDNANCE	ORDNANCE QUANTITY	ORDNANCE NOTES	RANGE	RANGE NOTES	EXTERNAL SYLLABUS SUPPORT	EXTERNAL SYLLABUS NOTES
TRK	6915							
TRK	6916							
TRK	6917							
TRK	6918							
TRK	6919							
TRK	6920							
TRK	6921							
TRK	6922							
TRK	6923							
TRK	6924							
TRK	6925							
TRK	6926							
TRK	6927							
TRK	6928							
TRK	6929							
TRK	6930							

APPENDIX A

ANNUAL NATOPS CHECKFLIGHT

Description: The sortie should be flown in the simulator and shall be flown in accordance with attached scenarios. The load-out shall be considered a heavy load-out. T&R Code 6001, 6003 (CRM) and TMR Code 2L4.

Purpose: To provide a standardized annual NATOPS checkflight for squadron pilots which is IAW OPNAVINST 3710.7 series, NATOPS NFM-000, and current SOP.

Sortie Objectives:

Evaluate the PUI on his adherence to NATOPS procedures. It is not the purpose of this sortie to evaluate the PUI in a high threat AI scenario.

Demonstrate proficiency in the various types of takeoffs and landings. At a minimum, the following landings shall be evaluated: VL, VNSL, CL. At least one landing shall be SAAHS off.

Compliance with NATOPS procedures for emergency scenarios. At least one emergency shall include crew coordination, if combined with the CRM evaluation.

The PUI should face complications with the ordnance load-out, requiring a jettison decision or an asymmetric recovery.

At some point during the sortie, the PUI should be placed in an ejection dilemma.

Guidance: For the simulator, recommend starting the sortie at the hold short running. Timeliness is imperative. The instructor should have a well thought out gameplan that he can implement to drive a scenario that will accomplish the sortie objectives. Emergencies given to the PUI should follow a logical pattern and stimulate analytical thought in order to support the instructor's gameplan, not random EPs. An example would be an Auto Flap light early in the sortie that resets, followed later by a complete ADC failure. The PUI shall plan on flying a scenario as outlined below. There are countless ways to load out the jet. Assign a load-out that fits the scenario. Ordnance load-outs could also include cluster munitions, Maverick missiles, gun, etc.

Scenario A: PGM sortie load-out should consist of a TPOD, a GBU-12/16, tanks, and a gun. PUI shall plan on a med alt level lay and an appropriate gun pattern (e.g., 20 degrees).

Scenario B: Raked range sortie load-out should consist of 4 Mk-83's and a gun. PUI shall plan a 30-degree pattern.

Discussion: The objective of the sortie is to evaluate compliance with the NATOPS Flight Manual, not tactical knowledge or abilities derived from other publications. The annual SFI flight evaluates flight lead's tactical ability and adherence to the Air NTTP in a high threat AI environment. This is not to suggest that the NATOPS check is a day FAM. The evaluation should be focused on the brief, execution, and debrief all IAW NATOPS, CNAF 3710.7 series, and SOPs.

NATOPS CHECK SCENARIO A: PGM SORTIE

1. Scenario. Aircraft running at the hold short with appropriate load-out (e.g., TPOD, GBU 12/16, tanks, and gun). Planned sortie includes medium alt PGM target attacks.
2. Objectives. The sortie will concentrate on NATOPS knowledge of emergency procedures throughout all phases of the sortie and on good headwork.
3. Sequence.
 - a. Start. N/A
 - b. Taxi. Taxi as cleared. Respond to one or more:
 - Brake Failure
 - NWS Failure
 - Skid Light
 - c. Takeoff. PUI will perform a heavy weight STO and a VTO. Respond to two or more:
 - Engine Overtemp
 - Lack of Engine Performance
 - Fire Light
 - AC Power Failure
 - IGV Failure in Full Closed Position
 - Abort Call From Tower
 - d. Airborne. Respond to one or more (one shall be taken to a full stop):
 - Birdstrike With Engine Surge
 - Flaps Drive to Full Down
 - AC Electrical failure
 - Flameout
 - Canopy Light
 - Oil Light
 - HYD 1 Failure
 - Stuck Throttle in High Power Position
 - Single Lane DECS Failure
 - e. Landing. PUI will perform a CL, VNLS, RVL, and a VL. Respond to one or more:
 - Oil Light
 - Unsafe Gear Indications
 - Nozzle Failure at Other Than Full Aft
 - Flap Failure at Low Angles
 - HYD 1 Failure
 - NWS Failure
 - Max Crosswind Landing
 - Total Electrical Failure

NATOPS CHECK SCENARIO B: RAKED RANGE

1. Scenario. Aircraft running at the hold short with appropriate load-out (e.g. 4 Mk-83's, full internal fuel and water, gun). Planned sortie is a raked range using a 30-degree pattern.
2. Objectives. The sortie will concentrate on NATOPS knowledge of emergency procedures throughout all phases of the sortie and on good headwork.
3. Sequence
 - a. Start. N/A
 - b. Taxi. Respond to one or more:
 - Brake Failure
 - NWS Failure
 - Skid Light
 - c. Takeoff. PUI will perform a heavy weight STO and a VTO. Respond to two or more:
 - Abnormal Engine Indications on Run-Up
 - Nozzle Failure on STO
 - Asymmetric Flap Failure
 - Symmetric Flap Failure
 - Flaps Fail in Full Down Position
 - Fire Indication at Liftoff
 - Abort Call From Tower
 - d. Airborne. Respond to one or more (one shall be taken to a full stop):
 - Engine Surge
 - Flaps Drive to Full Down
 - AC Electrical Failure
 - Flameout
 - Tank Overpressure Light
 - Oil Light
 - Rough Running Engine
 - HYD 1 Failure
 - Stuck Throttle
 - e. Landing. PUI will perform a CL, VNSL, RVL, and a VL. Respond to one or more:
 - Loss of Duct Pressure
 - Unsafe Gear Indications
 - Loss of Brakes
 - Flap Failure at Low Angles
 - SAAHS Failure
 - Max Crosswind Landing
 - Hot and Heavy RVL