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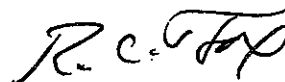
Encl: (1) AV-8B T&R MANUAL

1. Purpose. To revise standards and regulations regarding the training of AV-8B aircrew per the reference.
2. Cancellation. NAVMC 3500.51
3. Information. Significant changes in this revision include the following.
  - a. Mission Essential Task (MET) incorporation to facilitate MET-based readiness.
  - b. Incorporation of Marine Corps Task (MCT) list versus Universal Joint Task List (UJTL).
  - c. Emphasis on Mission Skills versus Core Skills to support MET-based reporting.
  - d. Re-naming and re-numbering of Phases from 3 digit to 4 digit codes.
  - e. Standardized NATOPS and instrument evaluation policy.
  - f. Standardized Fleet Replacement Squadron (FRS) Program of Instruction (POI).
  - g. Addition of FRS Table Of Organization.
  - h. Addition of Aviation Career Progression Model (ACPM) training requirements.
  - i. Revision to Chapter 1 to improve metrics and standards for aircrew readiness reporting.
4. Recommendations. Recommended changes to this publication are invited, and may be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General, Training and Education Command, Aviation Training Division using standard Naval Correspondence or the Automated Message Handling System plain language address: CG TECOM ATD.

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



R. C. FOX  
By direction

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CHAPTER 1

AV-8B TRAINING AND READINESS UNIT REQUIREMENTS

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CHAPTER 1

AV-8B TRAINING AND READINESS UNIT REQUIREMENTS

100. VMA AV-8B UNIT 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 Mission Essential Tasks (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.

NOTE: The AV-8B T&R manual and its corresponding Core Competency Resource Model (CCRM) does not, by itself, program sufficient hours for AV-8B pilots to maintain minimum proficiency standards for safe operations.

- Based on studies by the Center for Naval Analysis and the Naval Safety Center, there is a significant increase in mishap rates for aviators who have accrued less than 15 hours in the last 30 days. This relationship applies to both experienced and inexperienced aircrew populations.
- The T&R currency intervals are guidelines for tactical proficiency and do not ensure minimum hours for single-seat safety of flight standards. To meet recognized safety of flight standards, commanders should make every effort to ensure their AV-8B pilots fly more than 15 hours in the previous 30 days.
- Operational Risk Management shall be used to determine appropriate control measures for pilots with less than 15 hours in the previous 30 days. These control measure may include, but are not limited to: additional simulator events, limited sortie complexity, experienced flight leadership, and daylight operations.

101. VMA MISSION. Support the MAGTF Commander by destroying surface targets and escorting friendly aircraft, day or night, under all weather conditions, during expeditionary, joint, or combined operations.

102. VMA TABLE OF ORGANIZATION (T/O). As of this publication date, VMA units are authorized:

Squadron  
14 Aircraft  
22 Pilots

Squadron (-)  
8 Aircraft  
13 Pilots

Detachment  
6 Aircraft  
9 Pilots

FRS  
14 Aircraft TAV-8B  
14 Aircraft AV-8B  
28 Pilots (Instructor)

103. VMA SKILLS ABBREVIATIONS. Shading indicates Core Plus/Mission Plus Skills.

CORE SKILLS	
AA	Air-to-Air
AAR	Air-to-Air Refueling
AS	Air-to-Surface
FAM	Familiarization
LAT	Low Altitude Tactics
NS	Night Systems
TCT	Threat Countertactics
MISSION SKILLS	
AI	Air Interdiction
AR	Armed Reconnaissance
CAS	Close Air Support
EXP	Shore-based Expeditionary
SCAR	Strike Coordination and Reconnaissance
CORE PLUS SKILLS	
ADLAT	Advanced Low Altitude Tactics
FCLP (D)	Field Carrier Landing Practice, Day
FCLP (N)	Field Carrier Landing Practice, Night
LFE	Large Force Exercise
LL AI	Low Level AI
LL CAS	Low Level CAS
MISSION PLUS SKILLS	
AAD	Active Air Defense
AE	Aerial Escort
CQ (D)	Carrier Qualification, Day
CQ (N)	Carrier Qualification, Night
FOB	Shore-based Restricted
MIR	Multi-sensor Imagery Reconnaissance
OAAW	Offensive Anti-air Warfare
FAC(A)	Forward Air Controller (Airborne)

104. VMA MISSION ESSENTIAL TASK LIST (METL)

1. Core METL. The METL is a list of specified tasks a VMA squadron is designed to perform. Core METs, standardized by type unit, are drawn from the Marine Corps Task List (MCTL) and are used for unit readiness. Core Plus METs are additional METs that are theater specific and/or have a low likelihood of occurrence. Core Plus METs may be included in readiness reporting when contained within an Assigned Mission METL. An Assigned Mission METL consists of only the selected Tasks (drawn from Core and Core Plus METs) necessary for that Assigned Mission.

**Core METL**

MCT 1.3.3.3.2	Conduct Aviation Operations From Expeditionary Shore-Based Sites
MCT 3.2.3.1.1	Conduct Close Air Support
MCT 3.2.3.1.2.1	Conduct Air Interdiction
MCT 3.2.3.1.2.2	Conduct Armed Reconnaissance
MCT 3.2.3.1.2.3	Conduct Strike Coordination and Reconnaissance

**Core Plus METs**

MCT 1.3.3.3.1	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 1.3.3.3.2.1	Conduct Aviation Operations From Expeditionary Restricted Sites
MCT 2.2.5.2.2	Conduct Multi-sensor Imagery Reconnaissance
MCT 3.2.3.2	Conduct Offensive Anti-air Warfare
MCT 3.2.5.4	Conduct Forward Air Control (Airborne)
MCT 6.1.1.8	Conduct Active Air Defense
MCT 6.1.1.11	Conduct Aerial Escort

2. MET Output Standards. The required level of performance a VMA squadron/squadron (-)/detachment must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable VMA squadron/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 and assumes  $\geq 70$  percent FMC aircraft and  $> 90$  percent T/O aircrew on hand. If unit FMC aircraft  $< 70$  percent or T/O aircrew  $< 90$  percent, core capability will be degraded by a like percentage. A core capable unit is able to accomplish all tasks designated in the unit METL from a main base, expeditionary base, or amphibious platforms.

MET Output Standards AV-8B Squadron (14 Aircraft)			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.2 EXP	Conduct Aviation Operations From Expeditionary Shore- Based Sites	20	20
MCT 3.2.3.1.1 CAS	Conduct Close Air Support		20
MCT 3.2.3.1.2.1 AI	Conduct Air Interdiction		20
MCT 3.2.3.1.2.2 AR	Conduct Armed Reconnaissance		20
MCT 3.2.3.1.2.3 SCAR	Conduct Strike Coordination and Reconnaissance		20
Core Plus MET Output Standards AV-8B Squadron (14 Aircraft)			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.1 CQ	Conduct Aviation Operations From Expeditionary Sea- Based Sites	20	20
MCT 1.3.3.3.5 FOB	Conduct Aviation Operations From Expeditionary Restricted Sites		20
MCT 2.2.5.2.2 MIR	Conduct Multi-sensor Imagery Reconnaissance		20

MCT 3.2.3.2 OAAW	Conduct Offensive Anti-air Warfare		12
MCT 3.2.5.4 FAC(A)	Conduct Forward Air Controller (Airborne)		4
MCT 6.1.1.8 AAD	Conduct Active Air Defense		12
MCT 6.1.1.11 AE	Conduct Aerial Escort		20

\* A 14 plane Mission Capable VMA squadron is able to execute 20 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.

MET Output Standards AV-8B Squadron (-) (8 Aircraft)			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.2 EXP	Conduct Aviation Operations From Expeditionary Shore-Based Sites	12	12
MCT 3.2.3.1.1 CAS	Conduct Close Air Support		12
MCT 3.2.3.1.2.1 AI	Conduct Air Interdiction		12
MCT 3.2.3.1.2.2 AR	Conduct Armed Reconnaissance		12
MCT 3.2.3.1.2.3 SCAR	Conduct Strike Coordination and Reconnaissance		12
Core Plus MET Output Standards AV-8B Squadron (-) (8 Aircraft)			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.1 CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites	12	12
MCT 1.3.3.3.5 FOB	Conduct Aviation Operations From Expeditionary Restricted Sites		12
MCT 2.2.5.2.2 MIR	Conduct Multi-sensor Imagery Reconnaissance		12
MCT 3.2.3.2 OAAW	Conduct Offensive Anti-air Warfare		8
MCT 3.2.5.4 FAC(A)	Conduct Forward Air Controller (Airborne)		2
MCT 6.1.1.8 AAD	Conduct Active Air Defense		8
MCT 6.1.1.11 AE	Conduct Aerial Escort		12

\* An 8 plane Mission Capable VMA squadron (-) is able to execute 12 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.

MET Output Standards AV-8B Detachment (6 Aircraft)			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.2 EXP	Conduct Aviation Operations From Expeditionary Shore-Based Sites	8	8
MCT 3.2.3.1.1 CAS	Conduct Close Air Support		8
MCT 3.2.3.1.2.1 AI	Conduct Air Interdiction		8
MCT 3.2.3.1.2.2 AR	Conduct Armed Reconnaissance		8
MCT 3.2.3.1.2.3 SCAR	Conduct Strike Coordination and Reconnaissance		8
Core Plus MET Output Standards AV-8B Detachment (6 Aircraft)			
MCT	MET	OUTPUT STANDARD	
		MAXIMUM DAILY SORTIES*	MAXIMUM MCT SORTIES
MCT 1.3.3.3.1 CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites	8	8
MCT 1.3.3.3.5 FOB	Conduct Aviation Operations From Expeditionary Restricted Sites		8
MCT 2.2.5.2.2 MIR	Conduct Multi-sensor Imagery Reconnaissance		8
MCT 3.2.3.2 OAAW	Conduct Offensive Anti-air Warfare		8
MCT 3.2.5.4 FAC(A)	Conduct Forward Air Controller (Airborne)		2
MCT 6.1.1.8 AAD	Conduct Active Air Defense		8
MCT 6.1.1.11 AE	Conduct Aerial Escort		8

\* A 6 plane Mission Capable VMA detachment is able to execute 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.

105. VMA MET TO CORE/MISSION/CORE PLUS/MISSION PLUS SKILL MATRIX. This matrix provides a pictorial view of the relationship between the unit Mission Essential Task (MET) and each Core/Mission/Core Plus/Mission Plus Skill required to perform the MET. Shading indicates a Core Plus MET and corresponding Core Plus/Mission Plus Skill.

VMA (AV-8B) MET TO CORE SKILLS/MISSION SKILLS/CORE PLUS SKILLS/MISSION PLUS SKILLS																									
MARINE CORPS TASK (MCT) // MISSION ESSENTIAL TASK (MET)	CORE SKILL (2000 PHASE)						MISSION SKILL (3000 PHASE)					Core Plus 4000 Phase													
												SKILLS						MISSION PLUS							
	FAM	TCT	AAR	LAT	AS	NS	AA	EXP	CAS	AI	AR	SCAR	FCLP (D)	FCLP (N)	ADV LAT	LL CAS	LL AI	LFE	CQ (D)	CQ (N)	FOB	MIR	OAAW	FAC(A)	AAD
MCT 1.3.3.3.2 EXP	X					X		X																	
MCT 3.2.3.1.1 CAS	X	X	X	X	X	X			X						X	X									
MCT 3.2.3.1.2.1 AI	X	X	X	X	X	X	X			X					X		X	X							
MCT 3.2.3.1.2.2 AR	X	X	X	X	X	X					X				X										
MCT 3.2.3.1.2.3 SCAR	X	X	X	X	X	X						X					X								
CORE PLUS																									
MCT 1.3.3.3.1 CQ	X					X							X	X					X	X					
MCT 1.3.3.3.2.1 FOB	X					X														X					
MCT 2.2.5.2.2 MIR	X	X	X	X	X	X															X				
MCT 3.2.3.2 OAAW	X	X	X	X	X	X	X															X			
MCT 3.2.5.4 FAC(A)	X	X	X	X	X	X																	X		
MCT 6.1.1.8 AAD	X	X	X	X	X	X	X																	X	
MCT 6.1.1.11 AE	X	X	X	X	X	X																			X

106. VMA CORE MODEL MINIMUM REQUIREMENT (CMMR) SKILLS PROFICIENCY REQUIREMENTS. The CMMR is the number of aircrew to execute each stage of flight as detailed below. The numbers associated with each column reflect the number of proficient aircrew required.

AV-8B Unit CMMR			
	SQD	SQD(-)	DET
CORE SKILLS (2000 PHASE)			
FAM	18	9	9
TCT	15	9	6
AAR	15	9	6
LAT	12	7	5
AS	15	9	6
NS	15	9	6
AA	12	7	5
MISSION SKILLS (3000 PHASE)			
EXP	15	9	9
CAS	15	9	6
AI	15	9	6
AR	15	9	6
SCAR	15	9	6
CORE PLUS SKILLS (4000 PHASE)			
ADV LAT	4	2	2
FCLP (D)	15	9	7
FCLP (N)	8	6	5
LL CAS	4	2	2
LL AI	4	2	2
LFE	11	6	5
MISSION PLUS SKILLS (4000)			
CQ (D)	15	9	7
CQ (N)	8	6	5
FOB	15	9	6
MIR	15	9	6
OAAW	8	5	4
FAC(A)	2	1	1
AAD	8	5	4
AE	15	9	6

107. VMA READINESS REPORTING. The paragraphs and tables below delineate the minimum aircrew qualifications and designations required to contribute to unit readiness. Chapter 7 of the Aviation T&R Program Manual provides additional guidance and a detailed description of readiness reporting using the Defense Readiness Reporting System - Marine Corps (DRRS-MC) and the Current Readiness program.

1. Combat Leadership requirements for readiness reporting are per paragraph 109.1.
2. Crew requirements for specific missions may be balanced by the experience level of the crew and are at the discretion of the commanding officer. For readiness reporting purposes, the table delineates the minimum crew definition qualifications and designations as well as the number of crews required per MET. Designated Instructors may be used to offset specific training deficits when forming crews for readiness reporting. The number of crews formed using the below minimum standards per crew capture the readiness capability of a squadron to perform the MET sortie under all light levels and will be compared to the CMMR requirement for crews when reporting readiness.

AV-8B MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY				
CORE METS	CREW POSITION	PILOTS REQUIRED PER MET (CREW CMMR)		
MCT	PILOT	SQD	SQD(-)	DET
1.3.3.3.2 (EXP)	MSP	15	9	9
3.2.3.1.1 (CAS)	MSP	15	9	6
3.2.3.1.2.1 (AI)	MSP	15	9	6
3.2.3.1.2.2 (AR)	MSP	15	9	6
3.2.3.1.2.3 (SCAR)	MSP	15	9	6
CORE PLUS METS	CREW POSITION	SQD	SQD(-)	DET
1.3.3.3.1 (CQ) *	MSP, CQ	15(8)	9(6)	6(5)
1.3.3.3.5 (FOB)	MSP	15	9	6
2.2.5.2.2 (MIR)	MSP	15	9	6
3.2.3.2 (OAAW)	MSP	8	5	4
3.2.5.4 (FAC(A))**	MSP	2	1	1
6.1.1.8 (AAD)	MSP	8	5	4
6.1.1.11 (AE)	MSP	15	9	6

\* Number in parentheses denotes number of night CQ qualified aircrew.

\*\*A FAC(A) capable crew requires 1 FAC(A) per Flight.

Squadron: Based on 70 percent RBA 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 15 pilots are required to fly 14 aircraft aboard plus one current LSO, and FCLP(N)/CQ(N), where 7 pilots would be required to support a 6-plane wave and a current night LSO.

Squadron (-): Based on 70 percent RBA of T/O aircraft and 90 percent of T/O pilots, an 8-plane 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 of the pilots flying twice 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, where 9 pilots are required to fly 8 aircraft aboard plus one current LSO and FCLP(N)/CQ(N), where 5 pilots would be required to support 1 4-plane wave and a current night LSO.

Detachment: Based on 70 percent RBA 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 3 T 3 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, where 7 pilots are required to fly 6 aircraft aboard plus one current LSO and FCLP(N)/CQ(N), where 5 pilots would be required to support two 2-plane waves and a current night LSO.

108. VMA UNIT INSTRUCTOR REQUIREMENTS. A squadron should possess the following numbers of pilots with the instructor designations listed in the matrix.

INSTRUCTOR REQUIREMENTS				
DESIGNATION	SQUADRON	SQUADRON (-)	DETACHMENT	REMARKS
LSO	5	2	3	INCLUDES T, A&B LSO
LSS	2	1	1	MAIN BASE
WTO	6	4	2	INCLUDES WTI
LATI	3	2	1	INCLUDES WTI
NSI	2	1	1	INCLUDES WTI
NS LATI	1	1	0	INCLUDES WTI
ACTI	2	1	1	INCLUDES WTI
FAC(A)I	1	1	0	INCLUDES WTI
WTI	1	1	0	FILLING PTO BILLET
NATOPS	4	2	2	
INST	4	2	2	
FLSE	2	2	0	MAG DESIGNATION

#### 109. VMA QUALIFICATIONS AND DESIGNATIONS

1. VMA CMMR Combat Leadership Requirements. At a minimum, in order to be considered Core Competent, an VMA squadron must possess the following number of listed combat leadership designations.

VMA COMBAT FLIGHT LEADERSHIP CMMR (6000 PHASES)			
DESIGNATIONS	SQUADRON	SQUADRON(-)	DETACHMENT
SECTION LEAD	12	7	5
ACM LEAD	4	2	2
DIVISION LEAD	7	4	3
MISSION COMMANDER	3	2	1

#### 2. Qualifications and Designations

VMA DESIGNATIONS (6000 PHASES)			
QUALIFICATION	SQUADRON	SQUADRON(-)	DETACHMENT
FCP	4	2	2

110. 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.

Fleet Replacement Squadron (FRS) (37 RAC basis)

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
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

Note: FRS ordnance requirements are based upon predicted steady-state throughput requirements and standard support/overhead factors per RAC equivalent.

111. VMA TRAINING RESOURCE REQUIREMENTS. The range requirements in this table are based on event requirements listed in the individual event descriptions. Units should make every effort to adhere to the requirements listed in the event descriptions, but commanding officers may waive requirements based on existing range capabilities and limitations.

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.	

Category	Abbreviation	Name	Description	Notes
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.	
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.

Category	Abbreviation	Name	Description	Notes
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.	
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.	



Category	Abbreviation	Name	Description	Notes
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.	

112. FRS CMMR FLIGHT LEADERSHIP AND INSTRUCTOR REQUIREMENTS. At a minimum, the VMA FRS must possess the following numbers of instructors with the listed flight leadership and instructor designations.

AV-8B FRS (VMAT-203)	
FLIGHT LEADERSHIP	
DESIGNATION	PILOTS
SECTION LEADER	28
DIVISION LEADER	28
MISSION COMMANDER	0
FCP	10
AV-8B FRS (VMAT-203)	
INSTRUCTOR DESIGNATIONS	
DESIGNATIONS	PILOTS
LSO	5
LSS	5
WTO	28
LATI	5
NSI	3
NSLATI	0
ACTI	5
FAC(A)I	0
WTI	2
FRSI	28
NATOPS	6
INSTRUMENT	6
FLSE*	1
*FLSEs are designated by the Group CO	

CHAPTER 2

AV-8B PILOT INDIVIDUAL TRAINING AND READINESS REQUIREMENTS

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CHAPTER 2

AV-8B PILOT INDIVIDUAL TRAINING AND READINESS REQUIREMENTS

200. AV-8B PILOT INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

201. AV-8B PILOT TRAINING PROGRESSION MODEL. This model represents the recommended training progression 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.

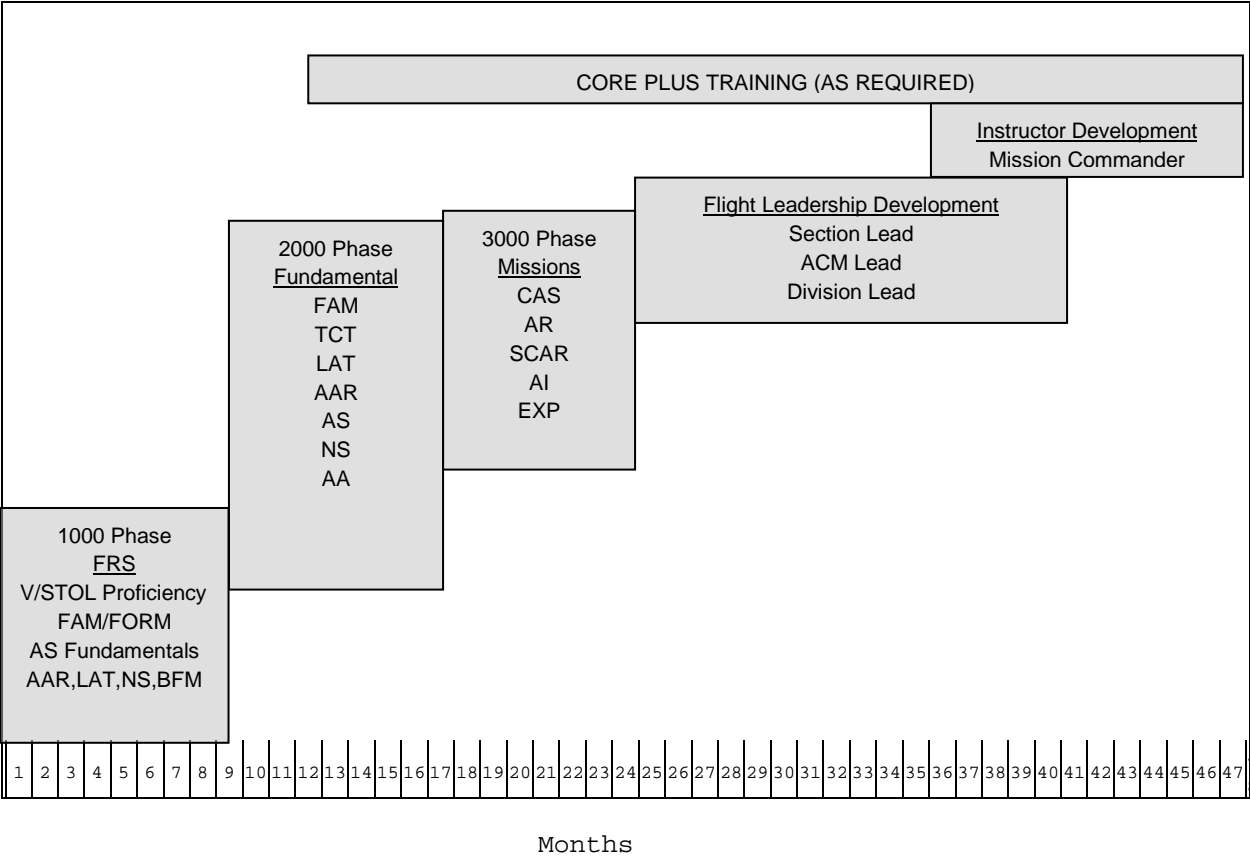


Figure 2-1. AV-8B Training Progression Model.

202. INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A standard crew consists of one pilot. A CSP crew is a pilot who has achieved and maintained individual CSP. In order to be considered proficient in a Core Skill, an individual must attain and maintain proficiency in Core Skill events as delineated in the paragraphs below.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, a pilot must simultaneously have a proficient status in all 2000 level T&R events listed for that core skill in the table below:

Pilot	FAM	TCT	AAR	LAT	AS	NS	AA
T&R event requirements to attain CSP	S2100 S2101R 2102R	S2200R 2201R	2300R	S2400 S2401R 2402 2403R	S2500 S2501R S2502 S2503R S2504R 2505 2506 2507 2508R 2509R 2510 2511 2512 2513R 2514R	S2600 S2601R 2602R 2603 2604 2605R	S2700R 2701 2702 2703 2704R 2705R S2706 S2707R 2708R

2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, a pilot must maintain proficiency in all 2000 level events listed for that Core Skill in the table below:

Pilot	FAM	TCT	AAR	LAT	AS	NS	AA
T&R event requirements to maintain CSP	S2101R 2102R	2201R	2300R	S2401R 2403R	2508 2509 2513R 2514R	2602R	2704R 2705R 2708R

203. INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. A standard crew consists of one pilot. A MSP crew is a pilot who has achieved and maintained individual MSP. In order to be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the paragraphs below.

1. Events Required to Attain Individual MSP. To initially attain MSP in a Mission Skill, a pilot must simultaneously have a proficient status in all 3000 level T&R events listed for that Mission Skill in the table below:

Individual Mission Skill Proficiency Attain Table					
Pilot	EXP	CAS	AR	SCAR	AI
T&R event requirements to attain MSP	3500R	S3100R S3101 S3102 3103R 3104 3105R 3106R 3107	S3200 3201 3202R 3203R	3301 3302R	S3400 3401R 3402
R = Refresher POI Event S = Event Conducted in Simulator					

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, a pilot must maintain proficiency in all 3000 level events listed for that Mission Skill in the table below:

Individual Mission Skill Proficiency Maintain Table					
Pilot	EXP	CAS	AR	SCAR	AI
T&R event requirements to maintain CSP	3500R	3103R 3104 3105R 3106R	3201 3202R 3203R	3300 3301R	3401R 3402
R = Refresher POI Event S = Event Conducted in Simulator					

204. INDIVIDUAL CORE PLUS SKILL AND MISSION PLUS SKILL PROFICIENCY. A standard crew consists of one pilot. In order to be considered proficient in a Core Plus Skill or Mission Plus Skill, an individual must attain and maintain proficiency in Core Plus events as delineated in the paragraphs below.

1. Events Required to Attain Individual Proficiency in Core Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Core Plus Skill, a pilot must have a proficient status in all T&R events listed for that Core Plus Skill in the table below:

Individual Core Plus Skills Attain Table						
Pilot	FCLP (D)	FCLP (N)	ADV LAT	LL CAS	LL AI	LFE
T&R event requirements to attain Core Plus Skill proficiency	S4100R 4101R	S4102R 4103R S4104R 4105R	S4200 S4201R 4202 4203R 4204 4205R	4400R	4401R	4800 4801R
R = Refresher POI Event S = Event Conducted in Simulator						

2. Events Required to Maintain Individual Proficiency in Core Plus Skills. To maintain proficiency in a Core Plus Skill, a pilot must maintain proficiency in all events listed for that skill in the table below:

Individual Core Plus Skills Maintain Table						
Pilot	FCLP (D)	FCLP (N)	ADV LAT	LL CAS	LL AI	LFE
T&R event requirements to maintain Core Plus Skill proficiency	4101R	4105R	S4201R 4205R	4400R	4401R	4801R

3. Events Required to Attain Individual Proficiency in Mission Plus Skills. Proficiency in Mission Plus Skills is not required to obtain unit MSP. Training to Mission Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Mission Plus Skill, a pilot must have a proficient status in all T&R events listed for that Mission Plus Skill in the table below:

Individual Mission Plus Skills Attain Table								
Pilot	FOB	AE	MIR	AAD	OAAW	FAC(A)	CQ (D)	CQ (N)
T&R event requirements to attain Mission Plus Skill proficiency	S4161R	4300R	4500R	S4600	S4700	S4900	S4130	S4130
	4162R	4301R		S4601	4701R	S4901	4131	4131
	S4163R			S4602R	4702R	S4902		S4133
	4164R			S4603		S4903		4134
				S4604R		4904R		S4135
				4605		4905R		4136
				4606R		4906		
				4607R		4907		
						4908R		
						S4909		
						S4910		
						4911R		
						4912R		
						4951R		
R = Refresher POI Event S = Event Conducted in Simulator								

4. Events Required to Maintain Individual Proficiency in Mission Plus Skills. Proficiency in Mission Plus Skills is not required to obtain unit MSP. Training to Mission Plus Skills is at the discretion of the unit commanding officer. To maintain proficiency in a Mission Plus Skill, a pilot must have a proficient status in all T&R events listed for that Mission Plus Skill in the table below:

Individual Mission Plus Skills Maintain Table								
Pilot	FOB	AE	MIR	AAD	OAAW	FAC(A)	CQ (D)	CQ (N)
T&R event requirements to maintain Mission Plus Skill proficiency	4162R	4300R	4500R	4606R	4701R	4904R	4131R	4131R
	4164R	4301R		4607R	4702R	4905R		4136R
						4908R		
						4911R		
						4912R		
						4951R		
R = Refresher POI Event S = Event Conducted in Simulator								

205. QUALIFICATION AND DESIGNATION TABLE. The table below delineate 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.



INITIAL EVENT QUALIFICATION REQUIREMENTS	
Qualification (TRACKING CODE)	Event Requirements
NATOPS	IAW OPNAVINST 3710.7 and an annual qualification letter signed by the commanding officer, 6000, 6001, 6002, 6101
INST	IAW OPNAVINST 3710.7 and an annual qualification letter signed by the commanding officer, 6004, 6005, 6102
AAR	AR1340, AR2300
LAT QUAL	S2400, S2401, 2402, 2403
NSQ	S2600, S2601, 2602, 2603, 2604, 2605
ACM QUAL	S2700, 2701, 2702, 2703, 2704, 2705, S2706, S2707, 2708 S4600, S4601, S4602, S4603, S4604, 4605, 4606, 4607
CQ(D)QUAL	S4130, 4131
CQ(N)QUAL	S4133, 4134, S4135, 4136
ADV LAT	S4200, S4201, 4202, 4203, 4204, 4205
FAC(A) QUAL	S4900, S4901, S4902, S4903, 4904, 4905, 4906, 4907, 4908, S4909, S4910, 4911, 4912
PMCF	S6600, 6601
DEMO	S6700, 6701
DESIGNATION REQUIREMENTS	
Designation	Event Requirements
SECTION LEAD	S6200, S6201, 6202, 6203, 6204, 6205, 6206
DIVISION LEAD	6400, 6401, 6402, 6403
MISSION CMDR	6500, 6501
ACMFL	S6300, 6301, 6302, 6303
FLSE	WTO and Div. Lead, re-designation IAW AV-8B T&R.
NATOPS	6101, VMAT-203 certified, designated by the CO
INST	6102, designated by the CO
FRSI	IAW VMAT-203 IUT Flight Syllabus Guide
WTO	IAW MAWTS-1 Course Catalog
LATI	
NSI	
NS LATI	
ACTI	

INITIAL EVENT QUALIFICATION REQUIREMENTS	
Qualification (TRACKING CODE)	Event Requirements
FAC(A)I	

206. AV-8B PILOT PROGRAMS OF INSTRUCTION (POI)

1. Basic (B) and Transition (T) POI. Note that Transition pilots fly the entire Basic POI.

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-4	Transit and Preload	Training Squadron
5-40	Core Skill Introduction Training	Training Squadron
41-80	Core Skill Training	Tactical Squadron
81-112	Mission Skill Training	Tactical Squadron
113-160	Core Plus Training	Tactical Squadron

2. Refresher (R) POI

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-8	Core Skill Introduction Training	Training Squadron
9-23	Core Skill Training	Tactical Squadron
24-34	Mission Skill Training	Tactical Squadron
35-52	Core Plus Training	Tactical Squadron

3. Modified Refresher (M) POI

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

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

4. Safe-for-Solo (SS) POI

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

5. FRS Instructor POI

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-5	T/AV-8B Instructor Pilot (IP)	Training Squadron

6. Contract Simulator Instructor POI

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

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).

207. ACADEMIC/GROUND TRAINING

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

2. The following external ground training courses of instruction are required to complete the syllabus.

<u>COURSE</u>	<u>ACTIVITY</u>
SURVIVAL, EVASION, RESISTANCE, AND ESCAPE COURSE	NAS BRUNSWICK, ME, OR NAS NORTH ISLAND, CA.
NITE LAB	ANY MAWTS-1 APPROVED COURSE
ACPM	MAWTS-1

208. T&R SYLLABUS NOTES

1. Event Performance Requirements

a. 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.

b. 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., TACTS, tapes, participating aircrews, and AIC personnel).

c. 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.

d. 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. T&R Phases

a. The 2000 phase 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.

b. The 3000 phase is mission-level training. Completion of this phase ensures the pilot is trained to execute missions that support the unit METL.

c. The 2000 phase is Core Skills. The 3000 phase is Mission Skills.

d. The 4000 phase 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.

e. The 5000 phase contains instructor syllabi and certification events and tracking codes for LSO/LSI controls.

f. The 6000 phase contains requirements, qualifications, and designations events.

g. The 8000 phase contains ACPM events.

## 3. T&R Codes

a. In order to log a T&R code, pilots must complete all event requirements satisfactorily, achieving mission performance standards. Pilots shall log the mission code and applicable tactic utilized (AS codes). Ordnance tracking codes have been removed. 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. For example, a pilot is scheduled for CAS-3104 with two GBU-12s, a JDAM, and a TPOD. A CAS-3104 chains a FAM-2102, AS-2505 (A/S sensors), and AS-2506 (A/S timelines). Based on the attack profiles conducted during the sortie, the pilot must then log the appropriate air-to-surface code. For example, AS-2510 would be logged if the GBU-12s were employed (actual or simulated). AS-2511 would be logged if the JDAM timeline was executed. Essentially, most AR, CAS, AI, and SCAR missions only chain up to AS-2505 and it is incumbent on aircrew to log the appropriate air-to-surface employment codes based on what they actually executed. Even though all requirements for sortie completion may not be met for those two codes, the pilot may log the additional codes as long as the performance standards were met (i.e., valid delivery, within required CEP, etc.) provided it is not an E-coded sortie.

b. Additionally, it is appropriate to log three separate training codes if, during the conduct of a sortie, the flight completes all of the specific event requirements for a syllabus event, conducts Air-to-Air Refueling (AAR) and completes all AAR requirements, and then completes a third syllabus event prior to landing. 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.

c. In the event that ordnance or dissimilar adversary requirements are not available or the available training range does not fully support the syllabus event, the following 6000-level tracking codes shall be logged, in addition to the syllabus event code:

- (1) TRK-6808: Required range requirement unavailable.
- (2) TRK-6809: Ordnance requirement unavailable.
- (3) TRK-6810: Syllabus support unavailable.

4. 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.

5. 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.

6. 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.

7. 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.

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

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

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

d. Performance standards are listed for each simulator and flight event.

8. Ordnance. In the Core Skill Introduction phase, specific ordnance requirements are delineated for each event. In the Core Skill Basic through Core Plus phases, this is done for simulator events and in those cases where a particular sortie's objectives could not be met without a specific ordnance load. In the remaining cases, individual events in this manual specify ordnance requirements by general category of ordnance to be employed:

- a. Gun.
- b. Free-fall.
- c. Illumination.
- d. Rockets.
- e. Precision-Guided Munitions (PGMs).
- f. Expendables.
- g. Air-Intercept Missiles (AIMs).

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.). 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.

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

#### 9. Range Requirements

a. 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.

b. Reference Table in paragraph 110. The range capabilities matrix depicts the types of operations that can be supported by each type range.

10. 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.

209. CORE SKILL INTRODUCTION PHASE

1. Core Skill Introduction Training

a. 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.

b. General

(1) 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.

(2) Passing grade on written examinations is 80 percent.

2. Familiarization (FAM)

a. Purpose. Introduce systems management and normal and emergency procedures.

b. General

(1) An early stage FAM instructor (EFAMI) is required for events up to, and including, FAM-1119 as well as the safe for solo check ride FAM-1128.

(2) A late-stage FAM instructor (LFAMI) is required for events after FAM-1119.

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

c. Ground/Academic Training

(1) Readings

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

1 Chapter 1, Aircraft and Engine.

2 Chapter 2, Systems.

3 Chapter 4, Operating Limitations.

4 Chapter 7, Shore-Based Procedures.

5 Chapter 11, Flight Characteristics.

6 Chapter 12, General Emergencies.

7 Chapter 13, Ground Emergencies.

8 Chapter 14, Takeoff Emergencies.

- 9 Chapter 15, In-Flight Emergencies.
- 10 Chapter 16, Landing Emergencies.
- 11 Chapter 17, Emergency Egress.
- 12 Chapter 18, Immediate Action Items.
- 13 Chapter 20, Instrument Procedures.
- 14 Chapter 22, Communications.
- 15 Chapter 23, Navigation.
- 16 Chapter 24, Identification.
- 17 Chapter 25, Data Storage Set.
- 18 Chapter 26, V/STOL-REST Displays.
- 19 Chapter 27, Digital Video Mapping Set.
- 20 Chapter 28, Video Recording System.
- 21 Chapter 29, Forward-Looking Infrared Navigation System.

(b) Air NTTP 3-22.3-AV8B:

Standards. 1 Chapter 2, Mission Planning, Briefing, and Debriefing

2 Chapter 3, Tactical Administration.

(c) V/STOL Pilot's Book of Corporate Knowledge.

(2) Lectures

(a) AFAM-0001, Familiarization Stage Brief.

(b) AFAM-0002, Instrument Ground School. (IGS)

(c) Receive the following AV-8B Courseware lectures:

1 AFAM-0003, AV-8B Engine.

2 AFAM-0004, Electrical and Lighting Systems.

3 AFAM-0005, Fuel System.

4 AFAM-0006, Hydraulic Power and Landing Systems.

5 AFAM-0007, Flight Control Systems.

6 AFAM-0008, Environmental Control Systems.

7 AFAM-0009, Standby Flight Instruments.



- 8 AFAM-0010, OSCAR Mission Systems Computer (MSC).
- 9 AFAM-0011, Up Front Control Set.
- 10 AFAM-0012, Communication/Identifications Equipment.
- 11 AFAM-0013, Heads Up Display.
- 12 AFAM-0014, INS Theory.
- 13 AFAM-0015, GPS Theory.
- 14 AFAM-0016, Navigation Systems, Part 1.
- 15 AFAM-0017, Navigation Systems, Part 2.
- 16 AFAM-0018, Navigation Systems, Part 3.
- 17 AFAM-0019, Navigation Systems, Part 4.
- 18 AFAM-0020, Emergency Equipment.
- 19 AFAM-0021, Ejection Seat.
- 20 AFAM-0022, Survival Equipment.
- 21 AFAM-0023, Operating Limits.
- 22 AFAM-0024, Video Recording System.
- 23 AFAM-0025, Aerodynamics.
- 24 AFAM-0026, AV-8B/TAV-8B Differences.
- 25 AFAM-0027, AV-8B Engine Handling and Performance.
- 26 AFAM-0028, AV-8B Preflight.
- 27 AFAM-0029, Normal Procedures, Part 1.
- 28 AFAM-0030, Normal Procedures, Part 2.
- 29 AFAM-0031, Normal Procedures, Part 3.
- 30 AFAM-0032, Normal Procedures, Part 4.
- 31 AFAM-0033, Normal Procedures, Part 5.
- 32 AFAM-0034, Normal Procedures, Part 6.
- 33 AFAM-0035, Normal Procedures, Part 7.
- 34 AFAM-0036, Ground Emergencies.
- 35 AFAM-0037, Takeoff Emergencies.
- 36 AFAM-0038, In-Flight Emergencies, Part 1.

37 AFAM-0039, In-Flight Emergencies, Part 2.

38 AFAM-0040, Landing Emergencies.

39 AFAM-0041, Briefing/Debriefing.

40 AFAM-0042, Instrument Procedures.

41 AFAM-0043, Aircraft Service and Handling.

42 AFAM-0044, AV-8B Flight Preparation.

(3) Chalk Talks/Practical Application

(a) AFAM-0045, Engine and Fuel Systems Trainer.

(b) AFAM-0046, Airframe Systems Trainer.

(c) AFAM-0047, Seat Brief, Survival Equipment, Parachute Hang.

(d) AFAM-0048, JMPS: Introduction to Joint Mission Planning  
System.

(e) AFAM-0049, JMPS: Introduction to the AV-8B-Unique Planning  
Component.

(f) AFAM-0050, JMPS: Basic Mission Planning.

(4) Exams

(a) AFAM-0051, Engine quiz.

(b) AFAM-0052, Electrical, Fuel, and Hydraulic Systems quiz.

(c) AFAM-0053, Flight Controls, Environmental Systems, and  
Standby Flight Instruments quiz.

(d) AFAM-0054, Aerodynamics quiz.

(e) AFAM-0055, FAM Ground School exam.

SFAM-1100      2.0      \*      R, M, SS      RNAWST      S

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. Perform a cockpit orientation, DSU and VRS installation, pre-start, and starting engine checks. Perform INS ground alignment, RADAR power-up, before taxi and after landing checks. Conduct postflight aircraft data retrieval and DSU removal procedures.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete FAM stage ground/academic training.

SFAM-1101      2.0      \*      RNAWST   S

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. Perform a cockpit orientation; DSU and VRS installation; and after entering cockpit, pre-start, and starting engine checks. Perform INS ground alignment, RADAR power-up, and before taxiing and after landing checks. Conduct postflight aircraft data retrieval and DSU removal procedures.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1100.

SFAM-1102      2.0      \*      RNAWST   S

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

Requirement. Perform blindfold cockpit check; data transfer; engine data entry; and ANTISKID, brake, NWS, and pre-positioning checks. Perform takeoff checklist and 1-finger, 2/5-finger, CTO, and after takeoff checks. Perform climb technique, handling drills, approach to stall (clean, dirty), VFR straight-in, landing checklist, 2 STOL flap FNSL, PNB, VRST STO display, STOL flap STO, and 2 auto flap VNSL.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1101.

SFAM-1103      2.0      \*      R, M, SS   RNAWST   S

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

Requirement. Perform CWAIVER checks, PAR, waveoff, 2 STOL flap VNSL, 2 roll-and-go landings, VRST VL display, and 2 press-ups. Perform emergency procedures: emergency shutdown, abnormal start, and engine fire (fire warning light). Review CTO, STOL flap STO, 1 STOL flap FNSL, 1 AUTO FNSL, and 2 auto flap VNSL.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1102.

SFAM-1104      2.0      \*      R, M, SS   RNAWST   S

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

Requirement. Perform TACAN approach, 3 CL to full stop, 2 CL to touch-and-go landing, and 1 CL to roll-and-go landing. Perform emergency procedures: ground fire, loss of engine control, and oil system failure (oil caution light). Review STOL flap STO, 2 auto flap VNSL, and 2 press-ups.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1103.

SFAM-1105      2.0      \*      RNAWST   S

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

Requirement. Perform VFR overhead, 2 continuous VTO-accel, 3 RVL, 2 decel-VL, and box pattern. Perform emergency procedures: brake failure, abort, no liftoff on STO, main generator failure (GEN, DC, and STBY TR Caution LTS), and cruise flaps landing. Review STOL flap STO, 1 CL to roll-and-go landing, 1 STOL flap VNSL, and 1 press-up.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1104.

SFAM-1106      2.0      \*      RNAWST   S

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

Requirement. Perform 2 RVTO, crosswind decel-VL, 1 Hover Stop Slow Landing (HSSL), and 2 SAAHS-off decel-VL. Perform emergency procedures: over-rotation on STO, standby TRU failure (STBY TR Caution Light), airstart, and SAS failure. Review STOL flap STO, continuous VTO-accel, 1 STOL flap FNSL, 1 CL to roll-and-go landing, 2 RVL, and 1 decel-VL.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1105.

SFAM-1107      2.0      \*      RNAWST   S

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

Requirement. Perform 2 pedal turns and 2 non-continuous VTO. Perform emergency procedures: landing gear fails to retract, APU generator failure (APU GEN Caution Light), flap channel failure (flaps 1 or 2 caution), flap failure (flap warning light), and nosewheel steering caster failure. Review CTO, STOL flap STO, 1 STOL flap FNSL, 1 AUTO FNSL, 2 RVL, 2 crosswind decel-VL, and press-up.  
Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1106.

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SFAM-1108	2.0	*	RNAWST	S
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Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. Perform 2 braking-stop decel-VL and 2 SAAHS-off RVL. Perform emergency procedures: uncommanded roll on VTO, uncommanded flap motion, uncommanded nose down pitch movement, landing gear fails to extend, and reaction control failure. Review STOL flap STO, 1 non-continuous VTO-accel, 1 STOL flap FNSL, 1 auto flap VNSL, 1 HSSL, 2 RVL, 1 SAAHS-off decel-VL, and press-up.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1107.

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SFAM-1109	2.0	*	RNAWST	S
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Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. Perform emergency procedures: flight control malfunction and HYD 1 failure (HYD 1 caution light). Review CTO, STOL flap STO, 1 auto flap VNSL, touch-and-go landing, 1 STOL flap VNSL, 1 SAAHS-off RVL, 1 crosswind decel-VL, 2 continuous VTO-accel, 2 braking-stop decel-VL, 2 SAAHS-off decel-VL, and press-up.

Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1108.

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SFAM-1110	2.0	*	RNAWST	S
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Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. Perform emergency procedures: single DECS failure (EFC Caution Light), dual DECS failure (JPTEL warning light) or loss of engine control, engine mechanical failure, engine vibration, and IGV failure. Review STOL flap STO, PAR,

2 CL, 2 STOL flap VNSL, 1 RVL, 2 continuous VTO-accel, 2 crosswind decel-VL, 2 SAAHS-off decel-VL, and press-up.  
Performance Standard. PUI shall execute all maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1109.

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SFAM-1111	2.0	*	R, M, SS	RNAWST	S
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Goal. Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.

Requirement. Perform emergency procedures: RPM fluctuation, compressor stall, fuel transfer failure (L trans / R trans caution light), and fuel low level (L fuel / R fuel caution light[s] flashing). Review CTO, TACAN approach, 1 STOL flap FNSL, STOL flap STO, 1 CL, 1 auto flap VNSL, 1 STOL flap VNSL, 1 RVL, RVTO, 1 crosswind decel-VL, 2 continuous VTO-accel, 1 braking-stop decel-VL, 1 SAAHS-off decel-VL, and press-up (pedal turn, box pattern).

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1110.

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SFAM-1112	2.0	*	R, M, SS	RNAWST	S
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Goal. Introduce emergency procedures and progress check.

Requirement. Perform emergency procedures: total electrical failure (GEN, APU GEN, DC, STBY TRU), NORDO, low altitude flameout, midair, and bird strike. Review CTO, PAR, 1 STOL flap FNSL, STOL flap STO, 1 CL, 1 auto flap VNSL, 1 STOL flap VNSL, 1 RVL, RVTO, 1 crosswind decel-VL, non-continuous VTO-accel, 1 braking-stop decel-VL, 1 SAAHS-off decel-VL, and press-up (pedal turn, box pattern).

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1111.

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FAM-1113	1.3	*	R, M, SS	1 TAV-8B	A
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Goal. Introduce CTO, STOL flap STO, handling drills, STOL flap FNSL, and auto flap VNSL.

Requirement. Perform ejection seat preflight, intercom system, and visual signals. Perform CTO, STOL flap STO, handling drills, approach to stall (clean/dirty), VFR overhead, 2 STOL flap FNSL, and 2 auto flap VNSL. Conduct hot refueling and hot brake/dearming inspection.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1112.

FAM-1114      1.3      \*      R, M, SS    1 TAV-8B    A

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

Requirement. Perform TACAN approach, waveoff, roll-and-go landing, 2 STOL flap VNSL, and 2 press-ups. Review CTO, STOL flap STO, 1 STOL flap FNSL, 1 AUTO FNSL, and 2 auto flap VNSL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1113.

Range Requirement. MOA, RSTD.

FAM-1115      1.3      \*      R, M, SS    1 TAV-8B    A

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

Requirement. Perform PAR, 4 CL, and touch-and-go landings. Review STOL flap STO, 1 STOL flap FNSL, 1 AUTO FNSL, roll-and-go landing, and 2 press-ups.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1114.

Range Requirement. MOA, RSTD.

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

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

Requirement. Perform 2 RVL, continuous VTO-accel, 1 decel-VL, and box pattern. Review STOL flap STO, PAR, TACAN, 1 press-up, 2 CL, 1 STOL flap VNSL, and roll-and-go landing.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1115.

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

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

Requirement. Perform RVTO, HSSL, and cruise flap 1 decel-VL. Review STOL flap STO, 1 PAR, 2 RVL, 1 STOL flap FNSL, roll-and-go landing, 2 CL, continuous VTO-accel, and 2 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1116.

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

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

Requirement. Perform pedal turn and 1 crosswind decel-VL. Review CTO, STOL flap STO, PAR, VFR overhead, 1 STOL flap FNSL, 2 RVL, continuous VTO-accel, 2 decel-VL, and 2 press-ups.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1117.

FAM-1119      1.3      \*      R, M   1 TAV-8B   A

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

Requirement. Perform SAAHS-off RVL. Review touch-and-go landing, PAR, STOL flap STO, 1 STOL flap FNSL, 2 auto flap VNSL, 2 RVL, non-continuous VTO-accel, 1 crosswind decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1118.

### 3. Familiarization/Instrument (FAM/INST)

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

b. General

(1) NATOPS instrument evaluation events shall consist of those items delineated in OPNAVINST 3710.7 series (NATOPS), NAVAIR 00-80T-112 (NATOPS Instrument Flight Manual), FAR/AIM, and other model manager lead community issues.

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

(3) 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.



(4) NATOPS instrument evaluatees shall ensure that annual instrument minimums are in accordance with OPNAVINST 3710.7 series prior to commencement of the annual instrument evaluation flight.

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

c. Ground/Academic Training

(1) Readings. Review OPNAVINST 3710.7 series.

(2) Exams. AINST-6005, Annual Instrument Ground School exam.

AINST-6004      8.0      \*      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      \*      RNAWST   S

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. Perform instrument flight planning, instrument climb profile, intermediate level-off procedures, maximum range cruise profile, partial panel instrument flight, unusual attitude flight, holding procedures, IFR penetration procedures, TACAN approach, missed approach procedures, and ground controlled approach PAR. Review 1 STOL flap FNSL and 1 RVL.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS and OPNAVINST 3710. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1112.

SFAM/INST-1121   2.0      \*      R, M   RNAWST   S

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. Perform airways navigation on a round-robin flight using maximum range en route procedures. Review instrument flight planning, instrument flight procedures, instrument climb profile, intermediate level-off procedures, maximum range cruise profile, partial panel, unusual attitudes, holding procedures, IFR penetration procedures, TACAN approach, missed approach procedures, and PAR. Review 1 auto flap VNSL and 1 RVL.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS and OPNAVINST 3710. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SINST-1120.  
SFAM/INST-1122 2.0 \* RNAWST S

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

Requirement. Perform minimum fuel PAR. Review instrument flight planning, instrument flight procedures, instrument climb profile, intermediate level-off procedures, maximum range cruise profile, airways navigation, IFR penetration procedures, and missed approach procedures. Review 1 STOL flap FNSL.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS and OPNAVINST 3710. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SINST-1121.  
FAM/INST-1123 1.5 \* 1 TAV-8B A

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

Requirement. Perform instrument flight planning, instrument climb profile, intermediate level-off procedures, maximum range cruise profile, unusual attitudes, holding procedures, IFR penetration procedures, TACAN approach, PAR, and missed approach procedures. Review 1 RVL and 1 decel-VL.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS and OPNAVINST 3710. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SINST-1122, FAM-1119.  
FAM/INST-1124 1.5 \* R 1 TAV-8B A

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

Requirement. Perform airways navigation and minimum fuel PAR. Review instrument flight planning, instrument climb profile, intermediate level-off procedures, maximum range cruise profile, holding procedures, IFR penetration procedures, TACAN approach, missed approach procedures, 1 RVL, and 1 decel-VL.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS and OPNAVINST 3710. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. INST-1123.

SFAM/INST-1125 1.5 \* R, M RNAWST S

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 POI listed in Appendix A of AV-8B T&R Manual.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, OPNAVINST 3710.7 series, and applicable SOPs. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG. The T&R code, REQ-6102, shall be logged at the completion of this sortie.

Prerequisite. AFAM-0112, INST-1124.

FAM/INST-1126 1.3 \* 1 TAV-8B A

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

Requirement. PUI to conduct briefing. Perform VFR straight-in and SAAHS-off decel-VL. Review CTO, roll-and-go landing, VFR overhead, STOL flap STO, 1 STOL flap FNSL, 1 CL, 1 auto flap VNSL, 3 RVL, non-continuous VTO-accel, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. INST-1125.

SFAM/INST-1127 2.0 \* R, M RNAWST S

Goal. Introduce compound emergencies.

Requirement. Perform compound emergencies.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1126.

FAM/INST-1128 1.3 \* R, M, SS 1 TAV-8B A

Goal. Safe for solo check.

Requirement. Review CTO, PAR, STOL flap STO, 1 STOL flap FNSL, 1 CL, 1 auto flap VNSL, 1 STOL flap VNSL, roll-and-go landing, 1 RVL, VTO-accel, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SFAM-1127.

FAM/INST-1129 1.3 \* R, M, SS 1 AV-8B A

Goal. Solo flight.

Requirement. Review CTO, GCA, and STOL flap STO. Execute 1 STOL flap FNSL, 1 CL, 1 auto flap VNSL, 1 STOL flap VNSL, 1 roll-and-go landing, 1 RVL, VTO-accel, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1128.

4. Forward Operating Base Operations (FOB)

a. Purpose. Develop the requisite skills for FOB.

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

c. Ground/Academic Training

(1) Readings

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

(b) Air NTTP 3-22.3-AV8B, Review Chapter 13, Expeditionary Basing.

(2) Lectures

(a) AFOB-0058, FOB Stage Brief.

(b) Receive the following AV-8B courseware lectures:

1 AFOB-0059, V/STOL Concept of Operations.

2 AFOB-0060, Forward Operating Base Operations.

SFOB-1200 1.0 \* RNAWST S

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

Requirement. Conduct FOB operations and simulated emergency procedures. Perform 3 maximum performance STO and 4 precision RVL at an air facility.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. Complete FOB stage ground/academic training, FAM-1129.

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

Goal. Introduce FOB operations.

Requirement. Conduct FOB operations at an air facility. Perform 3 maximum performance STO and 4 precision RVL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. SFOB-1200.

External Syllabus Support. Air facility and LSS.

FOB-1202      0.8      \*      1 AV-8B    A

Goal. Practice FOB operations.

Requirement. Conduct FOB operations at an air facility. Perform 3 maximum performance STO and 4 precision RVL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. FOB-1201.

External Syllabus Support. Air Facility and LSS.

5. Field Carrier Landing Practice (FCLP)

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

b. General

(1) A launch officer and FRS Landing Site Instructor (LSI-5706) are required for all events.

(2) A minimum of 30 vertical landings is required for completion.

(3) Completion of this stage constitutes FCLP(D) qualified.

c. Ground/Academic Training

(1) Readings

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

1 Chapter 3, Field Carrier Landing Practice Procedures.

2 Chapter 4, General Flight Procedures.

3 Chapter 5, Deck Markings.

- 4 Chapter 6, Recovery Procedures.
- 5 Chapter 7, Deck Procedures.
- 6 Chapter 8, Launch and Departure Procedures.
- 7 Chapter 11, Emergency Procedures.
- 8 Chapter 22, Communication.
- 9 Chapter 23, Records.

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

- 1 Chapter 5, Launching Aircraft.
- 2 Chapter 6, Recovering Aircraft.

(c) Air NTTP 3-22.3-AV8B, Review Chapter 13, Expeditionary Basing.

(2) Lectures

- (a) AFCLP-0061, FCLP Stage Brief.
- (b) Receive the following AV-8B courseware lectures:
  - 1 AFCLP-0062, Day Carrier Qualification, Part 1.
  - 2 AFCLP-0063, Day Carrier Qualification, Part 2.
  - 3 AFCLP-0064, Field Carrier Landing Practice.

(3) Exams. AFCLP-0065, FCLP Ground School exam.

SFCLP-1210	1.0	*	RNAWST	S	<u>D</u>
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Goal. Introduce day FCLP normal and emergency procedures.

Requirement. Perform day FCLP normal and emergency FCLP procedures to a simulated L-Class ship. Perform a Case 1 recovery, 5 VL, and 4 STO.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, LHA/LHD NATOPS and the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. Complete FCLP stage ground/academic training, FAM-1129.

FCLP-1211	1.0	*	1 AV-8B	A	<u>D</u>
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Goal. Introduce day FCLP.

Requirement. Perform day FCLP normal and emergency FCLP procedures to a simulated L-Class ship. Perform a Case 1 recovery, 4 VL, 3 STO, and test waveoff. Introduce launch officer signals.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, LHA/LHD NATOPS and the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. SFCLP-1210.

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

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FCLP-1212	1.0	*	1 AV-8B	A	D
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Goal. Introduce simulated NORDO approach. Review day FCLP.

Requirement. Perform simulated NORDO approach. Review day FCLP normal and emergency procedures to a simulated L-Class ship. Review a Case 1 recovery, 4 VL, 3 STO, and launch officer signals.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, LHA/LHD NATOPS and the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. FCLP-1211.

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

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FCLP-1213	1.0	*	1 AV-8B	A	D
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Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship. Review a Case 1 recovery, 4 VL, 3 STO, and launch officer signals.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, LHA/LHD NATOPS and the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. FCLP-1212.

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

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FCLP-1214	1.0	*	1 AV-8B	A	D
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Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship. Review a Case 1 recovery, 4 VL, 3 STO, and launch officer signals.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, LHA/LHD NATOPS and the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. FCLP-1213.

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

FCLP-1215	1.0	*	1 AV-8B	A	D
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Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship. Review a Case 1 recovery, 4 VL, 3 STO, and launch officer signals.

Performance Standard. Satisfactorily execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, LHA/LHD NATOPS and the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. FCLP-1214.

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

FCLP-1216	1.0	*	1 AV-8B	A	D
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Goal. Day FCLP qualification.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship. Review a Case 1 recovery, 4 VL, 3 STO, and launch officer signals.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, LHA/LHD NATOPS and the VMAT-203 FSG. Achieve an average pass grade of 2.5.

Prerequisite. FCLP-1215.

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

## 6. Formation (FORM)

a. Purpose. Develop proficiency in section administrative formations.

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



c. Ground/Academic Training

(1) Readings

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

1 Chapter 9, Paragraph 9.1, Formation Flight.

2 Chapter 22, Paragraph 22.4, Visual Communications.

(b) Air NTTP 3-22.3-AV8B:

1 Section 3.6, Tactical Formations and Maneuvering.

2 Section 3.10, Battle Damage/Ordnance Checks.

(2) Lectures

(a) AFORM-0066, FORM/TACFORM Stage Brief.

(b) Receive the following AV-8B courseware lectures:

1 AFORM-0067, Administrative Formation.

2 AFORM-0068, Medium/High Altitude Tactical Formation.

3 AFORM-0069, Low Altitude Tactical Formation.

4 AFORM-0070, Division Tactical Formation.

(3) Exams. AFORM-0071, Formation Ground School exam.

FORM-1300      1.3      \*      2 TAV-8B or 1 AV-8B/1 TAV-8B      A      D

Goal. Introduce administrative section formation.

Requirement. Perform taxi and marshal procedures, section CTO, stream STO, parade formation, cross-under, lead change, cruise formation, running rendezvous, break-up and rendezvous, battle damage/ordnance checks, TACAN approach, and VFR break maneuver. Review 1 STOL flap FNSL, 1 auto flap VNSL, and 1 VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete FORM stage ground/academic training, FAM-1129.

FORM-1301      Range Requirement. MOA, RSTD.  
1.3      \*      2 AV-8B      A      D

Goal. Practice administrative section formation.

Requirement. Perform section PAR to low approach and full stop. Review taxi and marshal procedures, section stream STO, parade formation, cross-under, lead change, cruise formation,

running rendezvous, and break-up and rendezvous. Review 1 CL, 1 RVL, and 2 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FORM-1300.

Range Requirement. MOA, RSTD.

7. Advanced Aircraft Handling (AAH)

a. 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.

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

c. Ground/Academic Training

(1) Readings

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

(b) Air NTTP 3-22.3-AV8B, Chapter 4, LAT.

(c) Air NTTP 3-22.1-AV8B, Chapter 15, A/A Fundamentals.

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

(d) NAVMC DIR 3510.14, Aviation Training and Readiness Program Manual, Chapter 4, LAT Rules of Conduct.

(e) AV-8B McDonnell Aircraft Company Product Support Digest:

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

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

3 Departure Resistance System.

4 Balancing Your DEPRES Account.

5 Aerodynamic and Flight Control Improvements.

6 Low Pressure Compressor Case Rub.

(2) Lectures

(a) AAAH-0072, AAH Stage Brief.

(b) Receive the following AV-8B courseware lectures:

1 AAAH-0073, Aircraft Performance and Handling.

2 AAAH-0074, AV-8B Departure Avoidance.

3 AAAH-0075, 3D Maneuvering.

4 AAAH-0076, Mission Crosscheck Time.

(3) Chalk Talks/Practical Application. AAAH-0077, Aircraft Performance and Safety Working Group.

(4) Exams. AAAH-0078, Aircraft Handling and Departure Avoidance exam.

SAAH-1310      1.0      \*      RNAWST    S

Goal. Introduce advanced aircraft handling.

Requirement. Perform G-awareness maneuver, FENCE checks, break and hard turns, aerobatics, 3-G weave, energy management and turn rate drills, accelerated/high speed stalls and slow speed departure, slow speed/high AOA drills, and 250-knot loops.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete AAH stage ground/academic training, FORM-1301.

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

Goal. Introduce advanced aircraft handling.

Requirement. Perform G-awareness maneuver, FENCE checks, unloaded rolls, hard turns, turn rate drill, aerobatics, and 3-G weave. Review 1 CL and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SAAH-1310.

Range Requirement. MOA, RSTD.

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

Goal. Introduce advanced aircraft handling.

Requirement. Introduce slow speed departure, break turns, energy management drills, deck transitions, slow speed/high AOA drills, and 250-knot loops.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AAH-1311.

Range Requirement. MOA, RSTD.

8. Tactical Formation (TACFORM)

- a. Purpose. Develop proficiency in section tactical formations. Introduce division administrative and tactical formations.
- b. General. A Fleet Replacement Squadron Instructor (FRSI) is required for all events.

c. Ground/Academic Training

(1) Readings. Air NTTP 3-22.3-AV8B, Review Section 3.6, Tactical Formations and Maneuvering.

(2) Lectures. Review the following AV-8B courseware lectures:

- (a) ATACFORM-0079, Medium/High Altitude Tactical Formation.
- (b) ATACFORM-0080, Low Altitude Tactical Formation.
- (c) ATACFORM-0081, Division Tactical Formation.

TACFORM-1320    1.1       \*           R, M    2 TAV-8B    A    D

Goal. Introduce section tactical formation at medium altitude.

Requirement. Perform offensive and defensive combat spread, deployed echelon formation, check turns, NAV turns, TAC turns, cross turns, hook turns, and shackle turns at medium altitude in the comm-in environment. Review 1 FNSL and 1 auto flap VNSL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete TACFORM stage ground/academic training, AAH-1312, FORM-1301.

Range Requirement. MOA, RSTD.

TACFORM-1321    1.1       \*           2 AV-8B    A    D

Goal. Introduce comm-out maneuvering at medium altitude.

Requirement. Perform fighter wing formation and comm-out maneuvering. Review offensive and defensive combat spread. Review check turns, NAV turns, TAC turns, cross turns, hook turns, and shackle turns at medium altitude in the comm-in environment. Review 1 STOL flap VNSL and 2 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. TACFORM-1320.

Range Requirement. MOA, RSTD.

TACFORM-1322    1.1       \*            2 AV-8B    A    D

Goal.    Introduce section tactical formation at low level.  
Requirement.    Perform section formation as a wingman at low altitude. Perform defensive combat spread and comm-in turns to include check turns, NAV turns, TAC turns, cross turns, hook turns, and shackle turns at low level. Review RADALT checks, terrain clearance tasks, mission tasks (CT and NCMT), Mission Crosscheck Time (MCT) tasks, and G-awareness maneuver. Review 1 RVL and 2 decel-VL.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    TACFORM-1321.

Range Requirement.    MOA, RSTD.

TACFORM-1323    1.1       \*            2 AV-8B    A    D

Goal.    Introduce section tactical formation at high altitude.

Requirement.    Perform energy-sustaining turns (chased) and section formation as a wingman at or above 25,000 feet. Review offensive combat spread and comm-in and comm-out turns to include check turns, NAV turns, TAC turns, cross turns, hook turns, and shackle turns. Review 1 RVL and 2 decel-VL.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    TACFORM-1321.

Range Requirement.    MOA, RSTD.

TACFORM-1324    1.1       \*            4 TAV-8B    A    D

Goal.    Introduce division formation at medium altitude.

Requirement.    Perform division formation procedures including division marshal procedures, division stream STO, balanced parade formation, fingertip formation, running rendezvous, break-up and rendezvous, division box, division cruise, deployed echelon, fluid 4 formations, and division VFR break. Review 1 decel-VL.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    TACFORM-1321.

Range Requirement.    MOA, RSTD.

## 9. Navigation (NAV)

a. Purpose.    Develop the requisite skills integrating aircraft navigation systems to plan and execute navigation flights using aeronautical charts and visual checkpoints.

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

c. Ground/Academic Training

(1) Readings. AV-8B NATIP (NTRP 3-22.4-AV8B):

(a) Section 2.2, Inertial Navigation System.

(b) Section 2.3, Global Positioning System.

(2) Lectures

(a) ANAV-0082, NAV Stage Brief.

(b) Receive the following AV-8B courseware lectures:

1 ANAV-0083, Low Level Navigation.

2 ANAV-0084, OSCAR Navigation Systems Changes.

(3) Chalk Talks/Practical Application. ANAV-0085, JMPS Low Level Planning.

(4) Exams. ANAV-0086, Navigation Ground School exam.

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MNAV-1330	0.8	*	MTT
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Goal. Introduce ingress/egress string and CST NAV system.

Requirement. Perform navigation at low altitude on input ingress string.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete NAV stage academic/ground training. FAM-1129.

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SNAV-1331	1.5	*	R, M RNAWST S
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Goal. Introduce navigation at low altitude.

Requirement. Perform navigation at low altitude on an MTR in an OSCAR-configured simulator emphasizing MPCD display, TACAN, Waypoint, Markpoint, Command Speed/Time, Waypoint Overfly, Non-Sequential route strings, HUD symbology differences, Target point, Steer-to-point, Point of Interest, Quick Access, and Null Points.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. MNAV-1330.

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

Goal.    Introduce navigation at low altitude.

Requirement.    Perform navigation at low altitude on an MTR emphasizing JMPS planning, TACAN navigation, waypoint and markpoint utilization, Command Speed/Time, Non-Sequential route strings, HUD symbology differences, Target point, Steer-to-point, Point of Interest, Quick Access, and Null Points.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    SNAV-1331.

Range Requirement.    MTR

10. Air-to-Air Refueling (AAR)

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

b. General

(1) An FRS Air-to-Air Refueling Instructor (AARI) is required for all events.

(2) Completion of this stage constitutes day AAR qualified.

c. Ground/Academic Training

(1) Readings

(a) AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Chapter 9, Paragraph 9.2, Air Refueling.

(b) Aerial Refueling NATOPS Manual.

(c) ATP-56(B), Air-to-Air Refueling.

(2) Lectures

(a) AAAR-0087, AAR Stage Brief.

(b) Receive the following AV-8B courseware lecture: AAAR-0088, Aerial Refueling.

(3) Exams.    AAAR-0089, Aerial Refueling Ground School exam.

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

Goal.    Day air-to-air refueling qualification.

Requirement.    Perform day in-flight refueling from a refueling platform in the comm-in environment. Perform 2 wet and 4 dry plugs. Review 1 RVL and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete AAR stage ground/academic training, TACFORM-1324.

Range Requirement. AAR.

External Syllabus Support. Compatible tanker IAW ATP-56(B).

11. Threat Countertactics (TCT)

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

b. General

- (1) All flights should be flown on an EW range with TACTS coverage.
- (2) An RTO shall be used to the maximum extent possible.
- (3) A FRS Threat Countertactics Instructor (TCTI) shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Chapter 30, Expendable Dispensers.

(b) Air NTTP 3-22.1-AV8B:

1 Review Chapter 3, Threat Countertactics.

2 Review Appendix A, E-Pole Determination.

3 Review Appendix B, Standard Expendable Loads.

(c) User's Manual for AV-8B CY20XX EW Suite.

(d) ALSA Communication Brevity.

(2) Lectures

(a) ATCT-0090, TCT Stage Brief.

(b) Receive the following AV-8B Classified courseware lectures:

1 ATCT-0091, Expendable Decoys.

2 ATCT-0092, ALR-67 RADAR Warning Receiver.

3 ATCT-0093, ALE-39 Countermeasure Dispensing System.

4 ATCT-0094, ALQ-164 Defensive Electronic Countermeasures.

5 ATCT-0095, Threat RADAR Fundamentals.



(c) MAWTS-1 Academic Support Package

1 ATCT-0096, Non-RF Surface-to-Air Missiles and AAA.

2 ATCT-0097, RF Surface-to-Air Missiles.

(d) ATCT-0100, MAWTS-1 Common Courseware, Threat Countertactics.

(3) Exams. ATCT-0101, Threat Countertactics Ground School exam.

MTCT-1350      0.8      \*      MTT

Goal. Introduce Exp programming, ECM panel, and CMDS functions.

Requirement. Perform setup of Exp page.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. TCT stage brief, TCT stage ground/academic training. TACFORM-1324.

STCT-1351      1.0      \*      RNAWST   S

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

Requirement. Review/Introduce setup and employment of ALE, ALR, and ALQ. Demo multiple RWR indications along with applicable comm calls. Introduce ALQ-167/ALR bit procedures. Perform ALSA communications and lean, beam, level-S, guns jink, SAM weave, and E-pole tactics. Utilize decision matrix for jettison criteria. Perform preemptive and reactive expendable gameplans.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. MTCT-1350.

TCT-1352      1.0      \*      2 AV-8B   A   D

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

Requirement. As a chased aircraft, perform ALSA communications and lean, beam, level-S, guns jink, SAM weave, and E-pole tactics at medium altitude for range-known threats. Utilize decision matrix for jettison criteria. Perform preemptive and reactive expendable gameplans. Review ALE-39 and ALR-67 setup and employment. Review 1 RVL and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. STCT-1351.

Ordnance. ALQ-164, 40 Chaff/10 Flares, TACTS Pod.

Range Requirement. TACTS Range, Electronic Warfare Range.

External Syllabus Support. TACTS, Hi Fi EW.

12. Air-to-Surface (AS)

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

b. General

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

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

c. Ground/Academic Training

(1) Readings

(a) AV-8B NATIP (NTRP 3-22.4-AV8B), Chapter 5, A/S Weapon Delivery.

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

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

(d) ALSA Communication Brevity.

(2) Lectures

(a) AAS-0102, AS Stage Brief

(b) Receive the following AV-8B courseware lectures:

1 AAS-0103, Introduction to Mission Publications

2 AAS-0104, A/G Weapons Delivery Theory

3 AAS-0105, Computed Delivery Theory

4 AAS-0106, Suspension Equipment

5 AAS-0107, GP Bombs

6 AAS-0108, GP Bomb Fuzing

7 AAS-0109, 25mm Gun

8 AAS-0110, Rockets

9 AAS-0111, Weapon Limits and Restrictions

10 AAS-0112, Weaponneering

11 AAS-0113, Multiple Weapons Release Weaponneering

12 AAS-0114, Forward-Firing Ordnance and Weaponneering

- 13 AAS-0115, WARP
- 14 AAS-0116, Laser Theory.
- 15 AAS-0117, Angle Rate Bombing System (ARBS)
- 16 AAS-0118, Height Above Target
- 17 AAS-0119, Target Designation Methods
- 18 AAS-0120, SMS & Weapon System Programming
- 19 AAS-0121, SMS & Weapon System Programming OSCAR
- 20 AAS-0122, Computed Weapons Delivery Modes
- 21 AAS-0123, Degraded Weapons Delivery Modes
- 22 AAS-0124, Weapon Delivery Procedures, Part 1
- 23 AAS-0125, Weapon Delivery Procedures, Part 2

(3) Chalk Talks/Practical Application. AAS-0126, JMPS Lab, Advanced Mission Planning.

(4) Exams. AAS-0127, Air-to-Surface Ground School exam.

MAS-1400      1.0      \*      MTT

Goal. Introduce A/S stores programming and computed weapons delivery.

Requirement. Program multiple stores into Stores page. Manipulate weapons programming, Q/M/I fuze function, and arm time. Perform 3 GCIP and 3 ARBS deliveries from medium altitude.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. TCT ground school complete, TACFORM-1324.

SAS-1401      1.0      \*      RNAWST      S

Goal. Introduce computed weapon delivery from medium altitude.

Requirement. Perform 6 30-degree and 6 45-degree BCIP/GCIP deliveries. Perform weapon system programming. Utilize adaptive roll-in technique, target placement angle, and curvilinear-to-straight-path tracking. Perform off-target maneuvers. Demonstrate knowledge of jettison system. Utilize WARP to generate weaponeering data.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. MAS-1400.

Ordnance. 12 Mk-76.

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SAS-1402	1.0	*	RNAWST	S
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Goal. Introduce 10-degree computed deliveries.

Requirement. Perform 8 10-degree deliveries of high drag and low drag ordnance. Utilize the adaptive roll-in technique, target placement angle, and curvilinear-to-straight-path tracking. Perform off-target maneuvers. Utilize WARP to generate weaponeering data.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SAS-1401.

Ordnance. 6 Mk-76, 2 Mk-82 HD.

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SAS-1403	1.0	*	R, M	RNAWST	S
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Goal. Introduce ARBS/TV deliveries.

Requirement. Perform a WOF update/designation. Introduce "J-Hook" maneuver. Perform straight-path-to-straight-path tracking. Utilize the ARBS/TV mode of the DMT to generate height above target data for CCIP and AUTO deliveries. Perform two CCIP to AUTO conversions. Review 6 30-degree and 6 45-degree deliveries. Utilize WARP to generate weaponeering data.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SAS-1401.

Ordnance. 12 Mk-76.

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SAS-1404	1.0	*	RNAWST	S
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Goal. Introduce ARBS/LST deliveries.

Requirement. Perform 6 30-degree and 6 45-degree ARBS/LST deliveries. Review straight-path-to-straight-path tracking, and ARBS/TV deliveries. Utilize WARP to generate weaponeering data.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SAS-1403.

Ordnance. 12 Mk-76.

SAS-1405      1.0      \*      R, M   RNAWST   S

Goal.    Introduce GAU-12 and rocket deliveries.

Requirement.   Perform 4 20-degree GAU-12 and 8 20-degree 5.00" Zuni Rocket deliveries.   Utilize the safe escape table and maximum fragmentation envelope chart to ensure safe releases.   Utilize WARP to generate weaponeering data.

Performance Standard.   PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.   SAS-1402.

Ordinance.    300 rounds 25mm, 8 5.00" Zuni Rockets.

AS-1406      1.0      \*      1 TAV-8B   A    D

Goal.    Introduce computed weapons deliveries.

Requirement.   Perform 6 30-degree or 45-degree deliveries.   Perform weapon preflight and weapon system programming.   Utilize the adaptive roll-in technique, target placement angle, two BAUT/GAUT straight-path-to-straight-path and four BCIP/GCIP attacks.   Perform off-target maneuvers.   Perform off-target rendezvous.   Utilize WARP to generate weaponeering data.   Review 1 RVL and 1 decel-VL.

Performance Standard.   PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.   SAS-1404.

Ordinance.    6 Mk-76.

Range Requirement.   RKD RNG.

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

Goal.    Practice medium angle deliveries.

Requirement.   PUI perform briefing.   Perform 6 30-degree or 45-degree BAUT/GAUT deliveries.   Review weapon preflight.   Review weapon system programming.   Review the adaptive roll-in technique, target placement angle, two BAUT/GAUT straight-path-to-straight-path and four BCIP/GCIP attacks.   Review off-target maneuvers and rendezvous.   Utilize WARP to generate weaponeering data.   Review 1 auto flap VNSL and 1 decel-VL.

Performance Standard.   PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.   AS-1406.

Ordinance.    6 Mk-76, 10 Flares.

Range Requirement.   RKD RNG, EXP.

AS-1408 1.0 \* R, M 2 AV-8B A D

Goal. Introduce ARBS/TV deliveries.

Requirement. Perform 6 30-degree or 45-degree ARBS/TV deliveries utilizing straight-path-to-straight-path tracking. Review adaptive roll-in technique, "J-Hook" maneuver off-target maneuvers, and off-target rendezvous. Utilize WARP to generate weaponeering data. Review 1 RVL and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AS-1407.

Ordnance. 6 Mk-76, 10 Flares.

Range Requirement. RKD RNG, EXP.

AS-1409 1.0 \* 1 TAV-8B A D

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

Requirement. Perform 6 10-degree CCIP deliveries of low drag ordnance. Utilize WARP to generate weaponeering data. Review 1 RVL and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AS-1408.

Ordnance. 6 Mk-76.

Range Requirement. RKD RNG.

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

Goal. Introduce GAU-12 employment and 10-degree deliveries with high drag ordnance.

Requirement. Perform 2 20-degree GAU-12 deliveries. Utilize the safe escape table and maximum fragmentation envelope chart to ensure safe releases. Perform 2 10-degree deliveries with high drag ordnance. Utilize WARP to generate weaponeering data. Review 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SAS-1405, AS-1409.

Ordnance. 300 rounds 25mm TP, 2 BDU-45 HD, 20 Flares.

Range Requirement. STRAFE, HVY INERT, WISS, EXP.

13. Low Altitude Tactics (LAT)

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

b. General

(1) A FRS Low Altitude Tactics Instructor (FRSLATI) shall instruct all events.

(2) 2D MAW or 3D MAW LAT approved course shall be used.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.3-AV8B, Chapter 4, LAT.

(b) NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Chapter 4, LAT Rules of Conduct.

(2) Lectures. ALAT-0128, MAWTS-1 LAT ASP I-IV.

(3) Exams. ALAT-0129, LAT Stage exam.

SLAT-1420      1.0      \*      RNAWST    S

Goal. Introduce basic LAT procedures and rules of conduct.

Requirement. Perform RADALT checks, Mission Cross-Check Time (MCT), level high G turns, 50-percent rule, dive recovery rules, small descent rule, step down recovery, terminate, knock-it-off, and climb-to-cope. 10-degree rule ridgeline crossing and unloaded rolls. Review G-awareness maneuver, FENCE checks, 1 CL, and 1 STOL flap VNSL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. TACFORM-1324.

SLAT-1421      1.0      \*      RNAWST    S

Goal. Review basic and introduce advanced LAT procedures.

Requirement. Perform Straight Oblique Jink (SOJ), Vertical Jink (VJ), Turning Oblique Jink (TOJ), Reverse Oblique Jink (ROJ), 10-degree rule, and unloaded rolls. Review G-awareness maneuver, RADALT checks, FENCE checks, MCT, 50-percent rule, dive recovery rules, small descent rule, step down recovery, 1 auto flap VNSL, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SLAT-1420.

SLAT-1422      1.0      \*      RNAWST    S

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

Requirement.    Perform medium to low altitude deck transition and lean, beam, level-S, guns jink, and SAM weave at low altitude. Review ALSA communications, preemptive and reactive expendable gameplans, and ALE-39 and ALR-67 usage and employment.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    SLAT-1420, STCT-1351.

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

Goal.    Introduce basic and advanced LAT procedures.

Requirement.    Perform RADALT Alt checks, MCT, level high G turns, SOJ, TOJ, ROJ, VJ, 10-degree rule, 50-percent rule, KIO procedures, small descent rule, dive recovery rule, step down recovery, terminate procedures, and 1 RVL.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    SLAT-1421.

Range Requirement.    MOA, RSTD, LAT.

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

Goal.    Practice basic and advanced LAT procedures.

Requirement.    Perform RADALT Alt checks, MCT, level high G turns, SOJ, TOJ, ROJ, VJ, 10-degree rule, 50-percent rule, KIO procedures, small descent rule, dive recovery rule, step down recovery, terminate procedures, and 1 RVL.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    LAT-1423.

Range Requirement.    MOA, RSTD, LAT.

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

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

Requirement.    As a chased aircraft, perform ALSA communications and lean, beam, level-S, guns jink, SAM weave, and E-pole tactics at low altitude for range-known threats. Perform medium to low deck transition. Utilize decision matrix for jettison criteria. Perform preemptive and reactive



expendable gameplans. Review ALE-39 and ALR-67 setup and employment. Review 1 RVL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. LAT-1424, TCT-1352.

Range Requirement. LAT, TACTS, Hi Fi EW.

External Syllabus Support. TACTS/EW debrief facility.

14. Target Area Tactics (MECH)

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

b. General

(1) 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.

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

c. Ground/Academic Training

(1) Readings

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

(b) Air NTTP 3-22.3-AV8B:

1 Chapter 6, A/S Fundamentals

2 Chapter 7, A/S Employment

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

(2) Lectures

(a) AMECH-0130, MECH Stage Brief

(b) Receive the following AV-8B courseware lectures:

1 AMECH-0131, Target Acquisition/Detection/ID

2 AMECH-0132, Attack Profiles

3 AMECH-0133, Laser-Guided Bombs and Laser-Guided Training

Rounds.

4 AMECH-0134, Standard Target Area Tactics

5 AMECH-0135, Air-to-Surface (A/S) Planning & Timeline

Management.

6 AMECH-0136, Reactive Weaponing

7 AMECH-0137, JMEM / JAWS

8 AMECH-0138, AGM-65E

(3) Chalk Talks/Practical Application

(a) AMECH-0139, Transition Profiles Planning Lab

(b) AMECH-0140, JDAM UPC

(4) Exams. AMECH-0141, Target Area Tactics Ground School exam

MMECH-1430      1.0      \*      MTT

Goal. Introduce PGM basic functionality and employment.

Requirement. Introduce JDAM and LGB symbology and employment profile execution.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Ground/academic training complete. AS-1409, AMECH-0141.

Ordinance. 2 GBU-12, 2 GBU-38

SMECH-1431      1.0      \*      R RNAWST S

Goal. Introduce transition profiles, heavyweight aircraft handling, and reactive weaponing.

Requirement. Perform 3 30-degree or 45-degree deliveries and 2 PGM deliveries: 1 level entry to a 45- or 30-degree dive delivery, 1 ramp entry to level delivery, and 1 ramp entry to a 45 or 30-degree dive delivery. Utilize WARP to generate weaponing data including reactive weaponing.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete MECH stage ground/academic training, AS-1430.

Ordinance. 6 Mk-82 LD, 2 GBU-12.

SMECH-1432      1.0      \*      R RNAWST S

Goal. Introduce low altitude transition profiles.

Requirement. Perform 5 transition profile attacks: 1 low altitude pop-up to 10-degree delivery, 1 Crank Self LGB, 1 LMAV ramp profile, 1 loft delivery profile, and 1 Direct Self Absolute GBU-38. Review WARP, reactive weaponing, 1 STOL flap FNSL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SMECH-1431, SLAT-1421.

Ordnance. 1 Mk-82, 1 AGM-65E, 1 GBU-12, 1 GBU-38.

MECH-1433      1.0      \*      2 AV-8B    A    D

Goal. Introduce transition profiles.

Requirement. Perform 2 30-degree deliveries: 1 level entry to a 30-degree dive delivery and 1 ramp entry to a 30-degree dive delivery. Perform 1 level auto delivery and 1 captive LMAV profile. Review WARP, reactive weaponeering, 1 RVL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SMECH-1431.

Ordnance. 3 Mk-82 LD, Captive LMAV or 2 Mk-82 LD, Captive LMAV or GBU-38, 10 Flares.

Range Requirement. HE, JDAM, LSR.

External Syllabus Support. Ground-based laser or Litening Pod-equipped lead aircraft.

MECH-1434      1.0      \*      R 1 TAV-8B    A    D

Goal. Introduce low altitude transition profiles and PGM employment.

Requirement. Perform 4 transition profile attacks: 2 low altitude pop attacks to 10-degree delivery, 1 Crank LGB profile, and 1 Direct Self Absolute GBU-38. Review WARP, 1 STOL flap FNSL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SMECH-1432, LAT-1424.

Ordnance. 6 Mk-76, LGTR.

Range Requirement. TGT, WISS, LSR.

External Syllabus Support. Ground-based laser or Litening Pod-equipped lead aircraft.

MECH-1435      1.0      \*      2 TAV-8B    A    D

Goal. Introduce section target area tactics at medium altitude.

Requirement. Perform 5 attacks to 30-degree or 45-degree dive deliveries: 2 same side attacks, 2 swept attacks, and 1 split attack. Review WARP, 1 STOL flap FNSL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SMECH-1431.

Ordnance. 6 Mk-76, 10 Flares.

Range Requirement. TGT, WISS, EXP.

MECH-1436      1.0      \*      R    2 AV-8B    A    D

Goal. Review section target area tactics at medium altitude.

Requirement. Review 5 attacks to 30-degree or 45-degree dive deliveries: 2 same side attacks, 2 swept attacks, and 1 split attack. Review WARP, 1 CL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. MECH-1435.

Ordnance. 6 Mk-76, 10 Flares.

Range Requirement. TGT, WISS, EXP.

MECH-1437      1.0      \*      2 AV-8B    A    D

Goal. Introduce section target area tactics at low altitude.

Requirement. Perform 1 chased single ship low pop to 10-degree delivery. Perform 2 same side attack and 2 split attacks to 10-degree deliveries. Review WARP, 1 RVL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. MECH-1434, LAT-1425.

Ordnance. 6 Mk-76, 10 Flares.

Range Requirement. TGT, WISS, EXP.

# 15. Close Air Support (CAS)

- a. Purpose. Introduce CAS at medium and low altitude.
- b. General

(1) 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.

(2) A FRS Close Air Support Instructor (CASI) is required for all events.

c. Ground/Academic Training

(1) Readings

(a) Joint Publication 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support:

1 Executive Summary.

2 Chapter I, Introduction, Organization and Fundamentals

3 Chapter III, Planning and Requesting

4 Close Air Support Planning Considerations

5 Integrating Close Air Support with Surface Fire Support

6 Requesting Close Air Support

7 Chapter IV, Preparation

8 Chapter V, Execution

9 Appendix C, Sample Close Air Support Aircrew Mission

Planning Guide

10 Appendix D, Risk-Estimate Distances

(b) AV-8B NATIP (NTRP 3-22.4-AV8B), 2.11.3, The CAS Display.

(c) Air NTTP 3-22.3-AV8B, Chapter 9, Close Air Support.

(2) Lectures

(a) ACAS-0142, CAS Stage Brief

(b) Receive the following AV-8B courseware lectures:

1 ACAS-0143, OAS Overview

2 ACAS-0144, Close Air Support (CAS)

3 ACAS-0145, CAS Execution

(3) Chalk Talks/Practical Application. ACAS-0146, CAS Planning Lab

(4) Exams. ACAS-0147, CAS Ground School exam

MCAS-1440      1.0      \*      MTT

Goal. Introduce 9-line entry and ATHS setup.

Requirement. Perform 4 CAS Attacks. Perform 9-line entries to 30-degree target attacks.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. CAS Academics/ground school complete. MECH-1437, ACAS-0147.

Ordinance. 6 Mk-82 LD.

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SCAS-1441	1.0	*	R	RNAWST	S
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Goal. Introduce CAS at medium altitude.

Requirement. Perform CAS attacks at medium altitude utilizing Type 1 terminal attack control. Review the 9-line CAS briefing format and attack preparation checklist. Review WARP and reactive weaponeering.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. MCAS-1440.

Ordinance. 6 Mk-82 LD.

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SCAS-1442	1.0	*		RNAWST	S
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Goal. Perform CAS attacks at medium altitude. Type 2/3 control shall be in effect.

Requirement. Review 2 CAS attacks at medium altitude utilizing Type 2 and 3 control. Review the 9-line CAS briefing format, attack preparation checklist, WARP, PGM weaponeering, 1 RVL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SCAS-1441.

Ordinance. 2 GBU-12, 2 GBU-38.

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SCAS-1443	1.0	*		RNAWST	S
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Goal. Introduce CAS at low altitude.

Requirement. Perform CAS attacks at low altitude utilizing Type 1 control. Review the 9-line CAS briefing format, attack preparation checklist, WARP, and reactive weaponeering.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SCAS-1442.

Ordinance. 6 Mk-82 HD.

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

Goal.    Introduce CAS at medium altitude.

Requirement.    Perform 2 CAS attacks at medium altitude utilizing Type 1 terminal attack control. Review the 9-line CAS briefing format and attack preparation checklist. Review WARP, reactive weaponeering, 1 STOL flap FNSL, and 1 decel-VL.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    SCAS-1441.

Ordinance.    6 Mk-76.

Range Requirement.    TGT.

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

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

Goal.    Introduce Type 2 control.

Requirement.    4 CAS attacks utilizing Type 2 control and simulated PGM profiles.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    SCAS-1442.

Ordinance.    1 sim GBU-12, 2 sim GBU-38.

Range Requirement.    TGT.

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

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

Goal.    Review CAS at medium altitude.

Requirement.    Review 2 CAS attacks at medium altitude utilizing type 1 control. Review the 9-line CAS briefing format, attack preparation checklist, WARP, reactive weaponeering, 1 RVL, and 1 decel-VL.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    CAS-1445.

Ordinance.    6 Mk-76, 20 Flares.

Range Requirement.    TGT, EXP.

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

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

Goal. Introduce CAS at low altitude.

Requirement. Review 2 CAS attacks at low altitude under Type 1 terminal attack control. Review the 9-line CAS briefing format, attack preparation checklist, WARP, reactive weaponing, 1 STOL flap FNSL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SCAS-1443, CAS-1446.

Ordinance. 6 Mk-76, 20 Flares.

Range Requirement. TGT, EXP.

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

#### 16. Aerial Interdiction (AI)

a. Purpose. Introduce systems management during low altitude ingress to target attack.

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

##### c. Ground/Academic Training

(1) Readings. Air NTTP 3-22.1-AV8B, Chapter 4, Air Interdiction.

(2) Chalk Talks/Practical Application. AAI-0148, AI Planning Lab.

SAI-1450      1.0      \*      RNAWST\_\_S

Goal. Introduce low altitude aerial interdiction.

Requirement. Perform low altitude ingress to target attack. Preflight preparation should include JMEMS-derived weaponing, threat reaction gameplan, TOT, and accurate JMPS-derived fuel planning.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. CAS-1447, AAI-0148. AI ground/academics training complete.

AI-1451      1.0      \*      2 AV-8B   A   D

Goal. Review low altitude aerial interdiction.



Requirement. Perform low altitude ingress to target attack. Preflight preparation should include JMEMS-derived weaponeering, threat reaction gameplan, TOT, and accurate JMPS-derived fuel planning.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SAI-1450.

Ordnance. 2 BDU-45, 10 Flares, 20 Chaff.

Range Requirement. TGT, RSTD, MTR, EXP.

#### 17. V/STOL Consolidation (VCON)

a. 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.

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

VCON-1220	1.3	*	1 AV-8B	A	D
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Goal. V/STOL consolidation.

Requirement. Review STOL flap STO, TACAN approach, 1 STOL flap FNSL, 1 CL, 1 auto flap VNSL, 1 STOL flap VNSL, roll-and-go landing, 1 RVL, VTO-accel, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1129.

SVCON-1221	1.0	*	RNAWST	S
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Goal. Review emergency procedures.

Requirement. Perform compound emergencies.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1129.

VCON-1222	1.3	*	1 AV-8B	A	D
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Goal. V/STOL consolidation.

Requirement. Review STOL flap STO, TACAN approach, 1 STOL flap FNSL, 1 CL, 1 auto flap VNSL, 1 STOL flap VNSL, 1 roll-and-go landing, 1 RVL, VTO-accel, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1129, VCON-1220.

VCON-1223      1.3      \*      1 AV-8B   A   D

Goal. V/STOL consolidation.

Requirement. Review STOL flap STO, PAR, VFR overhead, 1 STOL flap FNSL, 1 CL, 1 auto flap VNSL, 1 STOL flap VNSL, roll-and-go landing, 1 RVL, VTO-accel, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. FAM-1129, VCON-1222.

18. Air-to-Air (AA)

a. Purpose. Introduce Basic Fighter Maneuvers (BFM) and air-to-air weapons employment.

b. General

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

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

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

c. Ground/Academic Training

(1) Readings

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

1 Chapter 4, Operating Limitations.

2 Chapter 11, Flight Characteristics.

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

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

2 Chapter 7, Aircraft Performance Data.

3 Appendix A, Aircraft and Stores Limitations.

(c) Air NTTP 3-22.1-AV8B:

1 Chapter 6, A/A Fundamentals.

2 Chapter 7, A/A Mission Planning.

3 Chapter 8, A/A Employment.

(d) Air NTTP 3-22.3-AV8B, Appendix A, BFM/ACM Training.

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

(f) NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Chapter 4, Aviation Training Rules of Conduct.

(2) Lectures

(a) AAA-0149, AA Stage Brief

(b) Receive the following AV-8B courseware lectures:

1 AAA-0150, Air Combat Maneuvering (ACM) Safety and Air-to-Air Systems.

2 AAA-0151, Fighter Performance Comparisons.

3 AAA-0152, AIM-9 Sidewinder, Part I.

4 AAA-0153, AIM-9 Sidewinder, Part II.

5 AAA-0154, Combat Gunnery.

6 AAA-0155, Shot Validation.

7 AAA-0156, Combat Thrust Vector Control (CTVC).

8 AAA-0157, Threat Aircraft.

9 AAA-0158, 1V1 Basic Fighter Maneuvers (BFM).

(3) Exams. AAA-0159, AA Ground School exam.

MAA-1500      0.8      \*      MTT

Goal. Introduce A/A weapons programming and basic functions.

Requirement. Introduce AIM-9 weapons setup, HOTAS functionality, and HUD symbology and employment.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete AA stage ground/academic training, TACFORM-1324.

SAA-1501      1.0      \*      RNAWST    S

Goal. Introduce aircraft Thrust Vector Control (TVC) and RADAR ACM modes. Introduce air-to-air weapons employment and IR Missile Defense (IRMD). Practice high and slow speed departure recovery.

Requirement. Perform TVC straight and level, TVC-assisted turn, TVC slow speed/high AOA drills, TVC Hover Stop Push Over

(HSPO), flop, Hover Stop Wing Over (HSWO), TVC spiral drill, AIM-9 boresight, and heat-to-guns drill. Review high and slow speed departure recovery.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. MAA-1500.

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AA-1502	1.0	*	2 AV-8B	A	D
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Goal. Introduce BFM procedures and drills, aircraft handling, and TVC.

Requirement. Perform AIM-9 preflight, range estimation drill, TVC straight and level, TVC-assisted turns, TVC-assisted slow speed/high AOA drills, deck transition (positional, energy rate), separation/bug drills, redefine rate fight drills, TVC HSPO, and HSWO. Review G-awareness maneuver, break turn, and 1 RVL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SAA-1501.

Ordinance. CATM-9.

Range Requirement. AA.

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AA-1503	1.0	*	2 AV-8B	A	D
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Goal. Introduce 1V1 offensive BFM.

Requirement. Introduce heat-to-guns drill, guns weave, and flat scissors drill. Perform 2 3000-foot and 2 6000-foot perch offensive engagements. Include instruction of turn circle entry, attack window timing, offensive break turn, control zone entry/management, misaligned turn circle maneuvering, offensive rate fight, ditch counter, 1 RVL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AA-1502.

Ordinance. CATM-9, TACTS Pod, 20 Flares.

Range Requirement. AA, TACTS, EXP.

External Syllabus Support. TACTS debrief facility.

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AA-1504	1.0	*	2 AV-8B	A	D
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Goal. Review 1V1 offensive BFM.

Requirement. Introduce rolling scissors drill. Review 2 3000-foot and 2 6000-foot perch offensive engagements. Include instruction of turn circle entry, attack window timing, offensive break turn, control zone entry/management, misaligned turn circle maneuvering, offensive rate fight, and ditch counter. Review snapshot guns weave drills, 1 STOL flap VNSL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AA-1503.

Ordinance. CATM-9, TACTS Pod, 20 Flares.

Range Requirement. AA, TACTS, EXP.

External Syllabus Support. TACTS debrief facility.

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AA-1505	1.0	*	2	AV-8B	A	D
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Goal. Introduce 1V1 defensive BFM.

Requirement. Perform 2 3000-foot and 2 6000-foot perch defensive engagements. Include instruction of defensive break turn, preemptive and reactive expendable employment, maintaining sight techniques, executing lost sight game plan, sensor nose recognition, ditch maneuver, overshoot recognition and counters, defensive rate fighting, and guns defense. Review rolling scissors, heat-to-guns drills, 1 RVL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AA-1504.

Ordinance. CATM-9, TACTS Pod, 20 Flares.

Range Requirement. AA, TACTS, EXP.

External Syllabus Support. TACTS debrief facility.

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AA-1506	1.0	*	2	AV-8B	A	D
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Goal. Review 1V1 defensive BFM.

Requirement. Review 3000-foot and 2 6000-foot perch defensive engagements. Include instruction of defensive break turn, preemptive and reactive expendable employment, maintaining sight techniques, executing lost sight game plan, sensor nose recognition, ditch maneuver, overshoot recognition and counters, defensive rate fighting, and guns defense. Review heat-to-guns drill, 1 RVL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AA-1505.

Ordinance. CATM-9, TACTS Pod, 20 Flares.

Range Requirement. AA, TACTS, EXP.

External Syllabus Support. TACTS debrief facility.

AA-1507	1.0	*	2 AV-8B	A	D
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Goal. Introduce 1V1 neutral BFM.

Requirement. Perform 3 neutral engagements from a butterfly setup. Introduce merge control and 2-circle out-of-plane, 1-circle in-plane, and 1-circle out-of-plane flows. Review 1 3000-foot offensive and 1 6000-foot defensive perches, snapshot guns weave drill, 1 STOL flap FNSL, and 1 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. AA-1506.

Ordinance. CATM-9, TACTS Pod, 20 Flares.

Range Requirement. AA, TACTS, EXP.

External Syllabus Support. TACTS debrief facility.

#### 19. Night Systems (NS)

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

##### b. General

(1) PUI shall have 50 AV-8B or TAV-8B flight hours prior to commencing this stage.

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

##### c. Ground/Academic Training

###### (1) Readings

(a) AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Chapter 29, Forward Looking Infrared Navigation System.

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

1 Section 2.6, Night Vision Goggles.

2 Section 2.7, NAVFLIR.

(c) Air NTTP 3-22.3-AV8B, Chapter 5, Night Systems.

(2) Lectures

(a) ANS-0160, NS Stage Brief.

(b) Receive the following AV-8B courseware lectures:

1 ANS-0161, Night Flying Environment and Physiology.

2 ANS-0162, Infrared Theory.

3 ANS-0163, Navigation FLIR.

4 ANS-0164, Night Flying Procedures.

5 ANS-0165, Aided Night Flying Procedures.

(3) Chalk Talks/Practical Application. ANS-0166, NITE Lab.

(4) Exams. ANS-0167, NS Ground School exam.

SNS-1600            1.0            \*            RNAWST   S   N\*, NS

Goal. Introduce night V/STOL procedures and NVD usage.

Requirement. Perform unaided STOL flap STO, 2 STOL flap FNSL, 2 STOL flap VNSL, 2 RVL, VTO-accel, 1 decel-VL, 1 press-up, and touch-and-go and roll-and-go landings. Perform don/doff procedures airborne and conduct NVD environmental assessment.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. Complete NS stage ground/academic training, TACFORM-1324.

SNS-1601            1.0            \*            RNAWST   S   NS

Goal. Introduce night V/STOL procedures with NVDs.

Requirement. Perform night flight using NVDs. Perform ground don/doff procedures, familiarization, and aided STOL flap STO, 3 STOL flap FNSL, 3 RVL, , 2 CL, 2 decel-VL, and press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SNS-1600.

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

Goal. Introduce night V/STOL procedures and NVD usage.

Requirement. Perform unaided STOL flap STO. Perform don/doff procedures airborne and conduct NVD environmental assessment. Perform TACAN approach, 2 STOL flap FNSL, 2 STOL flap VNSL, 2 RVL, touch-and-go and roll-and-go landings, VTO-accel, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. SNS-1601.

Range Requirement. MOA, RSTD.

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NS-1603	1.3	*	2 TAV-8B	A	N*, NS
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Goal. Introduce night administrative formation.

Requirement. Perform unaided stream STO, parade formation, cross-under, lead change, running rendezvous, and break-up and rendezvous. Perform aided deployed echelon formation. Perform PAR as a wingman. Review unaided STOL flap STO, 2 STOL flap FNSL, 2 RVL, and 2 decel-VL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. NS-1602.

Range Requirement. MOA, RSTD.

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NS-1604	1.3	*	1 TAV-8B	A	NS
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Goal. Night system V/STOL consolidation.

Requirement. Perform night flight using NVDs. Perform familiarization, TACAN approach, aided STOL flap STO, 2 STOL flap FNSL, 2 STOL flap VNSL, 2 RVL, and 2 press-ups.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. NS-1603.

Range Requirement. MOA, RSTD.

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NS-1605	1.3	*	2 TAV-8B	A	NS
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Goal. Introduce NS formation.

Requirement. Perform night formation flight using NVDs. Perform ground don/doff procedures. Perform aided stream STO. Demonstrate lighting packages and perform formations including parade, deployed echelon, running rendezvous, and break-up and rendezvous. Perform PAR as a wingman to low approach. Review aided V/STOL (if airfield conditions and local regulations permit) to include STOL flap STO, 2 STOL flap FNSL, and 2 RVL.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. NS-1604.

Range Requirement. MOA, RSTD.



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

Goal. Review night unaided procedures, takeoffs, and landings. Practice night unaided procedures and V/STOL.

Requirement. Perform night unaided STOL flap STO, VTO-accel, 2 STOL flap FNSL, 2 STOL flap VNSL, 1 RVL, touch-and-go, roll-and-go, 1 decel-VL, and 1 press-up.

Performance Standard. PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite. NS-1603.

20. NATOPS/Core Skill Introduction Evaluation (NTPS)

a. Purpose. To evaluate the pilot's knowledge of aircraft systems, performance limitations, and both normal and emergency procedures.

b. General

(1) NATOPS evaluators/instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

(2) The NATOPS evaluator shall utilize the NATOPS model manager-generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the aviator completed the sortie (see Appendix A). A letter designating the pilot as NATOPS qualified shall be placed in the aircrew's NATOPS jacket upon successful completion.

(3) NATOPS evaluatees shall complete and have graded open book, closed book, and oral examinations prior to the commencement of the actual NATOPS evaluation event.

(4) PUI shall complete all Core Skill Introduction stages prior to NATOPS/Core Skill Introduction Evaluation.

(5) A designated AV-8B NATOPS check pilot will observe and certify that the PUI is NATOPS qualified per AV-8B NATOPS Manual, Chapter 10.

c. Ground/Academic Training

(1) Readings. Review AV-8B NATOPS Manual (A1-AV8BB-NFM-000).

(2) Exams

(a) ANTPS-6000, Open Book AV-8B NATOPS exam.

(b) ANTPS-6001, Closed Book AV-8B NATOPS exam.

(c) ANTPS-6002, Ground Evaluation IAW AV-8B NATOPS Manual.

ANTPS-6000            1.5            365            Open Book NATOPS Evaluation

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 aviator'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      Closed Book NATOPS Evaluation

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 aviator'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      Oral NATOPS Evaluation

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 book examination.

REQ-6101      1.5      365      E R, MR, SS RNAWST S/A

Goal. Conduct an objective evaluation of the aviator'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 in accordance with POI listed in Appendix A.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, Air NTTP 3-22.1-AV8B, Air NTTP 3-22.3-AV8B, and applicable SOPs.

Prerequisite. NATOPS ground/academic training (ANTPS 6000-6003), AA-1507, NS-1606.

REQ-6103      1.0      365      E R, MR, SS Tracking S/A (NS)

Goal. Complete CRM training.

Requirement. Satisfactory completion of CRM training.

Performance Standard. Per syllabus description.

## 21. Transition Ground School (TRAN)

a. Purpose. Introduce TPOD and RADAR usage and employment in A/A and A/S to newly designated 7509.

b. General

(1) ACTI shall be required for all A/A events.

(2) WTO shall be required for all A/S events.

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

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

1 Section 1.1, Electromagnetic Theory.

2 Section 1.2, RADAR Theory.

3 Section 2.1.1, RADAR Set Component Description.

4 Section 2.1.3, Air-to-Air RADAR Modes and Operation.

5 Section 2.1.4, RADAR Preflight Management.

6 Section 5.6, RADAR Attack Considerations.

(c) Air NTTP 3-22.3-AV8B, Chapter 3, Cap Management section.

(d) Air NTTP 3-22.1-AV8B:

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

2 Chapter 8, Air-to-Air Employment

(e) ALSA Communication Brevity.

(3) Lectures. Receive the following AV-8B courseware lectures:

(a) ATRAN-0171, RADAR Theory.

(b) ATRAN-0172, Air-to-Air RADAR Considerations.

(c) ATRAN-0173, Air-to-Air RADAR Controls and Displays.

(d) ATRAN-0174, Basic Intercept Geometry, Part 1.

(e) ATRAN-0175, Basic Intercept Geometry, Part 2.

(f) ATRAN-0176, Air-to-Air Search Techniques.

(g) ATRAN-0177, Introduction to Air Intercept Control.

(h) APG-65 Classified Annex [SECRET]:

1 ATRAN-0178, Litening II Employment.

2 ATRAN-0179, Introduction to the Litening II Targeting Pod.

3 ATRAN-0180, Litening II Targeting Pod (TPOD) Capabilities.

MTRAN-1900      1.0      \*      MTT

Goal.    Introduce A/S RADAR controls and displays.

Requirement.    Utilize A/S RADAR controls and displays.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    Complete Transition stage ground/academic training, SNTPS-6101

MTRAN-1901      1.0      \*      MTT

Goal.    Introduce A/S RADAR modes.

Requirement.    Utilize A/S RADAR modes to navigate and track surface targets.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    MTRAN-1900.

Ordinance.    6 Mk-76.

MTRAN-1902      1.0      \*      MTT

Goal.    Introduce TPOD controls and displays.

Requirement.    Utilize TPOD controls and displays.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    MTRAN-1901.

Ordinance.    1 TPOD.

MTRAN-1903      1.0      \*      MTT

Goal.    Introduce AGR mode, TPOD HAT, and off target RADAR HOTAS mechanics for dive deliveries.

Requirement.    Perform 3 weapons deliveries utilizing AGR as the HAT source. Perform 3 weapons deliveries utilizing the TPOD for LHAT.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    MTRAN-1902.

Ordinance.    12 Mk-76.

MTRAN-1904      1.0      \*      MTT

Goal.    Introduce TPOD buddy and self-lase attacks.    Introduce off target RADAR HOTAS mechanics for PGM deliveries.

Requirement.    Perform 2 self attacks, 1 buddy attack, and 1 buddy attack against a podium target.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    MTRAN-1903.

Ordnance.    4 GBU-12, TPOD.

MTRAN-1905      1.0      \*      MTT

Goal.    Introduce A/A RADAR controls and displays.    Perform RADAR trail mechanics in STT and RWS.

Requirement.    Utilize A/A RADAR controls and displays.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    MTRAN-1904.

MTRAN-1906      1.0      \*      MTT

Goal.    Introduce A/A RADAR intercept.

Requirement.    Perform 6 collision course intercepts on a non-maneuvering target.    Perform a minimum of 2 tanker rendezvous.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    MTRAN-1905.

MTRAN-1907      1.0      \*      MTT

Goal.    Introduce A/A RADAR intercept.

Requirement.    Perform 4 break collision range (BCR) and 4 forward hemisphere engagements on a non-maneuvering target.    Review 1 collision course intercept.    Review a minimum of 1 tanker rendezvous.

Performance Standard.    PUI shall execute all procedures and maneuvers IAW the VMAT-203 FSG.

Prerequisite.    MTRAN-1906.

210. CORE SKILL PHASE

1. Core Skill Training

a. 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:

- (1) System management and sensor employment.
- (2) Weapon employment.
- (3) Threat countertactics.
- (4) Section and division tactical fundamentals.
- (5) Operating under day and night conditions.

b. General

- (1) Initial POI events are tailored to a wingman's role.
- (2) Passing grade on written examinations is 80 percent.

2. Familiarization (FAM)

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

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

c. Ground/Academic Training

(1) Readings

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

- 1 Review Chapter 2, Systems.
- 2 Review Chapter 4, Operating Limitations.
- 3 Review Chapter 7, Shore-Based Procedures.
- 4 Review Chapter 12, General Emergencies.
- 5 Review Chapter 13, Ground Emergencies.
- 6 Review Chapter 14, Takeoff Emergencies.
- 7 Review Chapter 15, In-Flight Emergencies.
- 8 Review Chapter 16, Landing Emergencies.
- 9 Review Chapter 17, Emergency Egress.
- 10 Review Chapter 18, Immediate Action Items.

(b) Air NTTP 3-22.3-AV8B:

Standards. 1 Review Chapter 2, Mission Planning, Briefing, and Debriefing

2 Review Chapter 3, Tactical Administration.  
(c) Review Wing and MAG Standard Operating Procedures.

(d) Review applicable range regulations and course rules.

SFAM-2100 1.0 \* RNAWST S

Goal. Review normal and instrument procedures.

Requirement. Review normal procedures from start to shutdown. Practice instrument procedures to include departure, enroute, and terminal approach procedures. Introduce cockpit HOTAS, and displays for the RADAR aircraft.

Performance Standard. Demonstrate familiarity with aircraft system setup, HOTAS and MPCD menus associated with the II+. Demonstrate proficient and expeditious conduct of preflight, start, taxi, takeoff, enroute, descent, and landing checklists.

Prerequisite. Complete ground/academic training.

SFAM-2101 1.0 30 R RNAWST S (NS)

Goal. Review emergency procedures.

Requirement. Review emergency procedures and checklists. Review takeoffs and landings with simulated emergencies during shore and shipboard operations (basing scenario as required by operational requirements). Review CRM associated with these emergencies.

Performance Standard. Execute all normal and emergency procedures IAW NATOPS.

Prerequisite. SFAM-2100, (NS-2605 if aided).

FAM-2102 1.3 60 R 1+ AV-8B A (NS)

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

Requirement. Review normal and emergency procedures and checklists, instrument flight procedures, and/or navigation procedures.

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

Prerequisite. SFAM-2101, (NS-2605 if aided).

3. Threat Countertactics (TCT)

a. Purpose. Review medium altitude threat countertactics.

b. General

(1) A WTO (preferably a WTI) shall instruct initial training.

(2) All flights should be flown on an EW range with TACTS coverage.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.1-AV8B:

1 Chapter 3, Threat Countertactics.

2 Appendix A, E-Pole Determination.

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

1 ALE-39/47.

2 ALR-67.

3 ALQ-164.

(c) CY-20XX User's Manual.

(d) ALSA Communication Brevity.

(2) Lectures

(a) ATCT-2000, Expendable Decoys.

(b) ATCT-2001, ALE-39 Countermeasures Dispensing System.

(c) ATCT-2002, ALR-67 RADAR Warning Receiver.

(d) ATCT-2003, ALQ-164 Defensive Electronic Countermeasures.

(e) ATCT-2004, Threat Countertactics (MAWTS-1 Common Courseware).

(f) ATCT-2005, Non-RF Surface-to-Air Missiles (MAWTS-1 Generic Courseware).

(g) ATCT-2006, RF Surface-to-Air Missiles (MAWTS-1 Generic Courseware).

(h) ATCT-2007, Anti-Aircraft Artillery (AAA) Systems.

(i) ATCT-2008, Threat Briefing (Semi-Active RF Threats).

STCT-2200      1.0      \*      R      RNAWST      S

Goal. Review Surface-to-Air threat countertactics.



Requirement. Perform preemptive and reactive threat countertactics: lean, notch, level-S, SAM weave, and deck transition against range-known and range-unknown RF SAM threats.

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

Prerequisite. Complete ground/academic training, FAM-2102.

Ordinance. TPOD, 3 Mk-82 LD, ALQ-164, Expendables.

TCT-2201      1.3      180      R   2 AV-8B   A   (NS)

Goal. Review surface-to-air threat countertactics.

Requirement. Perform preemptive and reactive threat countertactics: lean, notch, level-S, SAM weave, and deck transition against range-known and range-unknown RF SAM threats.

Performance Standard. Execute maneuvers IAW Air NTTP. Demonstrate proficient setup and use of ALQ, ALE, and ALR. Execute briefed jettison gameplan. Communication IAW ALSA Communication Brevity and Air NTTP.

Prerequisite. STCT-2200, (NS-2605 if aided).

Ordinance. 1 TPOD, 1 ALQ-164, 1 TACTS Pod, 60 Chaff, 120 Flares

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. TACTS debrief facility.

#### 4. Air-to-Air Refueling (AAR)

a. Purpose. Complete night AAR qualification.

b. General

(1) Currency requirements IAW ATP-56(B).

(2) Initial AAR qualifications shall be conducted IAW ATP-56(B).

(3) AAR training may be executed in conjunction with ferry missions or as part of a tactical sortie, provided all prerequisites are met.

(4) A section lead shall instruct all initial training events.

(5) This stage assumes completion of the day AAR qualification in the FRS within the previous 365 days. If that refly window is exceeded or if that stage was deferred, the fleet will be responsible for completing the 1000 level day AAR sortie requirements.

c. Ground/Academic Training

(1) Readings

(a) AV-8B NATOPS Manual (A1-AV8BB-NFM-000), Review Chapter 9, Paragraph 9.2, Air Refueling.

(b) Review ATP-56(B), Parts I and II.

(2) Lectures

(a) AAAR-2009, AV-8B Aerial Refueling Lecture

(b) Review AV-8B courseware

AAR-2300            1.3            365            R   1+ AV-8B   A   N/(NS)

Goal. Introduce night AAR.

Requirement. Perform all AAR procedures at night (aided and/or unaided). Perform 1 tanker rendezvous and establish observation and astern positions. Execute 4 successful engagements on refueling drogue with 1 engagement under simulated NORDO conditions with an emergency breakaway. Perform tanker departure. This event will be flown in section or division for an initial or refresher qualification.

Performance Standard. Execute all procedures IAW ATP-56(B) and AV-8B NATOPS.

Prerequisite. Complete ground/academic training, AAR-1340, FAM-2102, (NS-2605 if aided).

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Compatible tanker IAW ATP-56(B).

5. Low Altitude Tactics (LAT)

a. Purpose. Complete LAT qualification.

b. General

(1) All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Chapter 3, LAT Rules of Conduct.

(2) All mission planning and flight briefs shall include BAM/BASH data and current route obstruction considerations (ECHUM).

(3) Completion of this stage constitutes LAT qualification.

(4) A LATI shall instruct all initial training events.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.3-AV8B:

1 Chapter 2, Mission Planning, Briefing, and Debriefing  
Standards.

2 Chapter 3, Tactical Administration.

3 Chapter 4, Low Altitude Tactics.

(b) Air NTTP 3-22.1-AV8B, Chapter 3, Threat Countertactics.

(c) NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Review Chapter 3, LAT Training Rules of Conduct.

(2) Lectures. Receive the following MAWTS-1 courseware lectures presented by a LATI:

(a) ALAT-2010, TACAIR LAT, Part 1.

(b) ALAT-2011, TACAIR LAT, Part 2.

(c) ALAT-2012, TACAIR LAT, Part 3.

(d) ALAT-2013, TACAIR LAT, Part 4.

(3) Chalk Talks/Practical Application. ALAT-2014, Surface-to-air threat countertactic gameplans against range-known and range-unknown threats with a LATI, preferably a WTI.

(4) Exams. ALAT-2015, LAT stage exam.  
SLAT-2400      1.0      \*      RNAWST      S

Goal. Review basic and advanced LAT procedures.

Requirement. Perform basic and advanced LAT procedures on a LAT circuit in a mountainous database, emphasizing TCT and MCT. Practice straight and level, turns, ridgeline crossings, terrain masking, and climb-to-cope. Practice 1 transition to LAT, vertical jinks, SOJ, TOJ, and ROJ. Emphasize adherence to the 10-degree rule, 50-percent rule, and dive recovery rules. Practice efficient scan techniques that enable aerodynamic, vector, and altitude control.

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

Prerequisite. Complete ground/academic training, SFAM-2101.

SLAT-2401 1.0 180 R RNAWST S

Goal. Review threat countertactics at low altitude.

Requirement. Plan a high-drag GP attack profile with appropriate weaponeering. Review guns jink, level-S, break turns, SAM weave (initiated from medium and low altitude), and MAC. Emphasize threat recognition, identification and assessment, decision points based on threat matrix, ALSA Communication Brevity, and reactions versus threat engagement timelines. Threat database shall include RF SAMS and RF AAA.

Performance Standard. Maintain a minimum of 300-foot clearance (100 feet during MAC) of all obstructions. Execute all surface-to-air threat countertactics procedures IAW Air NTTP. Adhere to LAT ROC. Communications IAW ALSA Communication Brevity. Proficient cockpit management including TCT and MCT.

Prerequisite. STCT-2200, SLAT-2400.

Ordnance. 4 Mk-83 HD, 300 x 25mm, ALQ-164, Expendables.

LAT-2402 1.3 \* 2 AV-8B A D

Goal. Introduce low altitude section target area tactics at comfort level.

Requirement. Complete 3 low altitude section attacks.

Performance Standard. Maintain a minimum 300-foot clearance of all obstructions. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Execute briefed air-to-surface timeline. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Correct ALSA Communication Brevity. Proficient cockpit management including TCT and MCT.

Prerequisite. FAM-2102, LAT-2401.

Ordnance. 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert/4 CBU-99, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.

LAT-2403 1.3 365 R 2 AV-8B A D

Goal. Introduce low altitude threat countertactics in section at comfort level.

Requirement. Practice section threat countertactics at low altitude. Emphasize threat recognition, identification and assessment, decision points based on threat matrix, and reactions versus threat engagement timelines. Execute at least 1 target attack at comfort level.

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. Execute briefed air-to-surface timeline. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Proficient TCT and MCT.

Prerequisite. TCT-2201, LAT-2402.

Ordnance. 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert/4 CBU-99, 20 Chaff, 40 Flares

Range Requirement. Reference Range Support Matrix.

6. Air-to-Surface (AS)

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

b. General. A section lead (preferably a WTI or recent WTO) shall instruct all events.

c. Ground/Academic Training

(1) Readings

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

1 Review Chapter 4, External Stores.

2 Review Chapter 5, Air-to-Ground Weapon Delivery.

(b) AV-8B NATIP (NTRP 3-22.2-AV8B), Chapter 3, Precision-Guided Munitions.

(c) Air NTTP 3-22.3-AV8B

1 Review Chapter 6, Air-to-Surface Fundamentals.

2 Review Chapter 7, Air-to-Surface Employment.

(d) Air NTTP 3-22.1-AV8B, Review Chapter 2, Air-to-Surface Mission Planning.

(2) Lectures

(a) Review the following AV-8B courseware lectures:

1 AAS-2016, Height Above Target.

2 AAS-2017, GP Bombs.

3 AAS-2018, GP Bomb Fuzing.

4 AAS-2019, 25mm Gun.

- 5 AAS-2020, Rockets.
- 6 AAS-2021, Forward-Firing Ordnance and Weaponneering.
- 7 AAS-2022, Laser-Guided Bombs and Laser-Guided Training  
Rounds.
- 8 AAS-2023, Attack Profiles.
- 9 AAS-2024, Standard Target Area Tactics.
- 10 AAS-2025, Air-to-Surface (A/S) Planning & Timeline  
Management.
- (b) Receive the following AV-8B courseware lectures from a  
WTO/WTI:
- 1 AAS-2026, Cluster Weapons and Fuzing.
- 2 AAS-2027, Joint Direct Attack Munition.
- 3 AAS-2028, LASER-Guided Weapons.
- 4 AAS-2029, Division Target Area Tactics.
- 5 AAS-2030, Call for Fire (presented by FAC(A) or prior GFAC).
- (3) Chalk Talks/Practical Application. With a WTI/WTO:
- (a) AAS-2031, Wingman Contracts and Responsibilities.
- (b) AAS-2032, JMEMS Air-to-Surface Weaponneering System (JAWS) Lab  
including Paveway Mission Planning Tool and SLIC planning tool for safe  
escape.
- (c) AAS-2033, Sensor Footprint Lab.

SAS-2500	1.0	*	RNAWST	S
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Goal. Review AS sensors (TPOD and APG-65) and AS timelines.

Requirement. Complete required TPOD and APG-65 ground checks.  
Perform RADAR trail departure and shadow in STT , RWS, and  
complete air to surface and air to air TACADMIN (I.E. RCAL,  
LCAL). Review TPOD and RADAR AS modes and HOTAS. Review RADAR  
Expand Map techniques. Conduct multiple targeting runs using  
different sensors to create a system designation utilizing  
RADAR SEA track, Expand Map, GMTT, TPOD CCD/FLIR, and TPOD  
LST.

Performance Standard. Demonstrate proper TPOD and APG-65  
ground procedures. Complete air to surface and air to air  
TACADMIN (I.E. RBIT, LCAL). Demonstrate proper TPOD management  
and HOTAS. Demonstrate proper HOTAS for RADAR AS modes.  
Demonstrate knowledge of the source of the system designation.

Prerequisite. SLAT-2401.

Ordnance. TPOD.

SAS-2501      1.0      \*      R   RNAWST   S

Goal. Review computed deliveries from medium and low altitude.

Requirement. Conduct a minimum of 3 deliveries from various dive profiles on a scored range using TPOD and radar HAT. Profiles should include ramp down, pop-up, and level entry to dive (10-45 degrees). Review free-fall delivery procedures. Review expendable programming and issues related to ITERS.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, SLIC, and NATIP. Execute briefed air-to-surface timeline. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Correct ALSA Communication Brevity.

Prerequisite. SAS-2500.

Ordnance. TPOD, 6 Mk-82 H/L SEL on ITERS, Expendables.

SAS-2502      1.0      \*      RNAWST   S

Goal. Review GAU-12 and rocket deliveries from medium and low altitude.

Requirement. Conduct a minimum of 8 deliveries with a combination of GAU-12 and rockets from various dive profiles on a scored range using both TPOD and RADAR HAT. Profiles should include ramp down, pop-up, and level entry to dive (10-45 degrees). Review forward-firing weapons preflight, delivery procedures, and malfunctions.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, and NATIP publications. Proper use of TPOD to designate targets. Comply with Tactical Abort Parameters. Comply with established contracts. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP. Correct ALSA Communication Brevity.

Prerequisite. SAS-2501.

Ordnance. TPOD, 300 rounds 25mm, 4 x 5" rockets, 7 x 2.75" rockets, Expendables.

SAS-2503      1.0      \*      R   RNAWST   S

Goal. Introduce JDAM deliveries.

Requirement. Conduct level JDAM deliveries. Complete 1 absolute delivery against multiple DMPIs, 2 BOT deliveries, and 1 multi-relative delivery with terminal parameters

enabled. Use the TPOD to generate coordinates for the absolute delivery. Introduce airburst fuze functionality.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JMPS CUPC, JAWS, SLIC, and NATIP. Execute briefed air-to-surface timelines. Proper use of TPOD to generate target coordinates. Comply with Tactical Abort Parameters. Valid weapons release IAW Air NTTP.

Prerequisite. SAS-2502.

Ordinance. TPOD, 2 GBU-38, 1 GBU-32 w/DSU-33, Expendables.

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SAS-2504	1.0	*	R	RNAWST	S
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Goal. Introduce LMAV and LGB deliveries.

Requirement. Conduct multiple attacks using self, buddy, or ground-based terminal lasing. Employ both continuous and delayed lase techniques. Conduct at least 1 dive LGB profile and 1 LMAV delivery.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing PMPT, JAWS, WARP, SLIC, and NATIP. Adhere to briefed air-to-surface timeline. Proper use of TPOD to designate and lase targets. Comply with Tactical Abort Parameters. Valid weapons release IAW Air NTTP.

Prerequisite. SAS-2503.

Ordinance. TPOD (centerline), 4 GBU-12s on ITERs, 1 GBU-16, 1 LMAV, Expendables.

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SAS-2505	1.0	*		RNAWST	S/A (NS)
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Goal. Introduce 81mm mortar and 105mm artillery call for fire.

Requirement. Conduct a minimum of 6 controls with a combination of SEAD, immediate suppression, and adjust fire LASER missions.

Performance Standard. Execute IAW JFIRE NTTP 3-09.2. Simulated JTAC shall have mark and control of fires but will not have a forward observer in direct support. Pilot shall derive target coordinates and pass to firing agency via call for fire format. Receive and record message to observer. Adjustments should result in accurate corrections with effects on target.

Prerequisite. Complete ground/academic training.

Ordinance. TPOD.

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AS-2506	1.3	180	2+	AV-8BII+	A (NS)
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Goal. Review AS sensors: TPOD and APG-65.



Requirement. Complete required TPOD and APG-65 ground checks. Perform RADAR trail departure and shadow in STT and RWS, and full air to surface and air to air TACADMIN (I.E. RBIT, LCAL). Review TPOD and RADAR AS modes and HOTAS. Review RADAR Expand Map techniques. Conduct multiple targeting runs using different sensors to create a system designation utilizing RADAR SEA track, Expand Map, GMTT, TPOD CCD/FLIR, and TPOD LST.

Performance Standard. Demonstrate proper TPOD ground procedures. Demonstrate proper TPOD management and HOTAS. Demonstrate proper HOTAS for RADAR AS modes. Demonstrate knowledge of the source of the system designation.

Prerequisite. SAS-2504, (NS-2605 if aided).

Ordinance. 1 TPOD.

Range Requirement. Reference Range Support Matrix.

AS-2507	1.3	180	2+ AV-8BII+ A (NS)
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Goal. Review AS timelines.

Requirement. Conduct multiple targeting runs using different sensors to create a system designation utilizing RADAR SEA track, Expand Map, GMTT, TPOD CCD/FLIR, TPOD LST, and TPOD IR MRKR. Introduce air-to-surface timelines with simulated PGMs and simulated free-fall ordnance.

Performance Standard. Demonstrate proper use of the TPOD to designate and attack targets. Execute briefed air-to-surface timeline. Correct off target RADAR mechanics.

Prerequisite. AS-2506, (NS-2605 if aided).

Ordinance. 1 TPOD.

Range Requirement. Reference Range Support Matrix.

AS-2508	1.3	180	R 2+ AV-8B A (NS)
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Goal. Introduce LCIP/LAUT deliveries and review BCWD from medium and low altitude.

Requirement. On a scored range, execute 4 (20-45) degree deliveries and 2 10-degree deliveries using TPOD as the source of the system designation.

Performance Standard. Execute IAW Air NTPP. Correct weaponeering utilizing JAWS, WARP, and NATIP. Proper use of TPOD to designate targets. Comply with Tactical Abort Parameters. Comply with established contracts and cascade plan. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP for the weapon.

Prerequisite. AS-2507, (NS-2605 if aided).

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45, 20 Chaff, 60 Flares

Range Requirement. Reference Range Support Matrix.

AS-2509 1.3 180 R 2+ AV-8B A (NS)

Goal. Review medium and low altitude GAU-12 and rocket deliveries.

Requirement. Conduct multiple deliveries with a combination of GAU-12 and rockets from various dive profiles on a scored range using TPOD, RADAR, or ARBS HAT. Profiles should include ramp down, pop-up, and level entry to dive (10-45 degrees).

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, and NATIP. Proper use of TPOD to designate targets. Comply with Tactical Abort Parameters. Comply with established contracts. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP.

Prerequisite. AS-2508, (NS-2605 if aided).

Ordnance. 1 TPOD, 300 25mm, 7 2.75" Rockets/4 5" Rockets, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

AS-2510 1.3 \* 2 AV-8B A (NS)

Goal. Introduce pop-up attacks from low altitude.

Requirement. Execute 4 pop-up attacks to 10-degree high-drag deliveries. Review DMT/LST, AGR, or LCIP deliveries.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, and NATIP. Proper use of TPOD to designate targets. Comply with Tactical Abort Parameters. Comply with established contracts and cascade plan. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP. Correct ALSA Communication Brevity.

Prerequisite. AS-2508, (NS-2605 if aided). This flight may be flown in the LAT environment in section only when both pilots are LAT-2402 and LAT-2403 complete.

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 60 Chaff, 120 Flares.

Range Requirement. Reference Range Support Matrix.

AS-2511 1.3 180 2 AV-8B A (NS)

Goal. Introduce LMAV and LGB deliveries.

Requirement. Conduct multiple (actual and simulated) attacks using self, buddy, or ground-based terminal lasing. Employ both continuous and delayed lase techniques. Conduct at least 1 dive LGB profile and 1 LMAV delivery.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing PMPT, JAWS, WARP, SLIC, and NATIP. Adhere to briefed air-to-surface timeline. Proper use of TPOD to designate and lase targets. Comply with Tactical Abort Parameters. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide.

Prerequisite. AS-2507, (NS-2605 if aided).

Ordnance. 1 TPOD, 2 GBU-12/2 GBU-12 inert/2 GBU-16/2 GBU-16 inert/2 LGTR, 1 CATM-65E/1 AGM-65E, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.

AS-2512	1.3	180	2 AV-8B	A	(NS)
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Goal. Introduce JDAM deliveries.

Requirement. Conduct level JDAM deliveries. Complete an absolute delivery, 2 relative deliveries, and 1 multi-relative delivery with terminal parameters enabled.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JMPS CUPC, JAWS, SLIC, and NATIP. Execute briefed air-to-surface timelines. Proper use of TPOD to generate target coordinates. Comply with Tactical Abort Parameters. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Correct ALSA Communication Brevity.

Prerequisite. AS-2507, (NS-2605 if aided).

Ordnance. 1 TPOD, 2 GBU-32/2 GBU-32 inert/2 GBU-38/2 GBU-38 inert.

Range Requirement. Reference Range Support Matrix.

AS-2513	1.3	180	R 2+ AV-8B	A	(NS)
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Goal. Review visual target area tactics.

Requirement. Execute 4 medium altitude target attacks using dive delivery profiles on a scored range.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, and NATIP. Proper use of TPOD to designate and attack targets. Comply with Tactical Abort Parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP. Correct ALSA Communication Brevity. Correct off target RADAR mechanics.

Prerequisite. AS-2508, (NS-2605 if aided).

Ordinance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 300 25mm, 7 2.75" Rockets/4 5" Rockets, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

AS-2514      1.3      90      R   2+ AV-8B   A   (NS)

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

Requirement. Conduct multiple AGM-65E, LGB, or JDAM deliveries using standoff target area tactics.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, SLIC, and NATIP. Proper use of TPOD to designate and attack targets. Comply with Tactical Abort Parameters. Execute briefed air-to-surface timeline. Valid weapons release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP for the weapon. Correct off target RADAR mechanics.

Prerequisite. AS-2511, AS-2512, (NS-2605 if aided).

Ordinance. 1 TPOD, 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/1 CATM-65E, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

## 7. Night Systems (NS)

a. Purpose. Complete NSQ qualification.

b. General

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

(2) The first sortie, NS-2602, shall be flown in High Light Level (HLL) conditions. At least one of the remaining three sorties, NS-2603 through NS-2605, shall be flown in Low Light Level (LLL) conditions.

(3) Completion of this stage constitutes NSQ HI qualification.

(4) An NSI shall instruct all initial training events.

c. Ground/Academic Training

(1) Readings

(a) AV-8B NATOPS, Review Chapter 15, In-Flight Emergencies, Electrical Malfunctions.

(b) AV-8B NATIP, Review Chapter 2, Night Vision Goggles.

(c) Air NTTP 3-22.3-AV8B, Review Chapter 5, Night Systems.

(d) MAWTS-1 NVD Manual.

(e) NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Review Chapter 3, Night Systems Rules of Conduct.

(2) Lectures

(a) Review the following AV-8B courseware lectures:

1 ANS-2034, Infrared Theory.

2 ANS-2035, NAVFLIR.

(b) Receive the following AV-8B courseware lecture: ANS-2036, LUU-2 Parachute Flares.

(3) Chalk Talks/Practical Application

(a) ANS-2037, NITE Lab.

(b) ANS-2038, MAWTS Night Systems Mishap Anthology given by an NSI.

SNS-2600            1.0            \*            RNAWST   S   NS

Goal. Introduce TPOD employment at night. Review NVD use, normal procedures, and aircraft systems management at night.

Requirement. Review cockpit setup, TPOD FLIR setup, and NATOPS ground procedures at night. In flight, focus on sensor management of the NVD suite and introduce TPOD FLIR. Perform a tanker rendezvous. Recovery should include a GCA, CL, VNSL, FNSL, RVL, and VL.

Performance Standard. Execute all procedures IAW NATOPS and Air NTTP. Demonstrate proficient TPOD FLIR system setup and employment.

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

Ordinance. 1 TPOD.

SNS-2601            1.0            \*            R   RNWST   S   NS

Goal. Introduce NS tactical attack profiles.

Requirement. Perform at least 2 ramp down profiles to GP ordnance release and multiple PGM profiles. Emphasize optimizing sensor/systems for target detection, acquisition, and identification. Introduce target area tactics at night. Execute VFR NORDO recovery using the RADAR to clear the aircraft's flight path.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JAWS, WARP, SLIC, 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 Planning, Briefing, and Debriefing Guide.

Prerequisite. SNS-2600.

Ordnance. TPOD (centerline), 2 Mk-82 LD w/DSU-33, 1 GBU-16, 2 GBU-32/38, Expendables.

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

Goal. Review FAM/FORM procedures at night. Introduce night TPOD employment. Review NVD use, normal procedures, and aircraft systems management at night.

Requirement. Review cockpit setup, TPOD FLIR calibration and setup, and NATOPS ground procedures at night. In flight, focus on sensor management of the night attack suite and introduce TPOD FLIR. Review all aircraft lighting configurations. Review all night formations. Execute 1 break-up and rendezvous. Perform 1 RADAR join from outside of 20nm separation Recovery shall include a GCA, CL, VNSL, FNSL, RVL, and VL.

Performance Standard. Execute all procedures IAW NATOPS and Air NTTP. Demonstrate proficient TPOD FLIR system setup and employment.

Prerequisite. SNS-2601.

Ordnance. 1 TPOD.

Range Requirement. Reference Range Support Matrix.

NS-2603      1.3      \*      2 AV-8B   A   NS

Goal. Introduce PGM attack profiles at night.

Requirement. Execute 1 self-lase, 1 buddy lase, and 1 JDAM attack. Emphasize air-to-surface timelines, contract adherence, and sensor/system optimization for target detection, acquisition, and identification.

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JMPS CUPC, JAWS, 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 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP. Correct ALSA Communication Brevity. Correct off target RADAR mechanics.

Prerequisite. NS-2602.

Ordnance. 1 TPOD, 1 GBU-32/1 GBU-32 inert/1 GBU-38/1 GBU-38 inert/2 GBU-12/2 GBU-12 inert/2 GBU-16/2 GBU-16 inert/2 LGTR, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

NS-2604      1.3      \*      2 AV-8B   A   NS

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

Requirement. Perform multiple medium (20 or 30 degree) and low (10 degree) LCIP/LAUT deliveries on a scored range. Emphasize air-to-surface timeline, sensor/system management, and TPOD employment. Emphasize environmental effects and Mission Crosscheck Time (MCT).

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JMPS CUPC, JAWS, SLIC, 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 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP.

Prerequisite. NS-2603.

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

NS-2605      1.3      \*      R 2 AV-8B   A   NS

Goal. Introduce section target area tactics at night.

Requirement. Complete 2 medium altitude transition profiles to free-fall/forward-firing weapon employment and 2 PGM attacks. Introduce aided target area tactics, mutual support, and deconfliction. Emphasize sensor/systems optimization for target detection, acquisition, and identification. Emphasize environmental effects and Mission Crosscheck Time (MCT).

Performance Standard. Execute IAW Air NTTP. Correct weaponeering utilizing JMPS CUPC, JAWS, 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 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP. Correct off target RADAR mechanics.

Prerequisite. NS-2604.

Ordnance. 1 TPOD, 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, 3 Mk-76/2 Mk-82/2 BDU-45/1 Mk-83/1 Mk-83 inert/4 5" Rockets, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

8. Air-to-Air (AA)

a. Purpose. Begin ACM qualification.

b. General

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

(2) An AV-8B ACTI or VFMT-401 ATI shall instruct all initial training events. Adversaries may be similar or dissimilar, provided instructor requirements are met.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.1-AV8B:

1 Review Chapter 15, Air-to-Air Fundamentals.

2 Review Chapter 16, Air-to-Air Mission Planning.

3 Review Chapter 17, Air-to-Air Employment.

4 Review Appendix B, Standard Expendable Loads.

(b) Air NTTP 3-22.3-AV8B, Review Appendix A, BFM/ACM Training.

(c) NTRP 3-22.4-AV8B:

1 Review Chapter 2.10, RADAR.

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

3 Review Chapter 7.1, E-M Diagrams.

(d) NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Review Chapter 4, ACM Rules of Conduct.

(e) TOPGUN Manual:

1 Review Rule-of-Thumb.

2 Review Threat Aircraft.

3 Review Threat RADAR Missiles.

4 Review Threat IR Missiles.

5 Review Combat Gunnery.

6 Review Intercept Control.

7 Review AIM-120.



(f) Review AV-8 NATIP (NTRP 3-22.2-AV8B), AIM-9M-8 and AIM-120 chapters.

(2) Lectures

(a) Review the following AV-8B courseware lectures:

- 1 AAA-2039, ACM Safety and A/A Systems.
- 2 AAA-2040, Aircraft Performance.
- 3 AAA-2041, Combat Gunnery.
- 4 AAA-2042, Combat Thrust Vector Control.
- 5 AAA-2043, AIM-9.
- 6 AAA-2044, GAU-12.
- 7 AAA-2045, ALR-67, RWR.
- 8 AAA-2046, ALE-39/47, CMDS.
- 9 AAA-2047, ALQ-164, DECM.
- 10 AAA-2048, AV-8B Departure Avoidance.
- 11 AAA-2049, AV-8B RADAR Controls and Displays.
- 12 AAA-2050, AV-8B Basic Intercept Geometry 1 & 2.
- 13 AAA-2051, Air-to-Air Search Techniques.

(b) Receive the following AV-8B courseware lectures:

- 1 AAA-2052, 1V1 Basic Fighter Maneuvers.
- 2 AAA-2053, 2V1 Basic Fighter Maneuvers.
- 3 AAA-2054, Air Intercept Control.
- 4 AAA-2055, APG-65 (15C+) Utilization (MAWTS-1 ASP).

(3) Chalk Talks/Practical Application

(a) Review the following AV-8B courseware lectures:

- 1 AAA-2056, TACTS Debrief Lab
- 2 AAA-2057, Air-to-air timeline with SAR-1 threat chalktalk

SAA-2700      1.0      \*      R    RNAWST    S    D

Goal.    Review TVC procedures and air-to-air TACADMIN.

Requirement.    Complete 1 high speed departure recovery, 1 slow speed departure recovery, 2

heat-to-guns drills, 2 turn rate drills, 2 break turns with a deck transition, 1 TVC-assisted turn drill, 1 HSPO, 1 HSWO, and 1 flop. Instruction shall include TVC utilization, 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.

Performance Standard. Adhere to ACM training rules. Departure recovery procedures IAW NATOPS. Execute drills and procedures IAW Air NTTP. Recognize AIM-9M-8, AIM-120, and GAU-12 WEZ.

Prerequisite. Complete ground/academic training, air-to-surface stage complete.  
Ordinance. 2 AIM-9M-8, Expendables.

AA-2701	1.3	180	2 AV-8B	A	D
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Goal. Review TVC procedures and air-to-air TACADMIN.

Requirement. Complete 1 zero airspeed departure recovery, 1 slow speed/high AOA drill, 2 turn rate drills, 2 break turns with a deck transition, 1 TVC-assisted turn drill, 1 HSPO, 1 HSWO, and 1 flop. Instruction shall include TVC utilization, ACM training rules application, and scan techniques.

Performance Standard. Adhere to ACM training rules. Departure recovery procedures IAW NATOPS. Execute drills and procedures IAW Air NTTP.

Prerequisite. FAM-2102, SAA-2700.

Ordinance. 1 AIM-9/1 CATM-9, 1 TACTS Pod, 60 Flares.

Range Requirement. Reference Range Support Matrix.

AA-2702	1.3	180	1+ AV-8B	A	D
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Goal. Review 1 V 1 offensive BFM.

Requirement. Review 2 heat-to-guns drill; 1 snapshot drill; and 1 x 9,000-foot, 1 x 6,000-foot, and 1 x 3,000-foot offensive perch engagements. Instruction shall include ACM training rules application, energy management and assessment, turn circle entry recognition, WEZ recognition, and deck awareness.

Performance Standard. Adhere to ACM training rules. Execute drills and procedures IAW Air NTTP. Maintain offensive position or disengage prior to a defensive position. Recognize AIM-9M-8, AIM-120, and GAU-12

WEZ. Valid GAU-12 kills are the only kills acknowledged.  
Correct  
ALSA Communication Brevity. Correct use of HOTAS commanded  
ACM modes.

Prerequisite. AA-2701.

Ordinance. 1 CATM-9, 1 TACTS Pod, 40 Chaff, 140 Flares.

Range Requirement. Reference Range Support Matrix.

AA-2703	1.3	180	1+ AV-8B	A	D
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Goal. Review 1 V 1 defensive BFM.

Requirement. Review 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).  
Instruction shall include ACM training rules application,  
energy management and assessment, deck  
awareness, and denying adversary WEZ entry. Attempt to  
neutralize adversary and/or disengage  
successfully while utilizing air-to-air threat countertactics.

Performance Standard. Adhere to ACM training rules. Execute  
drills and procedures IAW Air  
NTTP. Utilize expendables to delay and deny adversary shots  
along with maximizing aircraft  
performance. Adversary looks to employ IR-II+ missile.  
Recognize adversary WEZ and execute  
appropriate countertactic. Correct use of HOTAS commanded ACM  
modes.

Prerequisite. AA-2702.

Ordinance. 1 CATM-9, 1 TACTS Pod, 40 Chaff, 140 Flares.

Range Requirement. Reference Range Support Matrix.

AA-2704	1.3	180R	1+ AV-8B	A	D
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Goal. Review 1 V 1 high aspect BFM against a Category II+  
adversary.

Requirement. Review 1 snapshot drill, 1 heat-to-guns drill,  
and a minimum of 3 neutral  
engagements against a similar or dissimilar adversary: 2  
butterfly and 1 abeam. Adversary  
gameplan will be stipulated in the brief. Focus for this  
sortie is on decision making for 1-  
circle and 2-circle gameplans. Instruction shall include ACM  
training rules application,  
energy management and assessment, gameplans, pre-merge  
considerations, weapons employment, deck  
awareness, and air-to-air threat countertactics.

Performance Standard. Adhere to ACM training rules. Execute gameplan IAW Air NTTP. Recognize adversary WEZ and execute appropriate countertactic. Any valid GAU-12 or AA missile employment post-initial 3/9-line passage will be acknowledged. Deny adversary valid weapons employment. Gameplan execution and WEZ recognition is the focus of effort. Correct use of HOTAS commanded ACM modes.

Prerequisite. AA-2703.

Ordinance. 1 CATM-9, 1 TACTS Pod, 40 Chaff, 140 Flares.

Range Requirement. Reference Range Support Matrix.

AA-2705	1.3	180	R	2+ AV-8B	A D
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Goal. Introduce 2 V 1 section engaged maneuvering.

Requirement. Perform 3 WVR engagements: 2 forward hemisphere engagements (1 forward quarter and 1 abeam setup) and 1 rear quarter engagement (inside IR-II+ WEZ). Instruction shall include engaged and supporting fighter contracts, gameplan execution, VID considerations, disengagement procedures to include appropriate SRR mechanics, ACM training rules application, SA-enhancing communications along with applicable ALSA communications, and air-to-air threat countertactics.

Performance Standard. Adhere to ACM training rules. Execute briefed contracts and gameplans. Execute briefed air-to-air threat countertactics gameplan. Correct use of HOTAS commanded ACM modes. No shots until PHID is consummated. One hundred percent valid shots. Time-to-kill less than 90 seconds. TOPGUN Kill criteria applies.

Prerequisite. AA-2704.

Ordinance. 1 CATM-9, 1 TACTS Pod, 40 Chaff, 140 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. 1 Adversary , dissimilar preferred.

SAA-2706	1.0	*	MTT/RNAWST	S D
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Goal. Introduce forward quarter and stern conversion intercepts.

Requirement. Execute 4 forward quarter single-side offset (SSO) and two stern conversion

intercepts against a single non-maneuvering adversary. Instruction shall be focused on adjusting fighter geometry, airspeed, and altitude when evaluating target Mach, altitude, closure, and aspect cues. Review GCI/AIC integration and PHID criteria. Execute 4 AIM-9M-8 and 2 AIM-120 engagements.

Performance Standard. Execute procedures IAW Air NTTP. For SSO, intercept geometry set to arrive WVR of target with less than 30-degree TA and with look-up. For stern conversion, arrive 1-2nm in trail. Adhere to RADAR timeline, contracts, and criteria. Arrive WVR of target with less than 30-degree TA and with look-up.

Prerequisite. SAA-2700.

Ordinance. 4 AIM-9M-8, 2 AIM-120, ALQ-164, Expendables.

SAA-2707	1.0	*	R	MTT/RNAWST	S	(NS)
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Goal. Review forward quarter intercepts.

Requirement. Review 4 forward quarter SSO against a single group, unaware, Category II adversary on a strike profile. Adversary shall be at 500 feet for one engagement. Instruction shall be focused on adjusting fighter geometry, airspeed, and altitude when evaluating target Mach, altitude, closure, and aspect cues. Adversary group formations should include two-ship abeam, lead-trail, and echelon presentations. Both hostile and bogey presentations will be presented. Execute 4 AA weapon engagements.

Performance Standard. Execute SSO procedures IAW Air NTTP. Adhere to air-to-air timeline, contracts, and criteria. Accurate adversary formation analysis and sort IAW brief. Arrive WVR of target with less than 30-degree TA with look-up when applicable. If hostile adversary, fighter should employ weapons pre-merge. If VID required, fighter will make PHID at merge.

Prerequisite. SAA-2706, (NS-2605 if aided).

Ordinance. 2 AIM-9M-8, 2 AIM-120, ALQ-164, Expendables.

AA-2708	1.3	180	R	1+ AV-8BII+	A	(NS)
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Goal. Perform 1 V 1 intercepts against a single adversary.

Requirement. Perform 3 SSO intercepts against a single, IR-II+ capable, Category II+ adversary simulating a strike profile. Perform one stern conversion against an adversary simulating a

defector profile. Adversary maneuvering is limited to no more than flanking aspect or 10,000 feet of altitude change with picture set at 25nm. Instruction shall include air-to-air timeline, intercept geometry, GCI/AIC integration, and ACM training rules application. Initial training shall be in a AV-8B II+.

Performance Standard. Execute forward quarter and stern conversion procedures IAW Air NTTP. Adhere to air-to-air timeline, contracts, and criteria. Arrive WVR of target with less than 20-degree TA and look-up. Arrive in trail 1-2nm.

Prerequisite. AA-2707, (NS-2605 if aided). ACPM 8200, ACPM 8201, ACPM 8202, ACPM 8210, ACPM 8230, ACPM 8231, ACPM 8240, ACPM 8241, ACPM 8242, ACPM 8250.

Ordinance. 1 CATM-9, 1 TACTS Pod, 20 Chaff, 70 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. AIC/GCI, TACTS debrief facility.

#### 10. Aviation Career Progression Model (ACPM)

a. 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.

b. 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.

##### c. ACPM Core Skill Training Events

(1) AACPM-8200, MACCS Agencies, Functions and Control of Aircraft and Missiles.

(2) AACPM-8201, MWCS Brief.

(3) AACPM-8202, ACA & Airspace.

(4) AACPM-8210, Aviation Ground Support.

(5) AACPM-8230, ACE Battle Staff.

(6) AACPM-8231, Battle Command Display.

(7) AACPM-8240, Six Functions of Marine Aviation.

(8) AACPM-8241, JTAR/ASR Introduction and Practical Application.

(9) AACPM-8242, Site Command Primer.

(10) AACPM-8250, Theater Air Ground System (TAGS).

211. MISSION SKILL PHASE

1. Mission Skill Training

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

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

2. Close Air Support (CAS)

a. Purpose. Develop proficiency in CAS execution during day and night missions at medium altitude in a low to medium threat environment.

b. General. A section lead shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) Review Joint Publication 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support.

(b) AV-8B NATIP (NTRP 3-22.4-AV8B), Review Section 2.11.3, The CAS Display.

(c) Air NTTP 3-22.3 AV-8B, Review Chapter 8, Close Air Support.

(2) Lectures

(a) ACAS-3000, Receive the following AV-8B courseware lecture: Automatic Target Handoff System (ATHS)/Digital CAS.

(b) Review the following AV-8B courseware lectures:

1 ACAS-3001, CAS Execution.

2 ACAS-3002, MAWTS-1 JCAS.

SCAS-3100      1.0      \*      R      RNAWST      S      (NS)

Goal. Review CAS execution under Type 1 control.

Requirement. Execute 4 attacks under type 1 control. Emphasize systems management, target PID, target area tactics, reactive weaponeering, threat countertactics, and standardized communications.

Performance Standard. Execute tactics IAW with JCAS and Air NTTP. Locate the correct target. Achieve desired level of

destruction IAW ROE via a valid weapons release on time (+/- 30 sec). Survive against the threat IAW allowable risk.

Prerequisite. Complete ground/academic training, air-to-surface stage complete, (NS-2605 if aided).

Ordinance. TPOD, 1 GBU-12, 4 Mk-82 LD w/DSU-33, 300 25mm SAPHEI-T, Expendables.

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SCAS-3101      1.0      \*      RNAWST    S

Goal. Review CAS execution under type 2 and 3 control.

Requirement. Execute 3 attacks under type 2 control and 1 attack under type 3 control. Emphasize systems management, target PID, target coordinate generation accuracy, PGM employment, threat countertactics, and standardized communications. Conduct a minimum of 1 attack with an active RF SAM threat.

Performance Standard. Execute tactics IAW with JCAS and Air NTTP. Locate the correct target. Achieve desired level of destruction IAW ROE via a valid weapons release on time (+/- 30 sec). Survive against the threat IAW allowable risk.

Prerequisite. SCAS-3100.

Ordinance. TPOD, 1 GBU-12, 2 GBU-38, ALQ-164, Expendables.

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SCAS-3102      1.0      \*      RNAWST    S

Goal. Introduce digitally-aided CAS in an urban environment.

Requirement. Conduct 3 CAS attacks in an urban environment using digital communications (ATHS) under type 1, 2, or 3 control. Emphasize systems management, target PID, collateral damage and danger close considerations, GRG usage, target coordinate generation accuracy, PGM employment, threat countertactics, and standardized communications.

Performance Standard. Execute tactics IAW with JCAS and Air NTTP. Locate the correct target. Achieve desired level of destruction IAW ROE via a valid weapons release on time (+/- 30 sec). Survive against the threat IAW allowable risk.

Prerequisite. SCAS-3101.

Ordinance. TPOD (centerline), 1 GBU-51, 2 GBU-38, 1 AGM-65E, 300 25mm SAPHEI-T, Expendables.

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CAS-3103      1.3      90      R    2 AV-8B    A      D

Goal. Review day CAS execution under type 1 control.

Requirement. Conduct 2 attacks under type 1 control. Emphasize systems management, target PID, target area tactics,



reactive weaponeering, threat countertactics, and standardized communications.

Performance Standard. Execute tactics IAW with JCAS and Air NTTP. Locate the correct target. Achieve desired level of destruction IAW ROE via a valid weapons release on time (+/- 30 sec). Survive against the threat IAW allowable risk.

Prerequisite. SCAS-3102.

Ordinance. 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/4 5" Rocket, 300 25mm, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. JTAC or FAC(A).

CAS-3104	1.3	180	2	AV-8B	A	D
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Goal. Review day CAS execution under type 2 and 3 control.

Requirement. Conduct 1 attack under type 2 control and 1 attack under type 3 control. Emphasize systems management, target PID, target coordinate generation accuracy, PGM employment, threat countertactics, and standardized communications.

Performance Standard. Execute tactics IAW with JCAS and Air NTTP. Locate the correct target. Achieve desired level of destruction IAW ROE via a valid weapons release on time (+/- 30 sec). Survive against the threat IAW allowable risk.

Prerequisite. SCAS-3102.

Ordinance. 1 TPOD, 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, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. JTAC or FAC(A).

CAS-3105	1.3	180	R	2	AV-8B	A	NS
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Goal. Review night CAS execution under type 1 terminal attack control.

Requirement. Conduct 2 attacks under type 1 control. Emphasize systems management, target PID, target area tactics, IR marker employment, reactive weaponeering, and standardized communications.

Performance Standard. Execute tactics IAW with JCAS and Air NTTP. Locate the correct target. Achieve desired level of destruction IAW ROE via a valid weapons release on time (+/- 30 sec). Survive against the threat IAW allowable risk.

Prerequisite. NS-2605, CAS-3103

Ordnance. 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/4 5" Rocket, 300 25mm, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. JTAC or FAC(A).

CAS-3106	1.3	180	R	2	AV-8B	A	NS
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Goal. Review night CAS execution under type 2 and 3 control.

Requirement. Conduct 1 attack under type 2 control and 1 attack under type 3 control. Emphasize systems management, target PID, target coordinate generation accuracy, PGM employment, IR marker employment, and standardized communications.

Performance Standard. Execute tactics IAW with JCAS and Air NTTP. Locate the correct target. Achieve desired level of destruction IAW ROE via a valid weapons release on time (+/- 30 sec). Survive against the threat IAW allowable risk.

Prerequisite. NS-2605, CAS-3104

Ordnance. 1 TPOD, 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, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. JTAC or FAC(A).

CAS-3107	1.3	*		2	AV-8B	A	(NS)
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Goal. Introduce CAS execution in an urban environment.

Requirement. Conduct 2 CAS attacks in an urban environment. Emphasize systems management, target PID, collateral damage and danger close considerations, GRG usage, target coordinate generation, and weapons employment. This sortie can be completed using an actual urban area with simulated ordnance or a simulated urban complex using live or inert ordnance.

Performance Standard. Execute IAW with JPub 3-09.3 and Air NTTP. Execute briefed air-to-surface timeline and surface-to-air threat countertactics. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP. TOT +/- 30 seconds.

Prerequisite. CAS-3103, CAS-3104, (CAS-3105, CAS-3106 if aided). ACPM 8300, ACPM 8310, ACPM 8311, ACPM 8320, ACPM 8340.

Ordnance. 1 TPOD, 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, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. JTAC or FAC(A).

3. Armed Reconnaissance (AR)

a. Purpose. Develop proficiency in AR execution during day and night missions at medium altitude in a low to medium threat environment.

b. General. A section lead shall instruct all events.

c. Ground/Academic Training

(1) Readings. Air NTTP 3-22.3 AV-8B, Chapter 10, Armed Reconnaissance.

(2) Lectures. Receive the following AV-8B courseware lectures:

(a) AAR-3003, Armed Reconnaissance.

(b) AAR-3004, Armed Reconnaissance Procedures

SAR-3200	1.0	*	RNAWST	S	D
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Goal. Conduct day medium altitude AR.

Requirement. Brief a Target Precedence List (TPL) and Rules of Engagement (ROE). Detect, recognize, and PID targets according to ROE. Execute 2 attacks using free-fall or forward-firing ordnance and 1 attack with JDAM. Review direct, delayed, and transition attack profiles. Communicate IFREP to a simulated MACCS.

Performance Standard. Execute tactics IAW with AIR NTTP. Locate targets IAW TPL. Maximize tempo of destruction against targets IAW ROE via a valid weapons release. Execute briefed threat countertactics IAW allowable risk.

Prerequisite. Complete ground/academic training, air-to-surface stage complete.

Ordnance. TPOD, 2 GBU-32/38, 1 GBU-12, 2 CBU-99/100 w/FMU-140, 300 25mm SAPHEI-T, Expendables.

AR-3201	1.3	180	2+ AV-8B	A	(NS)
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Goal. Conduct medium altitude AR with GP munitions.

Requirement. Brief a TPL and ROE. Detect, recognize, and PID targets according to ROE. Execute 2 attacks using free-fall and/or forward-firing ordnance. Communicate an accurate IFREP to the MACCS.

Performance Standard. Execute tactics IAW with Air NTTP. Locate targets IAW TPL. Maximize tempo of destruction against targets IAW ROE via a valid weapons release. Execute briefed threat countertactics IAW allowable risk.

Prerequisite. SAR-3200, (NS-2605 if aided).

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert/2 CBU-99/2 Mk-77, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

AR-3202	1.3	90	R	2+	AV-8B	A	D
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Goal. Conduct medium altitude AR with PGM.

Requirement. Brief a TPL and ROE. Detect, recognize, and PID targets according to ROE. Execute 2 attacks with PGMs. Communicate IFREP to a simulated or actual MACCS.

Performance Standard. Execute tactics IAW with Air NTTP. Locate targets IAW TPL. Maximize tempo of destruction against targets IAW ROE via a valid weapons release. Execute briefed threat countertactics IAW allowable risk.

Prerequisite. AR-3200.

Ordnance. 1 TPOD, 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, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

AR-3203	1.3	180	R	2+	AV-8B	A	NS
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Goal. Conduct night medium altitude AR with PGMs.

Requirement. Brief a TPL and ROE. Detect, recognize, and PID targets according to ROE. Execute 2 attacks with PGMs. Communicate an accurate IFREP to the MACCS.

Performance Standard. Execute tactics IAW with Air NTTP. Locate targets IAW TPL. Maximize tempo of destruction against targets IAW ROE via a valid weapons release. Execute briefed threat countertactics IAW allowable risk.

Prerequisite. AR-3201, AR-3202, NS-2605.

Ordnance. 1 TPOD, 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, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

#### 4. Strike Coordination and Reconnaissance (SCAR)

a. Purpose. Develop proficiency in SCAR execution during day and night missions at medium altitude in a low to medium threat environment.

b. General. A section lead shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) Air NTTP 3-22.3-AV8B, Chapter 11.

(b) ALSA, SCAR

(2) Lectures. Receive the following MAWTS-1 AV-8B ASP lecture:  
ASCAR-3005, SCAR Tactics, Techniques, and Procedures

SCAR-3300      1.3      180      2 AV-8B   A      D

Goal. Conduct day SCAR.

Requirement. Coordinate with a minimum of 1 external section (FW or RW) to conduct a minimum of 2 target attacks. Communicate an accurate IFREP to the MACCS. Perform a SCAR-to-SCAR handover.

Performance Standard. Execute tactics IAW Air NTTP. Detect, recognize, and PID targets IAW TPL. Maximize tempo of destruction against targets IAW ROE via a valid weapons release. Execute briefed threat countertactics IAW allowable risk. Communicate an accurate IFREP.

Prerequisite. Complete ground/academic training, armed reconnaissance stage complete. ACPM 8321, ACPM 8322, ACPM 8323, ACPM 8324, ACPM 8325, ACPM 8326, ACPM 8350, ACPM 8351.

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 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, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. One section AR assets.

SCAR-3301      1.3      180      R 2 AV-8B   A      NS

Goal. Conduct night SCAR.

Requirement. Brief a TPL and ROE. Detect, recognize, and PID targets IAW ROE. Coordinate with a minimum of 1 external section to conduct a minimum of 2 target attacks. Provide an IFREP to the MACCS (actual or simulated). Perform a SCAR-to-SCAR handover (actual or simulated).

Performance Standard. Execute tactics IAW Air NTTP. Detect, recognize, and PID targets IAW TPL. Maximize tempo of destruction against targets IAW ROE via a valid weapons release. Execute briefed threat countertactics IAW allowable risk. Communicate an accurate IFREP.

Prerequisite. SCAR-3300.

Ordnance. 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/2 CBU-99/2 Mk-77, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 4 LUU-2/4 LUU-19, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. One section AR assets.

5. Armed Interdiction (AI)

a. Purpose. Develop proficiency in AI execution during day and night missions at medium altitude in a medium threat surface-to-air environment.

b. General. A section leader shall instruct all events.

c. Ground/Academic Training

(1) Readings

(a) AIR NTTP 3-22.1-AV8B:

(1) Chapter 4, Air Interdiction.

(2) Chapter 5, Suppression of Enemy Air Defenses.

(b) MAWTS-1 Strike Planning Guide

(2) Lectures. Receive the following AV-8B courseware lecture: AAI-3006, AI Planning and Execution

SAI-3400	1.0	*	RNAWST	S
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Goal. Introduce medium altitude AI.

Requirement. Perform a medium altitude AI with an RF SAM threat.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JMEmS derived) level of destruction criteria via a valid weapons release within +/- 15 seconds of TOT. Execute briefed threat countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to the MACCS.

Prerequisite. Complete ground/academic training, air-to-surface stage complete.

Ordnance. TPOD (Centerline), 2 300-Gallon Fuel Tanks, 2 GBU-32, ALQ-164, Expendables.

AI-3401	1.3	90	R	2+ AV-8B	A	D
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Goal. Perform a medium altitude AI with an RF SAM threat.

Requirement. Conduct a medium altitude AI as a section or division with an RF SAM threat.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JMEMs derived) level of destruction criteria via a valid weapons release within +/- 15 seconds of TOT. Execute briefed threat countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to the MACCS.

Prerequisite. SAI-3400.

Ordnance. 1 TPOD, 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 TACTS Pod, 1 ALQ-164, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

AI-3402	1.3	R	2+	AV-8B	A	NS
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Goal. Introduce night medium altitude AI with an RF SAM threat.

Requirement. Conduct a medium altitude AI in a section or division with an RF SAM threat.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JMEMs derived) level of destruction criteria via a valid weapons release within +/- 15 seconds of TOT. Execute briefed threat countertactics IAW allowable risk. Weapon impact within +/- 15 seconds of TOT. Communicate an accurate IFREP to the MACCS.

Prerequisite. NS-2605, AI-3401.

Ordnance. 1 TPOD, 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 TACTS Pod, 1 ALQ-164, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

6. Expeditionary Shore-Based Operations (EXP)

a. Purpose. Maintain proficiency in operations at airfields away from home field and/or in theatre.

b. General. Flight with NVDs is authorized if current and proficient in the Night Systems Core Skill. When a FAM 2102 is successfully executed, it will update EXP 3500.

EXP-3500	1.3	365	R	1	AV-8B	A	(NS)
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Goal. Review expeditionary shore-based operations.

Requirement. Review procedures specific to CONUS airfields other than local fields. Review special procedures for airfields outside CONUS including any unique flight filing requirements.

Performance Standard. Successfully conduct take-off and landing operations. This flight may be logged in conjunction with any other training flight when executed outside of the homefield boundaries.

Prerequisite. Fam stage complete.

8. ACPM Mission Skill Training Events

- a. AACPM-8300, Air Defense.
- b. AACPM-8310, Forward Arming Refueling Point (FARP) Operations.
- c. AACPM-8311, Marine Corps Tactical Fuel Systems.
- d. AACPM-8320, Joint Structure & Joint Air Operations.
- e. AACPM-8321, Joint Air Tasking Cycle Phase 1: Strategy Development.
- f. AACPM-8322, Joint Air Tasking Cycle Phase 2: Target Development.
- g. AACPM-8323, Joint Air Tasking Cycle Phase 3: Weaponneering and Allocation.
- h. AACPM-8324, Joint Air Tasking Cycle Phase 4: Joint ATO Production.
- i. AACPM-8325, Joint Air Tasking Cycle Phase 5: Force Execution.
- j. AACPM-8326, Joint Air Tasking Cycle Phase 6: Combat Assessment.
- k. AACPM-8340, Integrating Fires & Airspace Within the MAGTF.
- l. AACPM-8350, Phasing Control Ashore.
- m. AACPM-8351, TACRON Organizations and Functions.

212. CORE PLUS PHASE

1. Core Plus Training

a. 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.

b. General. Instructor supervision requirements are stipulated specifically for each stage.

2. Day Field Carrier Landing Practice (DAY) (FCLP (D))

a. Purpose. Review FCLP(D) qualification.

b. General

(1) An LSO shall instruct all events IAW V/STOL / LSO NATOPS.

(2) All events shall be conducted at a simulated L-Class ship equipped with an optical landing system.



- (3) Perform takeoffs and landings as required by V/STOL / LSO NATOPS.
- (4) Completion of this stage constitutes FCLP(D) qualification.

c. Ground/Academic Training

(1) Readings

- (a) Review V/STOL Shipboard and LSO NATOPS Manual.
- (b) Review LHA/LHD/MCS NATOPS Manual.

(2) Lectures. Receive the following AV-8B courseware lectures:

- (a) AFCLP-2060, V/STOL / LSO NATOPS, Part 1.
- (b) AFCLP-2061, V/STOL / LSO NATOPS, Part 2.
- (c) AFCLP-2062, LHA/LHD/MCS NATOPS.
- (d) AFCLP-2063, DAY FCLP.

SFCLP-4100	1.0	*	R	RNAWST	S
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Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship.

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-2102.

FCLP-4101	2.0	365	R	1 AV-8B	A
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Goal. Review day FCLP.

Requirement. Review day FCLP normal and emergency procedures to a simulated L-Class ship.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SFCLP-4100.

External Syllabus Support. FCLP facility.

3. Night Field Carrier Landing Practice (NIGHT) (FCLP (N))

- a. Purpose. Complete FCLP(N) qualification.

b. General

- (1) An LSO shall instruct all events IAW V/STOL / LSO NATOPS.
- (2) All events shall be conducted at a simulated L-Class ship equipped with an optical landing system.
- (3) Perform takeoffs and landings as required by V/STOL / LSO NATOPS.
- (4) For initial qualifications, 2 CCA approaches shall be completed during daylight conditions prior to commencing night training.
- (5) Completion of this stage constitutes FCLP(N) qualification.

c. Ground/Academic Training

- (1) Lectures. Receive the following AV-8B courseware lectures:

(a) AFCLP-4004, Night FCLP, Unaided.

(b) AFCLP-4005, Night FCLP, Aided.

SFCLP(N)-4102 1.0 \* R RNAWST S N

Goal. Introduce FCLP at night (unaided).

Requirement. Perform night (unaided) FCLP normal and emergency procedures to a simulated L-Class ship. Perform Case 3 recoveries. Perform CCA and AWLS approaches.

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.

FCLP(N)-4103 2.0 \* R 1 AV-8B A N

Goal. Introduce FCLP at night (unaided).

Requirement. Perform night (unaided) FCLP normal and emergency procedures to a simulated L-Class ship. Perform Case 3 recoveries.

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.

External Syllabus Support. FCLP Facility.

SFCLP(N)-4104 1.0 \* R RNAWST S NS

Goal. Introduce FCLP at night (aided).

Requirement. Perform night (aided) FCLP normal and emergency procedures to a simulated L-Class ship. Perform Case 1 recoveries.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SFCLP-4102, NS-2605.

FCLP(N)-4105    2.0       365       R   1 AV-8B   A   NS

Goal. Introduce FCLP at night (aided).

Requirement. Perform night (aided) FCLP normal and emergency procedures to a simulated L-Class ship. Perform Case 1 recoveries.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SFCLP-4103, FCLP-4104.

External Syllabus Support. NVD-compatible FCLP facility.

4. Day Carrier Qualification (DAY) (CQ (D))

a. Purpose. Complete CQ(D) qualification.

b. General

(1) An LSO shall instruct all events IAW V/STOL / LSO NATOPS.

(2) Perform takeoffs and landings as required by V/STOL / LSO NATOPS.

(3) Completion of this stage constitutes CQ(D) qualification.

c. Ground/Academic Training. Receive the following AV-8B courseware lecture: ACQ-4006, Day CQ.

SCQ(D)-4130    1.0       \*       R   RNAWST   S       D

Goal. Perform day CQ.

Requirement. Perform day CQ normal and emergency procedures to a simulated L-Class ship. Introduce Case 1 recoveries.

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.

CQ(D)-4131    3.0       365       R   1 AV-8B   A       D

Goal. Complete day CQ qualification.

Requirement. Perform day CQ normal and emergency procedures to an L-Class ship. Perform Case 1, 2, and 3 recoveries (time and fuel permitting) including TACAN Primary and Overhead, CCA, and needles approaches.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. SCQ-4130, FCLP-4101.

External Syllabus Support. L-Class ship.

4. Night Carrier Qualification (NIGHT) (CQ(N))

a. Purpose. Complete CQ(N) qualification.

b. General

(1) An LSO shall instruct all events IAW V/STOL / LSO NATOPS.

(2) Perform takeoffs and landings as required by V/STOL / LSO NATOPS.

(3) Completion of this stage constitutes CQ(N) qualification.

c. Ground/Academic Training. Review the following AV-8B courseware lecture: ACQ-4007, Night CQ.

SCQ(N)-4133	1.0	*	R	RNAWST	S	N
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Goal. Perform CQ at night (unaided).

Requirement. Perform night (unaided) CQ normal and emergency procedures to a simulated L-Class ship. Perform Case 3 recoveries. Perform CCA and AWLS approaches.

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. SCQ-4130, SFCLP-4102

CQ(N)-4134	2.0	*	R	1 AV-8B	A	N
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Goal. Perform CQ at night (unaided).

Requirement. Perform night (unaided) CQ normal and emergency procedures to an L-Class ship. Perform Case 3 recoveries including TACAN Primary and Overhead, CCA, and needles approaches.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. CQ-4131, SCQ-4133, FCLP-4103.

External Syllabus Support. L-Class ship.

SCQ(N)-4135      1.0      \*      R   RNAWST   S   NS

Goal. Perform CQ at night (aided).

Requirement. Perform night (aided) CQ normal and emergency procedures to a simulated L-Class ship. Perform Case 1 recoveries.

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, SNCQ-4133.

CQ(N)-4136      3.0      365      R   1 AV-8B   A   NS

Goal. Perform CQ at night (aided).

Requirement. Perform night (aided) CQ normal and emergency procedures to an L-Class ship. Perform Case 1 recoveries.

Performance Standard. Execute all procedures IAW AV-8B NATOPS, V/STOL / LSO NATOPS, Shipboard Operating Bulletin, and LHA/LHD NATOPS.

Prerequisite. CQ-4131, SCQ-4135, FCLP-4105.

External Syllabus Support. L-Class ship.

5. Forward Operating Base Operations (FOB)

a. Purpose. Complete FOB qualification (ISO Shore-Based Expeditionary Restricted-RESTR).

b. General

(1) An LSS shall instruct all events.

(2) Completion of this stage constitutes FOB(N) qualification.

c. Ground/Academic Training

(1) Readings. Review the following:

(a) NAVAIR 00-80-T-115, Expeditionary Airfields.

(b) Marine Corps Air Stations NATOPS Manual.

(2) Lectures. Review the following AV-8B courseware lecture: AFOB-4008, Forward Base Operations.

SFOB-4161      1.0      \*      R   RNAWST   S   D

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 is required for completion.

Performance Standard. Execute all procedures IAW NATOPS. Achieve an average pass grade of 2.5.

Prerequisite. Complete ground/academic training, FAM-2102.

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FOB-4162	2.0	365	R	1	AV-8B	A	D
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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 is required for completion.

Performance Standard. Execute all procedures IAW NATOPS. Achieve an average pass grade of 2.5.

Prerequisite. SFOB-4161.

External Syllabus Support. Air Facility or Road.

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SFOB-4163	1.0	*	R	RNAWST	S	NS
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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 is required for completion.

Performance Standard. Execute all procedures IAW NATOPS and Air NTTP. Achieve an average pass grade of 2.5.

Prerequisite. NS-2605, SFOB-4161.

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FOB-4164	2.0	365	R	1	AV-8B	A	NS
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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 is required for completion.

Performance Standard. Execute all procedures IAW NATOPS and Air NTTP. Achieve an average pass grade of 2.5.

Prerequisite. NS-2605, FOB-4162, SFOB-4163

External Syllabus Support. Air Facility or Road.

6. Advanced Low Altitude Tactics (ADV LAT)

a. Purpose. Complete NSQ LAT qualification.

b. General

(1) All training shall be conducted IAW NAVMC DIR 3500.14, Aviation Training and Readiness Program Manual, Chapter 3, Rules of Conduct.

(2) All mission planning and flight briefs shall include BAM/BASH data and current route obstructions and consideration (ECHUM).

(3) Prerequisites for NS LAT training are NSQ QUAL and LAT QUAL.

(4) An NSLATI shall instruct all flight events and ground/academic training.

c. Ground/Academic Training. Receive the following MAWTS-1 Common Courseware lecture: ALAT-4009, NS LAT Considerations.

SADV LAT-4200 1.0 \* RNAWST S NS

Goal. Introduce basic and advanced NS LAT.

Requirement. 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 1 transition to LAT, 2 SOJ, 2 TOJ, 2 ROJ, 2 guns jink, and 2 break turns. Instruction shall emphasize TCT and MCT; efficient scan techniques that enable aerodynamic, vector, and altitude control; and adherence to the 10-degree rule, the 50-percent rule, and dive recovery rules.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Execute all procedures IAW Air NTPP. Adhere to LAT ROC. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. Complete ground/academic training. LAT-2403, NS-2605.

Ordinance. ALQ-164, Expendables.

SADV LAT-4201 1.0 180 R RNAWST S NS

Goal. Review basic and advanced NS LAT. Introduce target attacks and threat countertactics in the LAT environment.

Requirement. Review all basic and advanced LAT maneuvers and threat countertactics at night. Perform 2 attacks at low altitude. Instruction shall emphasize sensor management, deconfliction, mutual support, standardized communications, threat recognition, identification and assessment, decision

points on a threat matrix, and reactions versus a threat engagement timeline.

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 Planning, Briefing, and Debriefing Guide. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. SLAT-4200.

ADV LAT-4202    1.3       180       2 AV-8B    A    NS

Goal. Introduce basic NS LAT.

Requirement. As a chased aircraft, perform basic LAT procedures at night on closed LAT circuit. Practice straight and level flight, level turns, sustained and hard turns, ridgeline crossings, terrain masking, and climb-to-cope. Instruction shall emphasize TCT and MCT and efficient scan techniques that enable aerodynamic, vector, and altitude control.

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 TCT and MCT.

Prerequisite. SLAT-4201.

Range Requirement. Reference Range Support Matrix.

ADV LAT-4203    1.3       180       R    2 AV-8B    A    NS

Goal. Introduce advanced NS LAT.

Requirement. As a chased aircraft, perform all basic and advanced LAT procedures, including 1 target attack (with simulated ordnance) at night on a closed LAT circuit. Instruction shall emphasize TCT and MCT, sensor management, threat recognition, identification and assessment, decision points on a threat matrix, and reactions versus threat engagement timeline.

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 Planning, Briefing, and Debriefing Guide. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. LAT-4202.

Ordnance. 1 ALQ-164, 20 Chaff, 40 Flares.



Range Requirement. Reference Range Support Matrix.

ADV LAT-4204    1.3        180        2 AV-8B    A    NS

Goal. Introduce NS LAT as a wingman.

Requirement. As a wingman, perform basic and advanced LAT in section planned LAT circuit. Instruction shall emphasize MCT, position keeping, mutual support, deconfliction, and roles/responsibilities.

Performance Standard. Maintain a minimum of 300-foot clearance of all obstructions. Maintain formation parameters IAW Air NTTP. Execute all procedures IAW Air NTTP. Adhere to LAT ROC. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. LAT-4203.

Range Requirement. Reference Range Support Matrix.

ADV LAT-4205    1.3        180        R 2 AV-8B    A    NS

Goal. Introduce target area tactics at low altitude at night.

Requirement. As a lead, and then as a wingman, execute 2 target attacks at low altitude. Practice section threat countertactics at low altitude. Instruction shall emphasize TCT and MCT, attack geometry, mutual support, and standardized communications.

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 Planning, Briefing, and Debriefing Guide. Demonstrate proficient cockpit management including TCT and MCT.

Prerequisite. LAT-4204.

Ordinance. 1 ALQ-164, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.

## 7. Aerial Escort (AE)

a. Purpose. Develop proficiency in Assault Support Escort (ASE) and Ground Convoy Escort (GCE).

b. General. A Section or Division Lead shall instruct all events.

c. Ground/Academic Training

(1) Readings. Air NTTP 3-22.3, Chapter 12, Escort.

(2) Lectures. Receive the following MAWTS-1 Common Courseware lecture: AAE-4010, Assault Support Escort.

AE-4300            1.3            365            R    2/2+ AV-8B    A    (NS)

Goal. Conduct an ASE mission.

Requirement. Perform ASE. Planning and briefing shall include mission tasking; attached, detached, and/or combined escort gameplans; execution checklist integration; communication plan; assault routing; surface-to-air threat engagement gameplans; actions at the landing zone; Initial Terminal Guidance (ITG); and fires coordination, ROE, and AMC and EFL roles/responsibilities. Scenario must include either an actual or simulated surface-to-air threat.

Performance Standard. Execute all taskings (CAS, AR) IAW Air NTTP. Maintain awareness of the assault package and status of execution checklist. Adhere to ROE and briefed fires coordination gameplan.

Prerequisite. Complete ground/academic training, CAS-3103, CAS-3104, (CAS-3105, CAS-3106 if conducted at night), AR-3201, AR-3202, (AR-3203 if conducted at night).

Ordinance. 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, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Assault Support assets.

AE-4301            1.3            365            R    2/2+ AV-8B    A    (NS)

Goal. Conduct a GCE escort mission.

Requirement. Perform ground convoy escort. Planning and briefing shall include mission tasking; convoy objectives; attached, detached, and/or combined escort gameplans; communication plan; convoy routing; surface threat to the convoy; convoy actions on contact; and fires coordination, ROE, and convoy commander roles/responsibilities.

Performance Standard. Execute all taskings (CAS, AR) IAW Air NTTP. Maintain awareness of the convoy. Adhere to ROE and briefed fires coordination gameplan.

Prerequisite. Complete ground/academic training, CAS-3103, CAS-3104, (CAS-3105, CAS-3106 if conducted at night), AR-3201, AR-3202, (AR-3203 if conducted at night).

Ordinance. 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, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Ground convoy.

8. Low Altitude CAS (LLCAS)

a. Purpose. Develop proficiency in CAS execution during day and night missions at low altitude in a medium to high threat environment.

b. General. A Section or Division Lead shall instruct all events.

c. Ground/Academic Training

(1) Unclassified Readings. Air NTTP 3-22.3-AV8B:

(a) Review Chapter 4, LAT.

(b) Review Chapter 8, Close Air Support.

(2) Chalk Talks/Practical Application. AOAS-4011, Low Altitude CAS execution.

LLCAS-4400      1.3      365      R   2 AV-8B   A   (NS)

Goal. Introduce CAS at low altitude, day or night at comfort level.

Requirement. Conduct 2 attacks under Type 1, 2, or 3 control. Emphasize systems management, target PID, target area tactics, reactive weaponeering, threat countertactics, and standardized communications.

Performance Standard. Maintain minimum TCT while accomplishing MCT. Execute IAW with JPub 3-09.3 and Air NTTP. Execute briefed air-to-surface timeline and surface-to-air threat countertactics. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Weapon impacts within CEP. TOT +/- 30 seconds.

Prerequisite. Complete ground/academic training. LAT qual, CAS-3103, CAS-3104, (CAS-3105, CAS-3106, LAT-4205 if flown at night).

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Support Syllabus. JTAC.

8. Low Altitude AI (LLAI)

a. Purpose. Develop proficiency in AI execution during day and night missions at low altitude in a medium to high threat environment.

b. General. A section or division lead shall instruct all events.

c. Ground/Academic Training

(1) Classified Readings. Air NTTP 3-22.1-AV8B, Review Chapter 4, Air Interdiction.

(2) Chalk Talks/Practical Application. AOAS-4012, Low Altitude AI execution.

LLAI-4401      1.3      365      R   2+ AV-8B   A   (NS)

Goal. Introduce low altitude AI in a medium threat environment at comfort level.

Requirement. Conduct a low altitude AI with an RF SAM and air-to-air threat.

Performance Standard. Adhere to ACM training rules. Execute IAW Air NTTP. Execute briefed air-to-surface timeline. Execute briefed surface-to-air threat countertactics. Weapon impact within +/- 15 seconds of TOT. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Comply with Tactical Abort Parameters. Weapon impacts within CEP. Communicate an accurate IFREP to the MACCS. Correct ALSA Communication Brevity.

Prerequisite. LAT qual, AI-3401. (LAT-4205, AI-3402, if flown at night.) With adversary air threat participating, shall be led by ACTI or ACMFL and wingmen shall be ACM QUAL (AA-2705, AA-2708).

Ordinance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 2 CBU-99/2 Mk-77, 1 CATM-9, 1 TACTS Pod, 1 ALQ-164, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. GCI/AIC, Adversary.

9. Multi-sensor Imagery Reconnaissance (MIR)

a. Purpose. Develop proficiency in executing MIR.

b. General. A WTO shall instruct all events.

c. Ground/Academic Training

(1) Receive the following ACPM lecture: AACPM-8641, MAGTF Theater & National ISR Employment

(2) Review squadron or MAG TPOD video library from contingency operations focusing on IED and suspicious activity detection.

MIR-4500      1.3      365      R   2 AV-8B   A   (NS)

Goal. Perform MIR.

Requirement. Conduct MIR. Planning and briefing shall include detailed mission tasking; detailed waypoint plan to support intelligence objectives; detailed sensor footprint and supporting flight profile; sensor FOV/Zoom plan, optics/polarity plan, and RADAR mapping plan; and data collection and communication requirements. Debrief with tasking unit including 8mm tape review and capture.

Performance Standard. Execute all mission tasking IAW Air NTTP.

Prerequisite. AS stage complete. Complete ground/academic training. (NS-2605, if flown at night).

Ordinance. 1 TPOD.

Range Requirement. Reference Range Support Matrix.

10. Active Air Defense (AAD)

a. Purpose. Complete Air Defense qualification.

b. General

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

(2) Completion of this stage constitutes ACM qualified.

(3) An AV-8B ACTI or VFMT-401 ATI shall instruct all initial training events. Adversaries may be similar or dissimilar, provided instructor requirements are met.

c. Ground/Academic Training

(1) Receive the following AV-8B courseware lecture: AAD-4013, Combat Section Tactics.

(2) Chalk Talks/Practical Application:

(a) AAD-4014, AV-8B Intercept Mechanics (MAWTS-1 ASP).

(b) AAD-4015, Air-to-Air Timelines.

1 SAR-1 Threat.

a Bogey Declaration.

b Hostile Declaration.

2 IR-2/3 Threat.

a Bogey Declaration.

b Hostile Declaration.

(c) AAD-4016, DARG Considerations.

SAAD-4600 1.0 \* RNAWST S

Goal. Introduce section intercepts against a single IR-2+ group.

Requirement. Perform 4 forward quarter single-side offset (SSO) intercepts against a single group adversary requiring PHID via VID. Adversaries will include both aware and unaware aircraft, Cat II-III and IR-2+ only. Adversary shall be at 500 feet for 1 engagement. Instruction shall include evaluating target Mach, altitude, closure, and aspect cues. Adversaries shall be both maneuvering and non-maneuvering. Instruction for actions coming to the merge will include sweep geometry as well as visual bracket. Review AIM-9M-8, AIM-120 employment and air-to-air threat countertactics and employment.

Performance Standard. Execute SSO procedures IAW Air NTTP. Adhere to air-to-air timeline, contracts, criteria, and RADAR mechanics. Execute briefed threat countertactics gameplan. Accurate adversary formation analysis and sort IAW brief. 100% valid shots.

Prerequisite. Complete ground/academic training. AA stage complete.

Ordinance. 2 AIM-9M-8, 2 AIM-120, Expendables.

SAAD-4601 1.0 \* RNAWST S (NS)

Goal. Introduce short-range RADAR mechanics.

Requirement. Perform 3 forward quarter intercepts from a CAP against a pop-up single group, aware, IR-2 Category II adversary within 25 nm. Perform 1 rear quarter engagement against a pop-up single group, aware, IR-2+ Category II+ adversary within 20 nm. Instruction shall include low SA RADAR set mechanics, ACM modes, Bracket (visual and RADAR) geometry, sweep geometry, and recommit criteria. Review GCI/AIC integration. Review AIM-9M-8, AIM-120 employment and threat countertactics.

Performance Standard. Execute SSO procedures IAW Air NTTP. Adhere to air-to-air timeline, contracts, and criteria. Execute briefed threat countertactics gameplan. Accurate adversary formation analysis and sort IAW brief. 100% valid shots.

Prerequisite. SAD-4600.

Ordinance. 2 AIM-9M-8, 2 AIM-120, Expendables.

SAAD-4602 1.0 \* R RNAWST S (NS)

Goal. Introduce section intercepts against a single SAR-1 group.

Requirement. Perform 4 forward quarter intercepts against a single group, PID satisfied and PID not satisfied, Cat II-III, SAR-1-capable adversary. Adversaries shall be both maneuvering and non-maneuvering, both bogey and hostile, at various altitudes (one at 500 feet) and speeds greater than 0.9 IMN, along with showing awareness at differing times (DR, MAR, and MNR) during the intercept. Actions at DR, MAR, and MNR shall be briefed and executed. Instruction shall include air-to-air timeline, GCI/AIC integration, contracts, criteria, and threat countertactics beyond visual range. Review AIM-9M-8, AIM-120 employment and forward quarter missile defense.

Performance Standard. Execute SSO procedures and DR mechanics IAW Air NTTP. Adhere to air-to-air timeline, contracts, and criteria. Execute briefed threat countertactics gameplan. Accurate adversary formation analysis and sort IAW brief. 100% valid shots.

Prerequisite. SAD-4601, (NS-2605 if aided).

Ordnance. 2 AIM-9M-8, 2 AIM-120, Expendables.

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SAAD-4603	1.0	*	RNAWST	S	(NS)
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Goal. Two-group and decoy tactics.

Requirement. From a CAP, perform 4 intercepts against 2 groups presentations of maneuvering, SAR-1-capable, Category III adversary. Adversary presentations shall include azimuth and range presentations at different altitudes. Adversary groups shall be in section. Adversary maneuvers shall simulate Level 3 decoy tactics.

Performance Standard. Execute DCA procedures IAW Air NTTP. Adhere to air-to-air timeline, contracts, and criteria. Execute briefed air-to-air threat countertactics gameplan. Accurate adversary formation analysis and sort IAW brief. 100% valid shots.

Prerequisite. SAD-4602.

Ordnance. 2 AIM-9M-8, 2 AIM-120, Expendables.

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SAAD-4604	1.0	*	R	RNAWST	S	(NS)
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Goal. Introduce DARG in a JEZ for a continuous VUL.

Requirement. Perform 4 engagements against 2 sortable groups, SAR-1-capable sweepers and IR-2-capable strikers. Adversary group formations shall include azimuth, range, and heavy presentations and ingress altitude between 500 ft AGL and 40,000 ft MSL. Instruction shall include air-to-air timeline; GCI/AIC integration; organic ESG capabilities, limitations, and utilization; contracts; criteria; and air-to-air threat countertactics beyond visual range. Review AIM-9M-8, AIM-120 employment and forward quarter missile defense.

Performance Standard. Execute SSO procedures and DR mechanics IAW Air NTTP. Adhere to air-to-air timeline, contracts, and criteria. Utilization of ESG capabilities demonstrated. Execute briefed air-to-air threat countertactics gameplan. Accurate adversary formation analysis and sort IAW brief. 100% valid shots.

Prerequisite. SAD-4603, (NS-2605 if aided).

Ordinance. 2 AIM-9M-8, 2 AIM-120, Expendables.

AAD-4605      1.3      180      2+ AV-8BII+    A    (NS)

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

Requirement. From a tap-the-cap setup, perform 3 intercepts beginning at 10 nm against IR-2+ Category II-III adversary: 1 forward quarter entry, 1 beam entry, and 1 rear quarter entry (i.e., Staggerback). PHID via VID is required. No pre-merge kills allowed. Instruction shall include SRR mechanics, RADAR and visual bracket geometry, sweep geometry, post-merge gameplans, engaged and supporting fighter contracts, ACM training rules application, applicable ALSA communications, and air-to-air threat countertactics.

Performance Standard. Adhere to ACM training rules. Execute briefed contracts and gameplans. Execute briefed threat countertactics gameplan. 100% valid shots.

Prerequisite. SAD-4604, (NS-2605 if aided).

Ordinance. 1 CATM-9, 1 TACTS Pod, 30 Chaff, 30 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. TACTS, GCI/AIC, 1 Adversary (Dissimilar Preferred).

AAD-4606      1.3      180      R    2+ AV-8BII+    A    (NS)

Goal. Introduce section intercepts against a single group.

Requirement. Perform a minimum of 3 forward quarter intercepts against a single group, both aware and unaware, SAR-1-capable adversary. Adversaries shall be both maneuvering and non-maneuvering, showing awareness at various ranges, at altitudes ranging from 5,000 to 30,000 feet and speeds greater than 0.9IMN. Profiles should include PHID scenarios as well as hostile-at-the-commit scenarios. Actions at DR, MAR, and MNR shall be briefed and executed. Instruction shall include air-to-air timeline, GCI/AIC integration, contracts, criteria, and air-to-air threat countertactics beyond visual range. Review AIM-9M-8 employment and FQMD.

Performance Standard. Execute intercept procedures IAW Air NTTP. Adhere to air-to-air timeline, contracts, and criteria.



Execute briefed air-to-air threat countertactics gameplan.  
Accurate adversary formation analysis and sort IAW brief.  
100% valid shots.

Prerequisite. AD-4605, (NS-2605 if aided).

Ordinance. 1 CATM-9, 1 TACTS Pod, 30 Chaff, 30 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. TACTS, GCI/AIC, 2 SAR-1 Capable  
Dissimilar Adversaries.

AAD-4607      1.3      180      R   2+ AV-8BII+   A   (NS)

Goal. 2 V X DARG(point defense).

Requirement. Perform a point defense. Emphasize ROE, ALSA communications, threat countertactics, mutual support, and incorporating organic ESG capabilities in a JEZ. Complete 3 engagements: two groups range (sweeper/striker) and a single group heavy (SES) profiles should be conducted.

Performance Standard. Adhere to ACM training rules. Delay, deny, and destroy threat aircraft IAW ROE for a 30-minute VUL. Adhere to air-to-air timeline, contracts, and criteria. Execute briefed air-to-air threat countertactics gameplan. Utilize organic ESG assets. Accurate adversary formation analysis and sort IAW brief. 100% valid shots.

Prerequisite. AD-4606, (NS-2605 if aided).

Ordinance. 1 CATM-9, 1 TACTS Pod, 30 Chaff, 30 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. TACTS Range, GCI/AIC,  
RADAR-Equipped Dissimilar Adversary (2 min).

#### 11. Offensive Anti-Air Warfare (OAAW)

a. Purpose. Develop proficiency in OAAW execution during day and night missions in a medium threat environment.

b. General. An ACTI or ACMFL shall lead all events. Wingman must be ACM qualified.

SOAAW-4700      1.0      \*      RNAWST   S

Goal. Introduce medium altitude AI with an RF SAM air-to-surface and air-to-air threat.

Requirement. Perform a medium altitude AI with a surface-to-air and air-to-air threat.

Performance Standard. Execute tactics IAW Air NTTP. Execute briefed air-to-surface and air-to-air timelines. Execute

briefed surface-to-air and air-to-air threat countertactics. Weapon impact within +/- 15 seconds of TOT. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide. Comply with Tactical Abort Parameters. Weapon impacts within CEP. Communicate an accurate IFREP to the MACCS.

Prerequisite. AA-2705, AA-2708, AI-3401, AI-3402.

Ordnance. TPOD (centerline), 2 300-gallon fuel tanks, 2 GBU-32, 2 AIM-9M-8, Expendables.

OAAW-4701      1.3      180      R    2+ AV-8B    A    (NS)

Goal. Introduce medium altitude AI with an RF SAM air-to-surface and air-to-air threat.

Requirement. Conduct a medium altitude AI in a section with a surface-to-air and air-to-air threat.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JMEMs derived) level of destruction criteria via a valid weapons release within +/- 15 seconds of TOT. Execute briefed surface-to-air and air-to-air threat countertactics IAW allowable risk. Communicate an accurate IFREP to the MACCS.

Prerequisite. SOAAW-4700.

Ordnance. 1 TPOD, 1 TACTS Pod, 3 GBU-12/3 GBU-16/3 GBU-32/3 GBU-38, 1 ALQ-164, 1 CATM-9, 30 Chaff, 30 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. AIC/GCI, RADAR-Equipped Adversary.

OAAW-4702      1.3      R      3+ AV-8B    A    (NS)

Goal. Introduce medium altitude division AI with an RF SAM air-to-surface and air-to-air threat.

Requirement. Conduct a medium altitude AI in a division with a surface-to-air and air-to-air threat.

Performance Standard. Execute tactics IAW Air NTTP. Locate correct target and achieve briefed (JMEMs derived) level of destruction criteria via a valid weapons release within +/- 15 seconds of TOT. Execute briefed surface-to-air and air-to-air threat countertactics IAW allowable risk. Communicate an accurate IFREP to the MACCS.

Prerequisite. OAAW-4701.

Ordnance. 1 TPOD, 1 TACTS Pod, 3 GBU-12/3 GBU-16/3 GBU-32/3 GBU-38, 1 ALQ-164, 1 CATM-9, 30 Chaff, 30 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. AIC/GCI, RADAR-Equipped Adversary.

12. Large Force Exercise (LFE)

a. Purpose. Develop proficiency integrating in an LFE under daylight or night conditions.

b. General

(1) 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.

(2) The LFE shall include a surface-to-air and/or air-to-air threat.

(3) A WTI or Mission Commander shall instruct all events.

LFE-4800      1.3      365      4+ AV-8B    A      D

Goal. Execute a day LFE.

Requirement. Complete a day LFE.

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. AS stage complete. With adversary air threat participating, shall be led by ACTI or ACMFL and wingmen shall be ACM QUAL.

Ordinance. 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, 60 Chaff, 120 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Per Scenario.

LFE-4801      1.3      365      R    4+ AV-8B    A    NS

Goal. Execute a night LFE.

Requirement. Complete a night LFE.

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-2605, AS stage complete. With adversary air threat participating, event shall be led by ACTI or ACMFL and wingmen shall be ACM QUAL.

Ordnance. 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, 60 Chaff, 120 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Per Scenario.

12. Forward Air Controller (Airborne) [FAC(A)]

a. Purpose. Complete FAC(A) qualification.

b. General

(1) The JCAS AP MOA 2004-02 (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 SIPRNET at <http://jfaca.mawts-1.usmc.smil.mil>.

(2) Prior to beginning this stage, an AV-8B pilot shall, at a minimum, be a division lead and WTO.

(3) Upon completion of FAC(A)-4912, 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.

(4) Unqualified pilots will fly SFAC(A)-4900 through FAC(A)-4912 with a MAWTS-1 certified FAC(A)I designated by the commanding officer. The FAC(A)I will fly in the escort aircraft. Any USMC FA-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.

(5) 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.

(6) FAC(A)-4900 through FAC(A)-4908 are work-up events. 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 syllabus.

(7) SFAC(A)-4909 through FAC(A)-4912 are exercises in integrating the fire support assets previously controlled separately. The intent is to expose prospective FAC(A) pilots to the unique challenges posed by each asset when integrated with fixed-wing CAS. The first simulator integrates fixed-wing CAS attacks with IDFS. The second simulator integrates fixed wing CAS attacks, rotary wing CAS attacks, and IDFS. Each sortie in the aircraft must integrate fixed wing CAS attacks with at least one separate and dissimilar

fire support asset. If FAC(A)-4911 integrates IDFS assets, FAC(A)-4912 should integrate RW/UAS CAS, and vice versa. If RW/UAS assets are integrated, emphasis is on combined or sectorized sequential attacks. If IDFS is integrated, emphasis is on altitude or lateral deconfliction of fires effects using standard SEAD templates. At a minimum, IDFS must be integrated into one of these two final sorties.

(8) Due to the high task-loading nature of the FAC(A) mission, pilots who achieved their initial FAC(A) qualification in an FA-18D will complete the entire qualification syllabus in an AV-8B prior to being FAC(A) qualified in an AV-8B squadron.

(9) Failure to meet JFAC(A) MOA proficiency or currency requirements or loss of proficiency (delinquent refly factor) for all associated FAC(A) qualification events (per paragraph 500.1.b) constitutes loss of the FAC(A) qualification.

(10) 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 and category (appropriate night, control type, ordnance, etc.) of controls the individual failed to accomplish during the appropriate currency or proficiency period (currency - 2 controls in 90 days; proficiency - 6 controls in a 6-month period; 4 of these 6 controls must be Type 1, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

(11) Pilots who have lost the FAC(A) qualification due to exceeding the refly interval in all associated qualification events or who have been FAC(A) unqualified for 18 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the appropriate Refresher FAC(A) syllabus under the supervision of a FAC(A)I and conducting a minimum of 6 controls (4 of these 6 controls must be Type 1, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

(12) The intent of the T&R refly intervals is to meet the JFAC(A) MOA minimum requirements for currency/proficiency controls:

JFAC(A) MOA REQUIREMENTS				
Interval	Controls	Type 1	Night	Ordnance
90 days	2	*	*	*
180 days	6	4	1	1
Initial Certification	12	8	1	4
*No specified requirements in these areas for this interval				

(13) Escort aircraft that are not flown by a FAC(A)I conducting instruction during a FAC(A) work-up will log an ESC-4951. 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.

c. Ground/Academic Training. JFAC(A) Common Lectures located on the MAWTS-1 SIPR website [www.mawts1.usmc.smil.mil](http://www.mawts1.usmc.smil.mil) Lectures must be taught by a current FAC(A)I. Recommend PFAC(A)I attend FAC(A) ground school at EWTGPAC. Reference JFAC(A) MOA for detailed information on FAC(A) training.

SFAC(A)-4900    1.0       \*       RNAWST    S       D

Goal. Type 1, 2, and 3 control procedures in a day, low threat environment.

Requirement. Perform Type 1, 2, and 3 controls. Emphasize C3 integration, target area flow, and timing; sensor management; and Crew Resource Management. Execute 2 Type 1, 2 Type 2, and 1 Type 3 controls. The FAC(A)I shall simulate C3 agencies, TACP, and CAS aircraft.

Performance Standard. Execute Type 1, 2, and 3 control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. 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. Complete ground/academic training IAW JFAC(A) MOA. Must be a Division Leader with prior ground FAC or FAC(A) experience or a Mission Commander.

SFAC(A)-4901    1.0       \*       RNAWST    S    NS

Goal. Type 1, 2, and 3 control procedures in a night, low threat environment.

Requirement. Perform Type 1, 2, and 3 controls. Conduct SEAD CFF. Emphasize C3 integration, target area flow, and timing; sensor management; and Crew Resource Management. Execute 2 Type 1, 2 Type 2, and 1 Type 3 controls. Conduct SEAD CFF in conjunction with all attacks conducted under Type 1 and Type 2 control. The FAC(A)I shall simulate C3 agencies, TACP, IDFS, and CAS aircraft.

Performance Standard. Execute Type 1, 2, and 3 terminal attack control IAW JPub 3-09.3. Proper communication format with the firing unit. Accurate target coordinate and 9-line generation. 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)-4900.

Ordinance. TPOD, 4 5" Rockets and/or Mk-82, Expendables.

SFAC(A)-4902    1.0       \*       RNAWST    S       D

Goal. Introduce Type 1, 2, and 3 control procedures in a daylight, urban environment.

Requirement. In an urban environment, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on Gridded Reference Graphic (GRG). Perform authentication procedures. Perform 1 Type 1, 4 Type 2, and 1 Type 3 controls of aircraft. Provide GRG-based talk-ons and corrections. Provide BHA. The FAC(A)I shall simulate C3 agencies, TACP, and CAS aircraft.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1, 2, and 3 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Accurate talk-ons. 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)-4901.

Ordnance. TPOD, 4 5" Rockets and/or Mk-82, Expendables.

SFAC(A)-4903    1.0       \*       RNAWST   S   NS

Goal. Introduce Type 1, 2, and 3 control procedures in a night, urban environment.

Requirement. In a night, urban environment, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on Gridded Reference Graphic (GRG). Perform authentication procedures. Perform 1 Type 1, 4 Type 2, and 1 Type 3 controls of aircraft. Deliver or coordinate marking rounds as required. Provide GRG-based talk-ons and corrections. Provide BHA.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1, 2, and 3 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Accurate talk-ons. 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)-4902.

Ordnance. TPOD, 4 5" Rockets and/or Mk-82, Expendables.

FAC(A)-4904    1.3       180       R   2 AV-8B   A       D

Goal. Introduce Type 1 and 2 control procedures of fixed-wing CAS assets in a low threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures.

Perform 2 Type 1 and 2 Type 2 controls of fixed-wing aircraft utilizing level and roll-in delivery profiles. Deliver or coordinate LASER mark on target and guide 1 LGW to impact. Provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1 and 2 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Proper coordination and approval for CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Successfully provides LASER mark guiding LGW to impact. Correct ALSA Communication Brevity.

Prerequisite. SFAC(A)-4903.

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 7 2.75" Rockets/4 5" Rockets, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. One or 2 FW CAS elements with live, inert or captive PGMs or LASER Guided Weapons and a ground FAC/JTAC. LSTs are desired to assist with type 1 control.

FAC(A)-4905	1.3	90	R	2	AV-8B	A	(NS)
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Goal. Introduce Type 1 and 3 control procedures of fixed-wing CAS assets with GP ordnance in a low threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Perform 3 Type 1 and 1 Type 3 controls of fixed wing aircraft with GP ordnance. Deliver or coordinate marking rounds with at least 1 mark via aircraft ordnance. Provide talk-ons and corrections. Provide BHA.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1 and 3 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Marks target within 300 meters. Accurate talk-ons and corrections from the mark. 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)-4903.

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 7 2.75" Rockets/4 5" Rockets, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.



External Syllabus Support. One or 2 FW CAS elements with live or inert GP ordnance and a ground FAC/JTAC.

FAC(A)-4906      1.3      365      2 AV-8B   A   (NS)

Goal. Introduce Type 1, 2, and 3 control procedures of rotary wing CAS assets in a low threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Perform 2 Type 1, 2 Type 2, and 1 Type 3 controls of rotary wing aircraft. Deliver marking rounds or talk-on (rockets, guns, TOW) or provide LASER designation (Hellfire). For Type 1 controls of rockets or guns, emphasize providing corrections, ensuring compliance with limit-of-advance and providing threat lookout for rotary wing assets in the target area. When controlling TOW attacks, emphasize target sort and ensuring no friendlies in the SDZ. Two (actual or simulated) TOW and/or Hellfire controls are required for completion. One of the Type 2 controls must have the FAC(A) lasing the Hellfire. Provide BHA.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1, 2, and 3 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Marks target within 300 meters. Accurate talk-ons and corrections from the mark. 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)-4903.

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 7 2.75" Rockets/4 5" Rockets, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. One or two RW CAS elements with live/captive Hellfire and a ground FAC/JTAC.

FAC(A)-4907      1.3      \*      2 AV-8B   A   (NS)

Goal. Introduce mortar/artillery airspot.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare call-for-fire briefs. Emphasize accurate call-for-fire communications and adjustment procedures. Execute 1 LASER 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.

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. SFAC(A)-4903.

Ordinance. 1 TPOD, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Naval Surface Fire Support asset and a ground FAC or FO or NGLO. NSFS asset requires a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds.

FAC(A)-4908	1.3	180	R	2	AV-8B	A	NS
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Goal. Introduce Type 1 and 2 control procedures at night in a low threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 2 Type 1 and 2 Type 2 attacks by fixed-wing aircraft. Deliver or coordinate marks. At least 1 Type 1 control must use an IR pointer. At least 1 Type 1 control must be supported by air-delivered illumination. Provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1 and 2 control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. 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. FAC(A)-4904 through FAC(A)-4907.

Ordinance. 1 TPOD, 7 2.75" Rockets/4 5" Rockets/6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 4 LUU-19/4 LUU-2, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. One or 2 RW CAS elements with live/captive Hellfire and a ground FAC/JTAC.

SFAC(A)-4909    1.0    \*    RNAWST   S    D

Goal. Introduce multiple asset integration procedures in a day, high threat environment.

Requirement. Perform Type 1 high threat controls while integrating multiple assets. Emphasize C3 integration, target area flow and integration; sensor management; and Crew Resource Management. Execute 4 Type 1 controls of fixed-wing aircraft. A SEAD CFF mission shall be given for each TOT. The FAC(A)I shall simulate C3 agencies, TACP, indirect fire assets, and CAS aircraft. Weather is overcast at 8,000 feet.

Performance Standard. Execute Type 1 control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Proper communication format with the firing unit. Proper coordination and approval for IDF and CAS attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions. Correct ALSA Communication Brevity.

Prerequisite. FAC(A)-4908.

SFAC(A)-4910    1.0    \*    RNAWST   S    NS

Goal. Introduce multiple asset integration procedures in a night, medium threat environment.

Requirement. Perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Integrate 2 attacks combining fixed-wing CAS assets, rotary wing CAS assets, and IDFS. Provide BHA.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1 and 2 control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. 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. FAC(A)-4909.

FAC(A)-4911    1.3    365    R   2   AV-8B   A    D

Goal. Introduce multiple asset integration procedures in a day, medium threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 4 Type 1 attacks by fixed-wing aircraft employing medium threat tactics. A minimum of 2 attacks shall be pop-up attacks. Deliver or coordinate marks. Each 9-line attack for

fixed-wing CAS aircraft must be integrated with at least 1 additional fire support asset. Provide BHA.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1 control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. 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)-4910.

Ordnance. 1 TPOD, 6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 7 x 2.75" Rockets/4 x 5" Rockets, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. One FW CAS element, 1 additional Fire support asset (RW CAS/UAS CAS/IDFS) and a ground FAC/JTAC. If IDFS is to be used 10 HE rds, 4 WP rds for marking or suppression required.

FAC(A)-4912	1.3	365	R	2	AV-8B	A	NS
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Goal. Introduce asset integration procedures in a night, medium threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 2 Type 1 and 2 Type 2 attacks by fixed-wing aircraft employing medium threat tactics. Provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries. Each 9-line attack for fixed-wing CAS aircraft must be integrated with at least 1 additional fire support asset. Provide BHA.

Performance Standard. Executes appropriate search, detection, and PID profiles. Execute Type 1 and 2 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. 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. FAC(A)-4911.

Ordnance. 1 TPOD, 7 2.75" Rockets/4 5" Rockets/6 Mk-76/4 Mk-82/4 BDU-45/2 Mk-83/2 Mk-83 inert, 4 LUU-19/4 LUU-2, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. One FW CAS element, 1 additional Fire support asset (RW CAS/UAS CAS/IDFS) and a ground

FAC/JTAC. If IDFS is to be used 10 HE rds, 4 WP rds for marking or suppression required.

FAC(A)-4951      1.3      365      R   2 AV-8B   A   (NS)

Goal. Conduct Aerial Escort (AE) by introducing FAC(A) escort.

Requirement. Escort a FAC(A).

Performance Standard. Execute 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 received call-for-fire lecture from JFAC(A) Academic Support Package before being tasked to coordinate marks via SEAD CFF.

Ordinance. 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, 20 Chaff, 40 Flares.

Range Requirement. Reference Range Support Matrix.

## 213. INSTRUCTOR TRAINING PHASE

### 1. MAWTS-1 Certifications

a. Purpose. Enumerate MAWTS-1 instructor training syllabi.

b. 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.

c. Ground/Academic Training. Refer to the MAWTS-1 Course Catalogd.

SWTO-5100      1.0      \*      E   RNAWST   S

Goal. WTO certification simulator.

Requirement. See MAWTS-1 Course Catalog.

SWTO-5101      1.0      \*      E   RNAWST   S

Goal. WTO certification simulator.

Requirement. See MAWTS-1 Course Catalog.

SWTO-5102      1.0      \*      E   RNAWST   S

Goal. WTO certification simulator.

Requirement. See MAWTS-1 Course Catalog.

<u>SWTO-5103</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>RNAWST</u>	<u>S</u>
<u>Goal.</u> WTO certification simulator.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>WTO-5104</u>	<u>1.3</u>	<u>*</u>	<u>E</u>	<u>2 AV-8B</u>	<u>A (NS)</u>
<u>Goal.</u> WTO certification sortie.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>WTO-5105</u>	<u>1.3</u>	<u>*</u>	<u>E</u>	<u>2 AV-8B</u>	<u>A (NS)</u>
<u>Goal.</u> WTO certification sortie.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>SLATI-5200</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>RNAWST</u>	<u>S</u>
<u>Goal.</u> LATI certification simulator.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>SLATI-5201</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>RNAWST</u>	<u>S</u>
<u>Goal.</u> LATI certification simulator.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>LATI-5202</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>2 AV-8B</u>	<u>A</u>
<u>Goal.</u> LATI certification sortie.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>LATI-5203</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>2 AV-8B</u>	<u>A</u>
<u>Goal.</u> LATI certification sortie.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>LATI-5204</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>2 AV-8B</u>	<u>A</u>
<u>Goal.</u> LATI certification sortie.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>SNSI-5300</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>RNAWST</u>	<u>S NS</u>
<u>Goal.</u> NSI certification simulator.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					
<u>SNSI-5301</u>	<u>1.0</u>	<u>*</u>	<u>E</u>	<u>RNAWST</u>	<u>S NS</u>
<u>Goal.</u> NSI certification simulator.					
<u>Requirement.</u> See MAWTS-1 Course Catalog.					

NSI-5302      1.3      \*      E   2 AV-8B   A   NS

Goal.   NSI certification sortie.

Requirement.   See MAWTS-1 Course Catalog.

NSI-5303      1.3      \*      E   2 AV-8B   A   NS

Goal.   NSI certification sortie.

Requirement.   See MAWTS-1 Course Catalog.

SNSLATI-5401   1.0      \*      E   RNAWST   S   NS

Goal.   NS LATI certification simulator.

Requirement.   See MAWTS-1 Course Catalog.

SNSLATI-5402   1.0      \*      E   RNAWST   S   NS

Goal.   NS LATI certification simulator.

Requirement.   See MAWTS-1 Course Catalog.

NSLATI-5403   1.3      \*      E   2 AV-8B   A   NS

Goal.   NS LATI certification sortie.

Requirement.   See MAWTS-1 Course Catalog.

SACTI-5500      1.0      \*      E   RNAWST   S

Goal.   ACTI certification simulator.

Requirement.   See MAWTS-1 Course Catalog.

ACTI-5501      1.3      \*      E   2 AV-8B   A

Goal.   ACTI certification sortie.

Requirement.   See MAWTS-1 Course Catalog.

ACTI-5502      1.3      \*      E   2 AV-8B   A

Goal.   ACTI certification sortie.

Requirement.   See MAWTS-1 Course Catalog.

ACTI-5503      1.3      \*      E   2 AV-8B   A

Goal.   ACTI certification sortie.

Requirement.   See MAWTS-1 Course Catalog.

SFAC(A)I-5601   1.0      \*      E   RNAWST   S   NS

Goal. FAC(A)I certification simulator.

Requirement. See MAWTS-1 Course Catalog.

FAC(A)I-5602 1.3 \* E 2 AV-8B A

Goal. FAC(A)I certification sortie.

Requirement. See MAWTS-1 Course Catalog.

FAC(A)I-5603 1.3 \* E 2 AV-8B A

Goal. FAC(A)I certification sortie.

Requirement. See MAWTS-1 Course Catalog.

FAC(A)I-5604 1.3 \* E 2 AV-8B A NS

Goal. FAC(A)I certification sortie.

Requirement. See MAWTS-1 Course Catalog.

## 2. VMAT-203 Instructor Under Training (IUT) Syllabus

a. Purpose. Enumerate FRS instructor training syllabi.

b. General. All training shall be conducted in accordance with the FRS IUT FSG. The VMAT-203 Commanding Officer must approve any deviations.

c. Ground/Academic Training. Refer to the FRS IUT FSG.

(1) AIUT-5000, Monitor the brief/debrief of a SNAV-066 IAW VMAT-203 IUT FSG.

(2) AIUT-5001, Monitor the brief/debrief of a late-stage familiarization sortie IAW VMAT-203 IUT FSG.

(3) AIUT-5002, Monitor as RTO an A/A Radar Intercept sortie from TACTS range.

d. Landing Site Instructor (LSI) Training. LSI 5701-5703 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-5701 1.3 \* E 1 AV-8B A D

Goal. Observe LSI control of FAM solo flight.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5702 1.3 \* E 1 AV-8B A D

Goal. Introduction to LSI control of FAM solo flight.

Requirement. IAW VMAT-203 IUT FSG.



LSI-5703      1.3      \*      E 1 AV-8B A D

Goal. Review LSI control of FAM solo flights.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5704      1.3      \*      E 1 AV-8B A N\*

Goal. Review LSI control introducing night LSI procedures.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5705      1.2      \*      E 1 AV-8B A D

Goal. Review LSI control and introduce FBO operations from an approved EAF site.

Requirement. IAW VMAT-203 IUT FSG.

LSI-5706      2.0      \*      E 1 AV-8B A D

Goal. Review LSO control per LSO NATOPS for FCLP operations.

Requirement. IAW VMAT-203 IUT FSG.

e. Fleet Replacement Squadron Instructor (FRSI) Training

Prerequisite: Division Lead and Weapons Training Officer (WTO)

SIUT-5800      1.5      \*      E RNAWST S D

Goal. Practice normal procedures.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5801      1.5      \*      E RNAWST S D

Goal. Review normal and emergency procedures.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5802      1.3      \*      E 1 TAV-8B A D

Goal. Introduce normal procedures from the rear seat of the TAV-8B.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5803      1.3      \*      E 1 TAV-8B A D

Goal. Review normal procedures from the rear seat of the TAV-8B.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5804      1.5      \*      E   RNAWST   S   D

Goal.   Introduce simulator instructional techniques.  
Requirement.   IAW VMAT-203 IUT FSG.

IUT-5805      1.3      \*      E   2 TAV-8B   A   D

Goal.   Introduce basic and tactical formation as lead.  
Requirement.   IAW VMAT-203 IUT FSG.

IUT-5806      1.3      \*      E   4 TAV-8B   A   D

Goal.   Introduce division formation.  
Requirement.   IAW VMAT-203 IUT FSG.

IUT-5807      1.3      \*      E   4 TAV-8B   A   D

Goal.   Review division formation as lead.  
Requirement.   IAW VMAT-203 IUT FSG.

f. Aerial Refueling Stage Instructor Pilot (AARI)

Prerequisite:   Fleet Replacement Squadorn Instructor (FRSI)

IUT-5808      1.3      \*      E   1 TAV-8B/1 AV-8B   A   D

Goal.   Monitor an aerial refueling sortie.  
Requirement.   IAW VMAT-203 IUT FSG.

g. Threat Countertactics Stage Instructor Pilot (TCTI)

Prerequisite:   Late Stage Familiarization Instructor and WTO, LATI,  
or ACTI

SIUT-5809      1.5      \*      E   RNAWST   S   D

Goal.   Review threat countertactics.  
Requirement.   IAW VMAT-203 IUT FSG.

IUT-5810      1.1      \*      E   1 AV-8B/1 TAV-8B   A   D

Goal.   Introduce threat countertactics chase.  
Requirement.   IAW VMAT-203 IUT FSG.

h. Air-to-Surface Stage Instructor Pilot (ASI)

Prerequisite:   Fleet Replacement Squadron Instructor (FRSI) and  
Weapons Training Officer (WTO)

SIUT-5811            1.5        \*            E   RNAWST   S   D

Goal.   Review high and low angle dive deliveries.

Requirement.   IAW VMAT-203 IUT FSG.  
SIUT-5812            1.5        \*            E   RNAWST   S   D

Goal.   Review transition profiles.

Requirement.   IAW VMAT-203 IUT FSG.

IUT-5813            1.1        \*            E   2 AV-8B   A   D

Goal.   Review high and low angle dive deliveries.

Requirement.   IAW VMAT-203 IUT FSG

i. Target Area Tactics (MECH) Stage Instructor Pilot (TATI)

Prerequisite:   Fleet Replacement Squadron Instructor (FRSI) and  
Weapons Training Officer (WTO).

IUT-5814            1.1        \*            E   2 AV-8B   A   D

Goal.   Review target area tactics.

Requirement.   IAW VMAT-203 IUT FSG.

IUT-5815            1.1        \*            E   2 AV-8B   A   D

Goal.   Review TPOD attacks as lead.

Requirement.   IAW VMAT-203 IUT FSG

j. CAS Stage Instructor Pilot (CASI)

Prerequisite:   Fleet Replacement Squadron Instructor (FRSI) and  
Weapons Training Officer (WTO)

SIUT-5816            1.5        \*            E   RNAWST   S   D

Goal.   Monitor medium altitude CAS simulator.

Requirement.   IAW VMAT-203 IUT FSG.

IUT-5817            1.1        \*            E   1 TAV-8B   A   D

Goal.   Review CAS as SCAR.

Requirement.   IAW VMAT-203 IUT FSG.  
IUT-5818            1.1        \*            E   2 TAV-8B/1 AV-8B   A   D

Goal.   Monitor low altitude CAS sortie from rear seat.

Requirement.   IAW VMAT-203 IUT FSG

k. Late Stage Familiarization Stage Instructor Pilot (LFAMI)

Prerequisite: Close Air Support Instructor (CASI)

IUT-5819            1.3        \*            E   2 TAV-8B   A D

Goal.    Introduce FAM stage maneuvers.

Requirement.    IAW VMAT-203 IUT FSG.

IUT-5820            1.3        \*            E   1 TAV-8B   A D

Goal.    Practice FAM stage maneuvers.

Requirement.    IAW VMAT-203 IUT FSG.

SIUT-5821           1.5        \*            E   RNAWST   S D

Goal.    Review FAM stage maneuvers and dangerous errors.

Requirement.    IAW VMAT-203 IUT FSG.

SIUT-5822           1.5        \*            E   RNAWST   S D

Goal.    Introduce instrument procedures in the FAM stage.

Requirement.    IAW VMAT-203 IUT FSG.

IUT-5823            1.3        \*            E   1 TAV-8B   A D

Goal.    Review instrument procedures in the FAM stage.

Requirement.    IAW VMAT-203 IUT FSG.

l. Early Stage Familiarization Stage Instructor (EFAMI)

Prerequisite: Late Stage Familiarization Instructor (LFAMI)

SIUT-5824           1.5        \*            E   RNAWST   S D

Goal.    Monitor early stage FAM simulator.

Requirement.    IAW VMAT-203 IUT FSG.

SIUT-5825           1.5        \*            E   RNAWST   S D

Goal.    Review FAM stage maneuvers and dangerous errors.

Requirement.    IAW VMAT-203 IUT FSG

m. Night Systems Familiarization Instructor Pilot (NSFI)

Prerequisite: LSI-5704 and Late Stage Familiarization Instructor.

IUT-5826            1.3        \*            E   1 TAV-8B   A NS

Goal. Introduce Night Systems stage maneuvers.  
Requirement. IAW VMAT-203 IUT FSG.

IUT-5827      1.3      \*      E   2 TAV-8B   A   NS

Goal. Monitor Night Systems formation maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5828      1.3      \*      E   2 TAV-8B   A   NS

Goal. Introduce Night Systems formation maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

n. Advanced Aircraft Handling Instructor Pilot (AAHI)

Prerequisite: Late Stage Familiarization Instructor and Weapons Training Officer (WTO), LATI, or ACTI

SIUT-5829      1.5      \*      E   RNAWST   S   D

Goal. Monitor advanced aircraft handling simulator.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5830      1.1      \*      E   2 TAV-8B/1 AV-8B   A   D

Goal. Introduce advanced aircraft handling chase.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5831      1.1      \*      E   1 TAV-8B   A   D

Goal. Review advanced aircraft handling maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

o. Air-to-Air Stage Instructor Pilot (AAI)

Prerequisite: Air Combat Tactics Instructor (ACTI)

SIUT-5832      1.5      \*      E   RNAWST   S   D

Goal. Monitor TVC simulator.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5833      1.1      \*      E   2 AV-8B   A   D

Goal. Review TVC and BFM maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5834      1.1      \*      E   1 TAV-8B/1 AV-8B   A   D

Goal. Chase TVC maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5835      1.1      \*      E    2 AV-8B    A D

Goal. Review 1V1 BFM.

Requirement. IAW VMAT-203 IUT FSG.

p. FRS Low Altitude Tactics Instructor Pilot (FRSLATI)

Prerequisite: Low Altitude Tactics Instructor (LATI)

SIUT-5836      1.5      \*      E    RNAWST    S D

Goal. Review Basic and Advanced LAT maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5837      1.5      \*      E    RNAWST    S D

Goal. Review low altitude threat reaction.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5838      1.3      \*      E    1 TAV-8B    A D

Goal. Review Basic and Advanced LAT maneuvers.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5839      1.3      \*      E    2 AV-8B    A D

Goal. Review low altitude threat reaction.

Requirement. IAW VMAT-203 IUT FSG

q. Forward Operating Based Operations Stage Instructor Pilot (FOBI)

Prerequisite: LSI-5705 and Main Base LSS

SIUT-5840      1.5      \*      E    RNAWST    S D

Goal. Monitor FBO simulator.

Requirement. IAW VMAT-203 IUT FSG

r. NATOPS Check Instructor Pilot

Prerequisite: Fleet Replacement Squadron Instructor (FRSI)

SIUT-5841      1.5      \*      E    RNAWST    S D

Goal. Fly NATOPS check with program/model manager.

Requirement. IAW VMAT-203 IUT FSG.

IUT-5842 1.3 \* E 2 AV-8B A D

Goal. Review A/A RADAR intercept sortie.

Requirement. IAW VMAT-203 IUT FSG.

SIUT-5843 1.5 \* E RNAWST S D

Goal. Monitor FOB simulator.

Requirement. IAW VMAT-203 IUT FSG.

### 3. Flight Lead Standardization Evaluator (FLSE)

a. 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 MAG CO.

#### b. General

(1) Prerequisite. Prospective aircrew member will be a designated Mission Commander or a WTI nominated by the Squadron Commanding Officer. WTI graduates who are serving in a squadron/MAG on the same tour in which they graduated from WTI may be designated a FLSE by MAG commanders at their discretion. Instructors who fall outside of the guidance established above shall be re-designated as a FLSE per the POI below. Instructors who are currently designated FLSEs and require re-designation shall have 12 months from the date of signature on this T&R manual to complete the re-designation POI.

(2) Prospective FLSEs shall in-brief with the current USMC Model Manager or MAW Program Coordinator before being designated as a FLSE. At the discretion of the MAG Commanding Officer, a letter designating the aircrew member as a FLSE shall be placed in the NATOPS jacket and APR. Additionally, an up to date FLSE Roster will be maintained by the Model Manager, through the Program Coordinators.

(3) All FLSEs must complete annual refresher training by attending one Model Manager/Program Coordinator standardization meeting.

Lectures	DATE COMP	INSTRUCTOR
AFLSE 5010 MAWTS-1 FLSE Designation		
AFLSE 5011 Air-to-Surface Briefing Lab		
Readings	DATE COMP	
MAG Flight Ops SOP		
MAG PIFs		

c. Refresher POI:

- (1) Complete academic training established above.
- (2) Lectures. Refer to the table above.

d. Flight and Simulator Event Training. (2 Events, 2.0 Hours).

SFLSE-5900      1.0      \*      E    RNAWST    S    (NS)

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. Conduct a minimum of 3 CAS attacks against urban targets.

Performance Standards

- a. Plan IAW Air NTTP using SPINS and ATO as listed on MAWTS AV-8B Website (Training Management Tab.)
- b. JMPS mission planning supports mission accomplishment.
- c. Smart pack IAW Air NTTP.
- d. Weaponneering:
  - (1) Weaponneer each delivery using WARP.
  - (2) Develop reactive weaponneering game plan IAW ANTPP Appendix D.
  - (3) Develop backup weather weaponneering game plan.
- e. Target area tactics:
  - (1) Holding game plan.
  - (2) Develop delivery profiles that optimize weapon effects while minimizing exposure to threats.
  - (1) 1:50,000 map of target area map/imagery.
  - (2) Target area map/imagery study.
- f. Threat counter tactics game plan.
  - (1) Develop tactics/game plan to address threats.
  - (2) ASE planning with reference to AFTTP 3-1 and CY-200X manual focusing on ALR indications and ALE effectiveness.

Brief

- a. Weaponneering
- b. Target area map / imagery / GRG study
- c. Holding procedures: Location, Orientation, Technique, Contracts
- d. Flight roles and responsibilities
- e. JTAC brief
- f. Mission receipt and system entry for BOT and BOC engagements
- g. Targeting game plan for BOT engagements
- h. Attack game plans
- i. Single JDAM, JDAM BOC, JDAM BOT (relative), multi-absolute, multi-relative, section attacks, LMAV, gun attacks, moving targets, urban canyon, podium target, etc



- j. Attack and weapons audible
- k. Target attack chalk talk:
  - (1) Attack profiles
  - (2) Contracts
  - (3) Sensor integration.
  - (4) Capture criteria.
  - (5) HOTAS
  - (6) Terminal Guidance
  - (7) Off target rejoin and considerations.
- l. Threat Counter-tactics
  - (1) Threat capabilities.
  - (2) ASE use and effectiveness.
  - (3) Threat counter-tactics game plan.
  - (4) Prohibitive interference.
- m. No Go criteria.

#### Execution

- a. Locate JTAC identified targets.
- b. Engage JTAC identified targets and achieved desired effects IAW ROE.
- c. Survive threat exposure IAW allowable risk.
  - (1) Appropriate expendable use.
  - (2) Adherence to threat reaction game plan.
  - (3) Adherence to PI considerations.

Debrief. IAW MAWTS-1 Briefing/Debriefing Guide: Determination of success or failure of mission objectives and analysis of failures. Validate all weapon employments.

Prerequisite. See stage description.

Ordnance. 1x TPOD, 1x GBU-12, 2 x GBU-38, 300x 25mm, SEL 1-5.

SFLSE-5901      1.5      \*      E    RNAWST    S    (NS)

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. Emphasis will be on the employment of GCI and the APG-65 to generate a recognized air picture (RAP). Once RAP is achieved demonstrate proficiency in executing briefed game plan and timeline to either accept or deny a merge based upon allowable risk including mission planning, briefing, crew resource management, performance criteria, and debriefing.

#### Requirements

- a. 2.0 hours of RNAWST time.
- b. Brief begins 1.5 hours before simulator time.
- c. Mission scenarios are located on the MAWTS-1 AV-8B Website in the Training Management section.

#### Performance Standards

- a. Plan:
  - (1) The plan should support the mission objectives.

- (2) Mission: DARG.
- (3) Mission Objectives:
  - i. Locate and intercept groups as directed.
  - ii. Destroy or escort groups as directed.
  - iii. Survive against hostile adversaries and friendly surface to air defense systems.
- b. Scenario: As listed on MAWTS AV-8B Website (Training Management Tab.)

#### Brief

- a. **This sortie is a combat mission with an ACM qualified wingman.**
- b. The focus of the brief should be on how you plan on locating the adversaries and either destroying them or surviving the threat based on allowable risk.
- c. Allowable risk for this mission is medium which is what one would expect if conducting this flight on a MEU. However, allowable risk has the potential to become high if the AV-8s become the only defense asset available to the MEU.
- d. The focus of this brief is not to give a class on how to conduct an intercept. The focus of the brief is dealing with combat contingencies (two groups range, single high fast flyer, defector profile, etc.) Incorporate the following items into this sortie:
  - (1) Timelines and gameplan execution. Clear action that will take place prior to, at and post DR, based on threat and SA of fighters.
  - (2) Detailed blue and red timeline based on the threat capabilities and expected contact range (ECR).
  - (3) Adherence to ROE. A declaration and VID plan is required.
  - (4) VID mechanics.
  - (5) Radar missile defense and Threat Counter Tactics game plan.
  - (6) GCI/AIC integration.
- e. Complete a fighter brief focusing on all phases of the intercept to include formation, sensors, communications, and crew coordination.
- f. Use a white board or smart board to conduct a thorough and comprehensive chalk talk which will detail the fighter game plan.

#### Execution

- a. Expect to perform multiple BVR combat intercepts to engagement, aborts or successful bug.
- b. Mission performance standards:
  - (1) Executes briefed game plan.
  - (2) Adheres to timeline either to the intercept or abort.
  - (3) Valid threat reaction.
  - (4) Valid shots.

Debrief. The debrief should be comprised of the following items:

- a. Comm / flow review.
- b. Whiteboard or Smartboard reconstruction of all engagements.
- c. Sensor usage:

- (1) Adherence to timeline.
- (2) Correct tactical decisions per situation or gameplan.
- (3) Shot validation.

Prerequisites. See stage description.

Ordinance Requirements. 300 rounds 25mm, 2 AIM-9M, 2 AIM-120, ALQ-164.

External Support Requirements. GCI/AIC trained controller for brief/flight/debrief

214. REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE

1. NATOPS/Core Skill Introduction Evaluation (NTPS)

a. Purpose. To evaluate the pilot's knowledge of aircraft systems, performance limitations, and both normal and emergency procedures.

b. General

(1) NATOPS evaluators/instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 series and other applicable directives, instructions, and orders.

(2) 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.

(3) NATOPS evaluatees shall complete and have graded an open book examination, a closed book examination, and an oral examination prior to commencement of the actual NATOPS evaluation event.

(4) PUI shall complete all Core Skill Introduction stages prior to NATOPS/Core Skill Introduction Evaluation.

(5) A designated AV-8B NATOPS check pilot will observe and certify that the PUI is NATOPS qualified per AV-8B NATOPS Manual, Chapter 10.

c. Ground/Academic Training

(1) Readings. Review AV-8B NATOPS Manual (A1-AV8BB-NFM-000).

(2) Exams

(a) ANTPS-6000, Open Book AV-8B NATOPS exam.

(b) ANTPS-6001, Closed Book AV-8B NATOPS exam.

(c) ANTPS-6002, Ground Evaluation IAW AV-8B NATOPS Manual.

ANTPS-6000            1.5            Open Book NATOPS Evaluation

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      Closed Book NATOPS Evaluation

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      Oral NATOPS Evaluation

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.

NTPS-6101      1.0      365      E      R, MR, SS      RNAWST      S/A

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.

Performance Standards. Execute all procedures IAW AV-8B NATOPS, Air NTTP, and applicable SOPs.

Prerequisite. NATOPS ground/academic training.

NTPS-6103      0.0      365      E      R, MR, SS      S/A      (NS)

Goal. Complete CRM training evaluation.

Requirement. Satisfactory completion of CRM training.

Performance Standard. Per syllabus description.

2. Instrument (INST)

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

b. General

(1) 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.

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

(3) 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.

(4) NATOPS instrument evaluatees shall ensure that annual instrument minimums are in accordance with OPNAVINST 3710.7 series prior to commencement of event.

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

c. Ground/Academic Training

(1) Readings. Review OPNAVINST 3710.7 series.

(2) Lecture. AINST 6004, Instrument Ground School.

(3) Exams. AINST-6005, Annual Instrument Ground School exam.

REQ-6102            1.0            365            E R, MR, SS            S/A (NS)

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.

Performance Standard. Execute all procedures IAW AV-8B NATOPS and OPNAVINST 3710.

Prerequisites. AINST-6004, AINST-6005.

215. SECTION LEADER STANDARDIZATION AND DESIGNATION SORTIES

1. Section Leader

a. Purpose. Prepare and evaluate a prospective flight lead's ability to plan, brief, and lead a combat mission as a section lead.

b. General

(1) A Section Lead Build shall conduct the following designation syllabus in order to develop flight leadership. A Section Leader work-up syllabus shall be completed and should mirror the designation sorties and requirements. Completion of this syllabus meets the requirements for being designated a Section Leader. At the discretion of the squadron commanding officer, a letter designating the pilot a Section Leader shall be placed in the NATOPS jacket and APR.

(2) The designation syllabus shall be supervised by a division lead or a syllabus-specified instructor.

(3) The modified Refresher POI will be tailored by the commanding officer based on experience level and time out of cockpit. For aircrew who require Core Skill Introduction Refresher training per paragraph 405 of the T&R Program Manual, the minimum re-designation requirement for flight leader positions is successful completion of the R-coded flight leader POI events. It is assumed that the Refresher pilot has the prerequisite academic knowledge base and familiarity with SOPs to conduct the designation syllabus.

(4) If a networked simulator is available, at least one of the syllabus simulator events shall be flown as a networked sortie with the section lead build flying in the lead position. The focus of the networked event should be required section departures and recoveries, and emergency procedure considerations.

c. Prerequisites

(1) 200 hours in model, 400 hours total.

(2) 2000 level and 3000 level complete.

(3) Receive a passing grade on the MAG standardized section lead build exam that covers 2000 to 3000 level academics.

d. Requirements

(1) A section lead build shall complete the following items during the course of the Section Leader designation syllabus:

(a) Three events in the syllabus shall be conducted at night.

(b) Conduct the following departures:

1 Section stream STO.

2 Section CTO.

3 Section RADAR trail.

4 Section SID.

(c) Conduct the following recoveries:

1 Section VFR overhead.

2 Section VFR straight-in.

3 Section PAR/TACAN to actual or simulated circling minimums. PUI will configure the section for landing with the intent to land both aircraft upon break-out of actual/simulated IMC conditions.

4 Simulated NORDO recovery.

5 Simulated hung ordnance recovery.

(d) Three events shall be flown with the TPOD.

(e) At a minimum, three events shall carry ordnance.

(f) One event will be flown in conjunction with RF/IR emitters on a TACTS or EW range.

(g) One simulator event will be flown as a networked sortie with the section lead build as the flight lead when a networked simulator is available.

(2) The following shall be flown with an FLSE external to the squadron:

(a) SSL-6201.

(b) One of the following events: SL-6202, 6203, 6204, 6205, 6206.

(3) The designation syllabus does not have to be flown in order. The last event in the phase will serve as the check flight. The check flight shall be one of the following events: SL-6203, 6204, 6205, 6206.

e. Ground/Academic Training

(1) Unclassified Readings

(a) AV-8B NATOPS:

1 Chapter 6, Flight Preparation.

2 Chapter 21, Extreme Weather Operation.

3 Chapter 31, Crew Resource Management (CRM).

(b) Air NTTP 3-22.3-AV8B:

1 Chapter 2, Mission Planning, Briefing, and Debrief Standards.

2 Chapter 3, Tactical Administration.

3 Chapter 6, A/S Fundamentals.

4 Chapter 7, A/S Employment.

5 Chapter 8, CAS.

6 Chapter 11, SCAR.

(2) Classified Readings

(a) Air NTTP 3-22.1-AV8B:

1 Chapter 2, A/S Mission Planning.

2 Chapter 4, AI.

3 Chapter 5, Threat Countertactics.

(3) Lectures. Delivered by a WTI.

(a) ASL-6009, Flight Briefing and Debriefing.

(b) ASL-6010, AV-8B T&R Manual and Training Management.

(4) ACPM

(a) AACPM-8630, Tactical Air Command Center (TACC).

(b) AACPM-8660, Joint Ops Intro.

(5) Exams. ASL-6011, Standardized Section Lead Build exam

f. Tracking. 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 3-22.1-AV8B Chapter 3, Threat Countertactics		
Air NTTP 3-22.3-AV8B Chapter 6, Air-to-Surface Fundamentals		
Air NTTP 3-22.1-AV8B Chapter 2, Air-to-Surface Mission Planning		
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 3-22.1-AV8B Chapter 4, Air Interdiction		
Air NTTP 3-22.3-AV8B Chapter 11, SCAR		
REQUIRED LECTURES RECEIVED	DATE COMP	INSTRUCTOR
Flight Briefing and Debriefing		
AV-8B T&R Manual and Training Management		
ADMINISTRATIVE FLIGHT LEADERSHIP REQMTS	DATE COMP	INSTRUCTOR
NIGHT EVENT 1		
NIGHT EVENT 2		
NIGHT EVENT 3		
SECTION STREAM STO		
SECTION CTO		
SECTION RADAR TRAIL		
SECTION SID		



SECTION VFR OVERHEAD		
SECTION VFR STRAIGHT-IN		
SECTION PAR/TACAN		
SIMULATED NORDO RECOVERY		
SIMULATED HUNG ORDNANCE RECOVERY		
<b>ADMINISTRATIVE FLIGHT LEADERSHIP REQMTS</b>	<b>DATE COMP</b>	<b>INSTRUCTOR</b>
TPOD EVENT 1		
TPOD EVENT 2		
TPOD EVENT 3		
ORDNANCE EVENT 1		
ORDNANCE EVENT 2		
ORDNANCE EVENT 3		
RF/IR EMITTER ON A TACTS OR EW RANGE		
SSL-6201 FLOWN WITH FLSE		

SSL-6200 1.0 \* E RNAWST S (NS)

Goal. Demonstrate proficiency instructing a medium altitude threat countertactics simulator. Evaluate basic instruction ability, knowledge of threat systems, and threat countertactics.

Requirement. Plan, brief, execute, and debrief a medium altitude threat countertactics simulator. Plan and brief shall emphasize weaponeering, air-to-surface timeline, threat reaction matrix, preemptive and reactive threat countertactics, and standardized communications. Threats shall include a range known SA-6/11, range unknown Roland II, and ZSU-23-4. The section lead build shall run the simulator console with the WTI/CO mentoring the event.

Performance Standard. Plan, brief, execute, and debrief IAW AIR NTTP. Correct weaponeering utilizing WARP, SLIC, and NATIP. Detailed air-to-surface timeline brief. Detailed threat countertactics brief. Constructive in-flight instruction. Accurate sortie reconstruction. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisite. See phase description.

Ordnance. TPOD, 2 Mk-83 HD w/DSU-33, 1 CBU-99/100, ALQ-164, Expendables.

SSL-6201 1.0 \* E RNAWST S (NS)

Goal. Demonstrate proficiency weaponeering PGM, optimizing aircraft sensors and target area tactics execution. Evaluate PGM and applicable employment systems knowledge.

Requirement. Plan, brief, execute, and debrief an air-to-surface target area tactics simulator. Execute 2 LGB attacks (1 self-lase and 1 buddy lase) and 1 BOT JDAM attack. Threats shall include range unknown SA-8 and 2S6. This event is flown with a MAG-designated FLSE.

Performance Standard. Plan, brief, execute, and debrief IAW AIR NTTP. Correct weaponeering utilizing PMPT, JMPS CUPC, JAWS, WARP, SLIC, and NATIP. Detailed air-to-surface timeline brief. Detailed threat countertactics brief. Proper use of TPOD to designate targets and generate coordinates. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Constructive in-flight instruction. Accurate sortie reconstruction. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisite. SSL-6200.

Ordnance. TPOD, 2 GBU-12/16, 1 GBU-32/38, Expendables.

SL-6202      1.3      \*      E    2 AV-8B    A    (NS)

Goal. Demonstrate proficiency weaponeering PGM, optimizing aircraft sensors, and leading a target area tactics flight.

Requirement. Plan, brief, execute, and debrief a target area tactics flight. Execute 2 actual or simulated LGB attacks (1 self-lase and 1 buddy lase) and 1 actual or simulated BOT JDAM attack. Emphasize basic flight leadership, administrative procedures, and tactical administrative procedures. Evaluate PGM and applicable employment systems knowledge.

Performance Standard. Plan, brief, execute, and debrief IAW AIR NTTP. Correct weaponeering utilizing PMPT, JMPS CUPC, JAWS, WARP, SLIC, and NATIP. Detailed air-to-surface timeline brief. Detailed threat countertactics brief. Proper use of TPOD to designate targets and generate coordinates. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisite. SSL-6201.

Ordnance. 1 TPOD, 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, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

SL-6203      1.3      \*      E    2 AV-8B    A    (NS)

Goal. Demonstrate proficiency leading CAS under Type 1 terminal attack control.

Requirement. Plan, brief, execute, and debrief CAS under Type 1 control. Execute 2 attacks. Emphasize JPub 3-09.3 procedures, systems management, target area tactics, reactive weaponeering, threat countertactics, and standardized communications. Evaluate combat flight leadership and tactical decision making.

Performance Standard. Execute IAW with JPub 3-09.3. Plan, brief, execute, and debrief IAW Air NTTP. Accurate brief of fire support coordination measures. Execute briefed air-to-surface timeline. Execute briefed surface-to-air threat countertactics. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Comply with Tactical Abort Parameters. Weapon impacts within CEP. TOT +/- 30 seconds. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisite. SSL-6201.

Ordnance. 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, 300 25mm, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. JTAC.

SL-6204	1.3	*	R E 2 AV-8B A (NS)
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Goal. Demonstrate proficiency leading CAS under type 2 and/or 3 terminal attack control.

Requirement. Plan, brief, execute, and debrief CAS under Type 2 and 3 control employing PGM. Execute 2 attacks. Emphasize JPub 3-09.3 procedures, systems management, PGM employment target area tactics, reactive weaponeering, threat countertactics, and standardized communications. Evaluate combat flight leadership and tactical decision making.

Performance Standard. Execute IAW with JPub 3-09.3. Plan, brief, execute, and debrief IAW Air NTTP. Accurate brief of fire support coordination measures. Execute briefed air-to-surface timeline. Execute briefed threat countertactics. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Comply with Tactical Abort Parameters. Weapon impacts within CEP. TOT +/- 30 seconds. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisite. SSL-6201.

Ordnance. 1 TPOD, 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, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. JTAC.

SL-6205      1.3      \*      E 2 AV-8B A (NS)

Goal. Demonstrate proficiency leading a medium altitude AI with an RF SAM threat.

Requirement. Plan, brief, execute, and debrief a medium altitude AI in a section with an RF SAM threat.

Performance Standard. Execute IAW Air NTTP. Execute briefed air-to-surface timeline. Emphasize systems management, PGM employment, target area tactics, threat countertactics, and standardized communications. Evaluate combat flight leadership and tactical decision making. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisite. SL-6201.

Ordnance. 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, 1 ALQ-164, 10 Chaff, 20 Flares.

Range Requirement. Reference Range Support Matrix.

SL-6206      1.3      \*      E 2 AV-8B A (NS)

Goal. Demonstrate proficiency leading SCAR.

Requirement. Plan, brief, execute, and debrief SCAR. Coordinate with a minimum of 1 external section to conduct a minimum of 2 target attacks. Provide an IFREP to the MACCS (actual or simulated). Conduct a SCAR-to-SCAR handover (actual or simulated). Emphasize systems management, target PID, airspace deconfliction, MACCS integration, threat countertactics, and standardized communications. Evaluate combat flight leadership and tactical decision making.

Performance Standard. Execute IAW Air NTTP. Brief a TPL and ROE. Execute briefed air-to-surface timeline. Execute briefed surface-to-air threat countertactics. Locate and prioritize target sets IAW briefed commander's guidance. Accurate target coordinate generation, communication, and marking. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Comply with Tactical Abort Parameters. Weapon impacts within CEP. Evaluate combat flight leadership and tactical decision making. Accurate sortie reconstruction. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Prerequisite. SSL-6301. AACPM-8630, Tactical Air Command Center (TACC). AACPM-8660, Joint Ops Intro.

Ordnance. 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/2 CBU-99/2 Mk-

77, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Minimum 1 section of AR Assets.

2. Air Combat Maneuvering Flight Leader (ACMFL)

a. Purpose. Complete ACMFL qualification.

b. General

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

(2) Completion of this stage constitutes ACMFL qualified.

(3) An AV-8B ACTI, USMC FA-18 ACTI, or VFMT-401 ATI shall instruct all initial training events. Adversaries may be dissimilar provided instructor requirements are met.

(4) Pilots executing this stage must be designated Section Leaders.

(5) Pilots shall be AAD and OAAW stage complete.

c. Flight and Simulator Event Training. (4 Events, 4.9 Hours).

SACMFL-6300 1.0 \* E MTT/RNAWST S

Goal. Demonstrate proficiency as a section lead in lane defense and section intercepts against 2 groups, sweeper/striker profiles incorporating organic ARG defense capabilities in a JEZ for a continuous VUL.

Requirement. Perform 4 engagements against 2 sortable groups, SAR-1 capable sweepers and IR-2 capable strikers. Adversary group formations shall include azimuth, range, and heavy presentations and shall ingress from 500 to 40,000 feet. Instruction shall include air-to-air timeline, GCI/AIC integration, organic ESG capabilities, limitations and utilization, contracts, criteria, and air-to-air threat countertactics beyond visual range. Review AIM-9M-8 employment and FQMD.

Performance Standard. Execute SSO procedures and DR mechanics IAW AIR NTTP. Adhere to air-to-air timeline, contracts, and criteria. Utilization of ESG capabilities demonstrated. Execute briefed air-to-air threat countertactics gameplan. Accurate adversary formation analysis and sort IAW brief. 100 percent valid shots.

Prerequisite. See phase description.

Ordinance. 4 AIM-9M-8, Expendables.

ACMFL-6301      1.3      \*      E R 1+ AV-8B A      D

Goal. Demonstrate proficiency in leading a section during a 1V1 high aspect BFM against a Category II+ adversary.

Requirement. Review 1 snapshot drill, 1 heat-to-guns drill, and a minimum of 3 neutral engagements against a similar or dissimilar adversary: 2 butterfly and 1 abeam. Adversary gameplan will be stipulated in the brief. Focus for this sortie shall be on decision making for 1-circle and 2-circle gameplans. Instruction shall include ACM training rules application, energy management and assessment, gameplans, pre-merge considerations, weapons employment, deck awareness, and air-to-air threat countertactics within visual range.

Performance Standard. Adhere to ACM training rules. Execute gameplan IAW Air NTTP. Recognize adversary WEZ and execute appropriate countertactic. Any valid GAU-12 or AA missile employment post-initial 3/9-line passage will be acknowledged. Must utilize expendables to delay and deny adversary shots along with maximizing performance of the aircraft when applicable. Gameplan execution along with recognizing WEZ (both own ship and adversary) constitutes the bulk of the evaluation for this sortie.

Prerequisite. SACMFL-6300.

Ordinance. 1 CATM-9M, 1 TACTS Pod, 30 Flares.

Range Requirement. Reference Range Support Matrix.

ACMFL-6302      1.3      \*      E      2 AV-8BII+ A

Goal. Demonstrate proficiency in leading a section during a 2V1 short range intercepts to section engaged maneuvering sortie.

Requirement. From a tap-the-cap setup, perform 3 intercepts beginning at 10 nm against IR-2-capable Category II-III adversary: 1 forward quarter entry, 1 beam entry, and 1 rear quarter entry (i.e., Staggerback). PHID via VID is required. No pre-merge kills allowed. Instruction shall include SRR mechanics, RADAR and visual bracket geometry, sweep geometry, post-merge gameplans, engaged and supporting fighter contracts, ACM training rules application, applicable ALSA communications, and air-to-air threat countertactics within visual range.

Performance Standard. Adhere to ACM training rules. Execute briefed contracts and gameplans. Execute briefed air-to-air threat countertactics gameplan. 100 percent valid shots.

Prerequisite. ACMFL-6301.

Ordinance. 1 CATM-9M, 1 TACTS Pod, 30 Flares, 30 Chaff.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. TACTS, GCI/AIC, 1 Dissimilar Adversary.

ACMFL-6303      1.3      \*      E R 2+ AV-8BII+ A

Goal. Demonstrate proficiency in leading a section during a 2 V X DCA (Point defense) sortie.

Requirement. Perform a point defense. Emphasize ROE, ALSA communications, threat countertactics, mutual support, and incorporating organic ESG capabilities in a JEZ. Complete 3 engagements: two groups range (sweeper/striker) and single group heavy (SES) profiles shall be conducted.

Performance Standard. Adhere to ACM training rules. Delay, deny, and destroy threat aircraft IAW ROE for a 30-minute VUL. Adhere to air-to-air timeline, contracts, and criteria. Execute briefed air-to-air threat countertactics gameplan. Utilize organic ESG assets. Accurate adversary formation analysis and sort IAW brief. 100 percent valid shots.

Prerequisite. ACMFL-6302.

Ordinance. 1 CATM-9M, 1 TACTS, 30 Flares, 30 Chaff.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. TACTS range, RADAR-Equipped Adversary (2 min), GCI/AIC.

## 216. DIVISION LEADER STANDARDIZATION AND DESIGNATION SORTIES

### 1. Division Leader

a. Purpose. Prepare and evaluate a prospective flight lead's ability to plan, brief, and lead a combat mission as a division lead.

#### b. General

(1) A Division Leader Under Training (DLUT) 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. At the discretion of the squadron commanding officer, a letter designating the pilot a division leader shall be placed in the NATOPS jacket and APR.

(2) 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.

(3) A Mission Commander, WTI, or specified instructor shall instruct all events.

#### c. Prerequisites

(1) 400 hours in model, 600 hours total.

(2) Complete a Division Leader work-up syllabus that, at a minimum, mirrors the designation sorties and requirements.

(3) Receive a passing grade on the MAG standardized DLUT exam that covers division administration and tactical employment.

d. Requirements

(1) DLUT shall complete the following items during the course of the Division Lead designation syllabus:

(a) One event in syllabus shall be conducted at night.

(b) Conduct the following departures:

1 Division stream STO.

2 Division RADAR trail.

(c) Conduct the following recoveries:

1 Division overhead.

2 Division straight-in.

(d) At a minimum, two events shall carry ordnance.

(e) One event will be flown in conjunction with RF/IR emitters on a TACTS or EW range.

(f) One event shall include AAR.

(g) One event shall be conducted with four aircraft.

(2) One event shall be flown with an FLSE external from the squadron.

(3) The designation syllabus does not have to be flown in order. The last sortie shall constitute the check ride. It shall be either DARG-6402 or DARG-6403.

e. Ground/Academic Training

(1) Readings. IAW Table below.

(2) Exams. ADL-6012, Standardized DL exam.

(3) Lectures:

(a) AACPM-8640, Joint Data Network

(b) AACPM-8641, MAGTF Theater & National ISR Employment

f. 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
NIGHT EVENT		
DIVISION STREAM STO		
DIVISION RADAR TRAIL		
DIVISION OVERHEAD		
DIVISION STRAIGHT-IN		
ORDNANCE EVENT		
ORDNANCE EVENT		
ONE EVENT WITH RF/IR EMITTERS ON A TACTS OR EW RANGE		
AAR EVENT		
4-SHIP MINIMUM EVENT		
ONE EVENT FLOWN WITH A FLSE		

DL-6400 1.3 \* E 3+ AV-8B A (NS)

Goal. Demonstrate proficiency executing a division target area tactics sortie.

Requirement. Plan, brief, execute, and debrief a division target area tactics flight. Execute 2 division attacks (1 visual attack and 1 standoff attack). Emphasize basic flight leadership, division flight administration, tactical administration, mutual support, and deconfliction. Evaluate division air-to-surface fundamentals.

Performance Standard. Plan, brief, execute, and debrief IAW Air NTTP. Correct weaponeering utilizing PMPT, JMPS CUPC, JAWS, WARP, SLIC, and NATIP. Detailed air-to-surface timeline brief. Detailed threat countertactics brief. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Ordnance. 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, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

Prerequisites. See phase description.

DL-6401 1.3 \* E 3+ AV-8B A (NS)

Goal. Demonstrate proficiency executing division AR.

Requirement. Plan, brief, execute, and debrief division AR. Locate and PID targets. Execute 2 division attacks (1 visual attack and 1 standoff attack). Provide an IFREP to the MACCS (actual or simulated). Emphasize target PID, airspace

deconfliction, MACCS integration, threat countertactics, and standardized communications. Evaluate combat flight leadership and tactical decision making.

Performance Standard. Plan, brief, execute, and debrief IAW Air NTTP. Correct weaponeering utilizing PMPT, JMPS CUPC, JAWS, WARP, SLIC, and NATIP. Detailed air-to-surface timeline brief. Detailed threat countertactics brief. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Ordnance. 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/2 CBU-99/2 Mk-77, 7 2.75" Rockets/4 5" Rockets, 300 25mm, 20 Chaff, 60 Flares.

Range Requirement. Reference Range Support Matrix.

Prerequisite. DL-6400

DL-6402	1.3	*	R	E	3+	AV-8B	A	D
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Goal. Demonstrate proficiency executing division day AI.

Requirement. Plan, brief, execute, and debrief a division AI during the day at medium altitude. Scenario shall include a surface-to-air and air-to-air threat. Evaluate combat flight leadership and tactical decision making. Emphasize target area tactics, threat countertactics, and standardized communications.

Performance Standard. Plan, brief, execute, and debrief IAW Air NTTP. Correct weaponeering utilizing PMPT, JMPS CUPC, JAWS, WARP, SLIC, and NATIP publications. Detailed air-to-surface timeline brief. Detailed threat countertactics brief. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Evaluate combat flight leadership and tactical decision making. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Ordnance. 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.

Range Requirement. Reference Range Support Matrix.

Prerequisite. DL-6400 and ACMFL required for air threat.

DL-6403	1.3	*	E	3+	AV-8B	A	NS
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Goal. Demonstrate proficiency executing division AI at night.

Requirement. Plan, brief, execute, and debrief a division AI during the day at medium altitude. Scenario shall include a surface-to-air and air-to-air threat. Evaluate combat flight leadership and tactical decision making. Emphasize target area tactics, threat countertactics, and standardized communications.

Performance Standard. Plan, brief, execute, and debrief IAW Air NTTP. Correct weaponeering utilizing PMPT, JMPS CUPC, JAWS, WARP, SLIC, and NATIP. Detailed air-to-surface timeline brief. Detailed threat countertactics brief. Comply with Tactical Abort Parameters. Valid weapon release IAW MAWTS-1 Planning, Briefing, and Debriefing Guide with accurate employment validation. Capture lessons learned and tie errors in execution to planning, briefing, or basic execution.

Ordnance. 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.

Range Requirement. Reference Range Support Matrix.

Prerequisite. DL-6400 and ACMFL required for air threat. AACPM-8640, Joint Data Network. AACPM-8641, MAGTF Theater & National ISR Employment.

## 217. MISSION COMMANDER STANDARDIZATION AND DESIGNATION SORTIES

### 1. Mission Commander

a. Purpose. Evaluate a prospective Mission Commander's ability to plan, brief, and lead a combat mission as the Mission Commander.

#### b. General

(1) 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.

(2) 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.

(3) A Mission Commander shall instruct all events.

#### c. Prerequisites

(1) 500 hours in model.

(2) Division Leader

(3) ACMFL

- (4) A Mission Commander Under Training (MCUT) shall complete either LFE-4700 or LFE-4701 as the strike element lead.

d. Ground/Academic Training

- (1) One event shall be flown with an FLSE external to the squadron.

- (2) Lectures. Review the following AV-8B courseware lectures:

(a) AMC-6013, Strike Mission Commander, Part 1.

(b) AMC-6014, Strike Mission Commander, Part 2.

(c) AACPM-8620, ESG/CSG Integration.

- e. Tracking. The following matrix will be used to track academic and administrative training.

REQUIRED LECTURES	DATE COMP	INSTRUCTOR
Strike Mission Commander, Part 1		
Strike Mission Commander, Part 2		

MC-6500      2.0      \*      E   4+ AV-8B   A   (NS)

Goal. Lead a day or night AI LFE as the Mission Commander.

Requirement. As part of a division, lead an AI LFE. The mission shall be supported with command and control assets, SEAD, EA, ES, AAR, and OCA assets. Scenario per WTI guidance. Emphasize flight leadership and tactical decision making.

Performance Standard. Planning, briefing, execution, and debrief IAW the MAWTS-1 Strike Planning Guide. Develop a sound tactical gameplan based on the scenario. 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.

Ordinance. Per Scenario.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Adversaries, Tanker, Blue Air, GCI/AIC.

Prerequisites. See phase description.

MC-6501      2.0      \*      E   R   4 AV-8B   A   (NS)

Goal. Lead a day or night large force SCAR package as the Mission Commander.

Requirement. SCAR Mission Commander evaluation requires the MCUT to act as the SCAR for a minimum of 2 dissimilar AR elements in a confined airspace in a medium threat scenario with active RF SAM emitters. Scenario per WTI guidance. Emphasize flight leadership and tactical decision making.

Performance Standard. Planning, briefing, execution, and debrief IAW the MAWTS-1 Strike Planning Guide. Develop a sound tactical gameplan based on the scenario. 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. 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.

Ordinance. Per Scenario.

Range Requirement. Reference Range Support Matrix.

External Syllabus Support. Per Scenario.

Prerequisites. MC-6500. AACPM-8620, ESG/CSG Integration.

## 218. POST-MAINTENANCE CHECK FLIGHT (PMCF) PILOT

### 1. PMCF Pilot

a. Purpose. Evaluate a pilot's ability to execute a PMCF.

b. General. Completion of the syllabus meets the requirements to be designated a functional check pilot. At the discretion of the squadron commanding officer, a letter designating the pilot as a functional check pilot shall be placed in the NATOPS jacket and APR.

c. Ground/Academic Training. Per MAG order.

SFCF-6600	1.5	*	E	RNAWST	S	D
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Goal. Functional Check Flight (FCF) workup simulator.

Requirement. Complete an FCF profile in the simulator.

Performance Standard. Profile completion per appropriate card.

Prerequisite. Per MAG order.

FCF-6601	1.5	180	1	AV-8B	A	D
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Goal. Conduct an FCF.

Requirement. Complete an FCF profile. Initial event shall be in an FMC AV-8B.

Performance Standard. Profile completion per appropriate card.

Prerequisite. Per MAG order, SFCF-6600.

219. AV-8B AIR SHOW DEMONSTRATION PILOT (DEMO PILOT)

1. Demo Pilot

a. Purpose. To evaluate a prospective demonstration pilot's ability to conduct air show demonstration.

b. 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.

c. Prerequisite. Per MC and MAG order.

d. Academic Training. Per MCO and MAG order.

SDEMO-6700	1.5	*	E	RNAWST	S	D
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Goal. Demo pilot workup simulator.

Requirement. Complete a Level III air show demonstration profile.

Performance Standard. Conducts all maneuvers correctly.

Prerequisite. Per MCO and MAG order.

DEMO-6701	0.8	365	1	AV-8B	A	D
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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.

Performance Standard. Conducts all maneuvers correctly.

Prerequisite. Per MCO and MAG order.

220. TRACKING CODES

1. Tracking Codes

a. Purpose. Track currency in various evolutions.

b. 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-6800	0.0	365	Tracking	1+	AV-8B
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Goal. Conduct day aerial refueling.

Requirement. Conduct day aerial refueling.

Performance Standard. As outlined in ATP-56(B).

Prerequisite. AAR-1340.

External Syllabus Support. Any Non-Strategic Tanker.

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TRK-6801	0.0	365	Tracking	1+	AV-8B	(N)/(NS)
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Goal. Conduct strategic tanking.

Requirement. Conduct aerial refueling from a strategic tanking platform.

Performance Standard. As outlined in ATP-56(B).

Prerequisite. AAR-1340, (AAR-2300, if at night).

External Syllabus Support. Strategic Tanker.

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TRK-6802	0.0	*	Tracking	1+	AV-8B	(NS)
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Goal. Employ ALQ-164.

Requirement. Tactically employ the ALQ-164.

Performance Standard. IAW the sortie performance standards.

Ordinance. 1 ALQ-164.

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TRK-6803	0.0	*	Tracking	1+	AV-8B	
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Goal. Air-to-air gunnery.

Requirement. Air-to-air gunnery.

Performance Standard. IAW the sortie performance standards.

Prerequisite. ACM QUAL.

Ordinance. 300 25mm.

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TRK-6804	1.3	*	2 AV-8B	A	(NS)	
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Goal. Introduce adverse weather procedures in a high threat environment.

Requirement. On a tactical range, perform visual/sensor reconnaissance of 3 separate targets and generate target coordinates with aircraft systems. Plot each target on gridded imagery/chart. Perform authentication procedures. Control 2 Type 1 pop-up attacks and 2 Type 2 attacks by fixed-wing aircraft. Deliver or coordinate marks. Provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries. Simulated

weather is overcast at 8,000-feet AGL. May be flown at night if previously flown during the day.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 1 and 2 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Proper coordination and approval for attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.

Prerequisite. FAC(A)-4912, LAT-4205.

Ordnance. TPOD, Free-Fall or Forward-Firing Ordnance, Expendables.

Range Requirement. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. One or 2 FW CAS elements with live or inert free fall or forward firing or weapons and a ground FAC.

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TRK-6805	1.3	*	2 AV-8B A (NS)
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Goal. Introduce UAS/UCAV integration.

Requirement. Perform visual/sensor reconnaissance on 3 tactical targets, generating target coordinates with aircraft systems. Execute 1 LASER spot/target handoff from a UAS/UCAV. Plot targets on gridded imagery/chart and prepare an attack brief. Control 2 Type 2 and 2 Type 3 attacks by UAS/UCAV aircraft. Perform authentication procedures. Deliver or coordinate LASER mark on target and guide 1 LGW to impact. Provide BHA and coordinate with UAS/UCAV to provide BHA. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated deliveries.

Performance Standard. Execute appropriate search, detection, and PID profiles. Execute Type 2 and 3 terminal attack control IAW JPub 3-09.3. Accurate target coordinate and 9-line generation. Proper coordination and approval for attacks. Effective FAC(A) aircraft position to provide marking and control with consideration of threat and friendly positions.

Prerequisite. FAC(A)-4912.

Ordnance. TPOD, Expendables.

Range Requirement. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. LGW Capable UAS/UCAV, GFAC/JTAC.

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TRK-6807	1.3	*	2 AV-8B A (NS)
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Goal. Introduce AC-130 Call For Fire.



Requirement. Perform visual/sensor reconnaissance on 3 tactical targets, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare a call-for-fire brief. Emphasize accurate call-for-fire communications and adjustment procedures. Execute 3 missions.

Performance Standard. Execute appropriate search, detection, and PID profiles. Correctly use aircraft systems for target coordinate and call-for-fire brief generation. Provide accurate verbal description during talk-on attacks. If required, mark the target within 300 meters.

Prerequisite. FAC(A)-4912.

Ordinance. TPOD, Expendables.

Range Requirement. RSTD, LSR, HE. JCAS, JDAM, LGB.

External Syllabus Support. One AC-130 and a Ground or air FAC.

TRK-6808	0.0	Tracking
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Requirement. Range requirement unavailable.

TRK-6809	0.0	Tracking
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Requirement. Ordinance requirement unavailable.

TRK-6810	0.0	Tracking
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Requirement. Syllabus support unavailable.

TRK-6900	1.0	*	Tracking	1 AV-8B
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Goal. Day CAL site operations.

External Syllabus Support. Approved CAL Site.

TRK-6901	1.0	*	Tracking	1 AV-8B NS
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Goal. Night CAL site operations.

External Syllabus Support. Approved CAL Site.

TRK-6902	1.0	*	Tracking	1 AV-8B D
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Goal. Road operations.

External Syllabus Support. Approved Road.

TRK-6903	1.0	*	Tracking	1 AV-8B NS
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Goal. Night road operations.

External Syllabus Support. Approved Road.

2. Landing Signal Officer (LSO), Landing Site Instructor (LSI), and Landing Site Supervisor (LSS) Designation and Tracking

a. Purpose. To track the designation and currency of LSOs, LSIs, and LSSs.

b. 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:

(1) A pilot must complete the 2000-level syllabus prior to beginning any work-up for LSO or LSS designation.

(2) 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.

(3) 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.

(4) Successful completion of all appropriate work-up events and designation by the squadron commander are required prior to exercising any designation.

c. Ground/Academic Training. Per LSO NATOPS or MAG LSI/LSS Order.

LSO-6750            0.0                    E    Designation

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                    E    Designation

Goal. Night Basic Field LSO.

Requirement. Per LSO NATOPS.

Performance Standard. Per LSO NATOPS.

Prerequisite. Per LSO NATOPS.

External Syllabus Support. FCLP Facility.

<u>LSO-6752</u>	<u>0.0</u>	<u>E Designation</u>
<u>Goal.</u> Day Basic Ship.		
<u>Requirement.</u> Per LSO NATOPS.		
<u>Performance Standard.</u> Per LSO NATOPS.		
<u>Prerequisite.</u> Per LSO NATOPS.		
<u>External Syllabus Support.</u> L-Class Ship.		
<u>LSO-6753</u>	<u>0.0</u>	<u>E Designation</u>
<u>Goal.</u> Night Basic Ship.		
<u>Requirement.</u> Per LSO NATOPS.		
<u>Performance Standard.</u> Per LSO NATOPS.		
<u>Prerequisite.</u> Per LSO NATOPS.		
<u>External Syllabus Support.</u> L-Class Ship.		
<u>LSO-6754</u>	<u>0.0</u>	<u>E Designation</u>
<u>Goal.</u> Advanced Day LSO.		
<u>Requirement.</u> Per LSO NATOPS.		
<u>Performance Standard.</u> Per LSO NATOPS.		
<u>Prerequisite.</u> Per LSO NATOPS.		
<u>External Syllabus Support.</u> FCLP Facility and L-Class Ship.		
<u>LSO-6755</u>	<u>0.0</u>	<u>E Designation</u>
<u>Goal.</u> Advanced Night LSO.		
<u>Requirement.</u> Per LSO NATOPS.		
<u>Performance Standard.</u> Per LSO NATOPS.		
<u>Prerequisite.</u> Per LSO NATOPS.		
<u>External Syllabus Support.</u> FCLP Facility and L-Class Ship.		
<u>LSO-6756</u>	<u>0.0</u>	<u>E Designation</u>
<u>Goal.</u> Training Day LSO.		
<u>Requirement.</u> Per LSO NATOPS.		
<u>Performance Standard.</u> Per LSO NATOPS.		
<u>Prerequisite.</u> Per LSO NATOPS.		

External Syllabus Support. FCLP Facility and L-Class Ship.

LSO-6757      0.0      E Designation

Goal. Training Night 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      E 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      E 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      E Designation

Goal. Day Road LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. Road Training Facility or Road Base.

LSS-6773      0.0      E Designation

Goal. Night Road LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. Road Training Facility or Road Base.

LSS-6774      0.0      E    Designation

Goal. Day CAL Site LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. CAL Site.

LSS-6775      0.0      E    Designation

Goal. Night CAL Site LSS.

Requirement. As outlined in directives.

Performance Standard. As outlined in directives.

Prerequisite. As outlined in directives.

External Syllabus Support. CAL Site.

3. LSO, LSI, and LSS Tracking

a. Purpose. To enable squadrons to track LSO, LSI, and LSS.

TRK-6904      0.0      Tracking

Goal. Control Day FCLP LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

TRK-6905      0.0      Tracking  
External Syllabus Support. FCLP Facility.

Goal. Control Night FCLP LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. FCLP Facility.

TRK-6906      0.0      Tracking

Goal. Control Aided Night FCLP LSO.

Prerequisite. IAW V/STOL / LSO NATOPS.

External Syllabus Support. FCLP Facility.

<u>TRK-6907</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Day Ship LSO. <u>Prerequisite.</u> IAW V/STOL / LSO NATOPS. <u>External Syllabus Support.</u> L-Class Ship.
<u>TRK-6908</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Night Ship LSO. <u>Prerequisite.</u> IAW V/STOL / LSO NATOPS. <u>External Syllabus Support.</u> L-Class Ship.
<u>TRK-6909</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Night Aided Ship LSO. <u>Prerequisite.</u> IAW V/STOL / LSO NATOPS. <u>External Syllabus Support.</u> L-Class Ship.
<u>TRK-6910</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Day Training LSO. <u>External Syllabus Support.</u> FCLP Facility or L-Class Ship.
<u>TRK-6911</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Night Training LSO. <u>External Syllabus Support.</u> FCLP Facility or L-Class Ship.
<u>TRK-6912</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Day LSI Facility. <u>Prerequisite.</u> IAW V/STOL / LSI NATOPS. <u>External Syllabus Support.</u> Main Operating Facility.
<u>TRK-6913</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Night LSI Facility. <u>Prerequisite.</u> IAW V/STOL / LSI NATOPS <u>External Syllabus Support.</u> Main Operating Facility.
<u>TRK-6914</u>	<u>0.0</u>	<u>Tracking</u>	<u>Goal.</u> Control Day LSS Road. <u>Prerequisite.</u> IAW V/STOL / LSI NATOPS.

External Syllabus Support. Road Training Site or Road Site.

TRK-6915      0.0      Tracking

Goal. Control Night LSS Road.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. Road Training Site or Road Site.

TRK-6916      0.0      Tracking

Goal. Control Day LSS CAL Site.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. CAL Site.

TRK-6917      0.0      Tracking

Goal. Control Night LSS CAL Site.

Prerequisite. IAW V/STOL / LSI NATOPS.

External Syllabus Support. CAL Site.

TRK-6918      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-6919      0.0      Tracking

Goal. Control Night Night EP and approaches as LSO.

Prerequisite. IAW V/STOL / LSI NATOPS and MAG SOP.

External Syllabus Support. CAL Site.

NAVMC 3500.51A  
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221. T&R SYLLABUS MATRIX. These matrices display 1000 to 6000 phase event information, plus 8000 ACPM events.

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
CORE SKILL INTRODUCTION TRAINING (1000 PHASE TRAINING)																		
CORE SKILL INTRODUCTION ACADEMICS (ACAD)																		
AFAM-1	0001	FAM STAGE BRIEF							1	1.0								
AFAM-1	0002	INSTRUMENT GROUND SCHOOL							1	0.0								
AFAM-1	0003	AV-8B ENGINE							1	1.0								
AFAM-1	0004	ELECTRICAL/LIGHTING SYSTEMS							1	1.0								
AFAM-1	0005	FUEL SYSTEMS							1	1.0								
AFAM-1	0006	HYDRAULIC POWER/LANDING SYSTEMS							1	1.0								
AFAM-1	0007	FLIGHT CONTROL SYSTEMS							1	1.0								
AFAM-1	0008	ENVIRONMENTAL CONTROL SYSTEMS							1	1.0								
AFAM-1	0009	STANDBY FLIGHT INST							1	1.0								
AFAM-1	0010	OSCAR MISSION SYSTEMS COMPUTER (MSC)							1	1.0								
AFAM-1	0011	UP FRONT CONTROL SET							1	1.0								
AFAM-1	0012	COMMUNICATION/IDENTIFICATIONS EQUIPMENT							1	1.0								
AFAM-1	0013	HEADS UP DISPLAY							1	1.0								
AFAM-1	0014	INS THEORY							1	1.0								
AFAM-1	0015	GPS THEORY							1	1.0								
AFAM-1	0016	NAVIGATION SYSTEMS, PART 1							1	1.0								
AFAM-1	0017	NAVIGATION SYSTEMS, PART 2							1	1.0								
AFAM-1	0018	NAVIGATION							1	1.0								

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		SYSTEMS, PART 3																
AFAM-1	0019	NAVIGATION SYSTEMS, PART 4							1	1.0								
AFAM-1	0020	EMERGENCY EQUIPMENT							1	1.0								
AFAM-1	0021	EJECTION SEAT							1	1.0								
AFAM-1	0022	SURVIVAL EQUIPMENT							1	1.0								
AFAM-1	0023	OPERATING LIMITS							1	1.0								
AFAM-1	0024	VIDEO RECORDING SYSTEM							1	1.0								
AFAM-1	0025	AERODYNAMICS							1	1.0								
AFAM-1	0026	AV-8B/TAV08B DIFFERENCES							1	1.0								
AFAM-1	0027	AV-8B ENGINE HANDLING & PERFORMANCE							1	1.0								
AFAM-1	0028	AV-8B PREFLIGHT							1	1.0								
AFAM-1	0029	NORMAL PROCEDURES, PART 1							1	1.0								
AFAM-1	0030	NORMAL PROCEDURES, PART 2							1	1.0								
AFAM-1	0031	NORMAL PROCEDURES, PART 3							1	1.0								
AFAM-1	0032	NORMAL PROCEDURES, PART 4							1	1.0								
AFAM-1	0033	NORMAL PROCEDURES, PART 5							1	1.0								
AFAM-1	0034	NORMAL PROCEDURES, PART 6							1	1.0								
AFAM-1	0035	NORMAL PROCEDURES, PART 7							1	1.0								
AFAM-1	0036	GROUND EMERGENCIES							1	1.0								
AFAM-1	0037	TAKEOFF EMERGENCIES							1	1.0								
AFAM-1	0038	IN-FLIGHT EMERGENCIES, PT 1							1	1.0								

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
AFAM-1	0039	IN-FLIGHT EMERGENCIES, PT 2							1	1.0								
AFAM-1	0040	LANDING EMERGENCIES							1	1.0								
AFAM-1	0041	BRIEFING/DEBRIEFIN G							1	1.0								
AFAM-1	0042	INSTRUMENT PROCEDURES							1	1.0								
AFAM-1	0043	AIRCRAFT SERVICE & HANDLING							1	1.0								
AFAM-1	0044	AV-8B FLIGHT PREPARATION							1	1.0								
AFAM-1	0045	ENGINE & FUEL SYSTEMS TRAINER							1	1.0								
AFAM-1	0046	AIRFRAME SYSTEMS TRAINER							1	1.0								
AFAM-1	0047	SEAT BRIEF, SURVIVAL EQUIPMENT, PARACHUTE HANG							1	1.0								
AFAM-1	0048	JMPS: INTRODUCTION TO JOINT MISSION PLANNING SYSTEM							1	1.0								
AFAM-1	0049	JMPS: INTRODUCTION TO THE AV-8B UNIQUE PLANNING COMPONENT							1	1.0								
AFAM-1	0050	JMPS: BASIC MISSION PLANNING							1	1.0								
AFAM-1	0051	ENGINE QUIZ							1	1.0								
AFAM-1	0052	ELECTRICAL, FUEL, & HYDRAULIC SYS QUIZ							1	1.0								
AFAM-1	0053	FLIGHT CONTROLS, ENVIRONMENTAL SYSTEMS, & STANDBY FLIGHT INST QUIZ							1	1.0								

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
AFAM-1	0054	AERODYNAMICS QUIZ							1	1.0								
AFAM-1	0055	FAM GND SCHOOL EXAM							1	1.0								
AINST-1	6004	INSTRUMENT GND SCHOOL							1	8.0								
AINST-1	6005	ANNUAL INST GND SHOOOL EXAM							1	1.0								
AFOB-1	0058	FOB STAGE BRIEF							1	1.0								
AFOB-1	0059	V/STOL CONCEPT OF OPERATIONS							1	1.0								
AFOB-1	0060	FORWARD OPERATING BASE OPERATIONS							1	1.0								
AFCLP-1	0061	FCLP STAGE BRIEF							1	1.0								
AFCLP-1	0062	DAY CARRIER QUALIFICATION, PART 1							1	1.0								
AFCLP-1	0063	DAY CARRIER QUALIFICATION, PART 2							1	1.0								
AFCLP-1	0064	FIELD CARRIER LANDING PRACTICE							1	1.0								
AFCLP-1	0065	FLCP GROUND SCHOOL EXAM							1	1.0								
AFORM-1	0066	FORM/TACFORM STAGE BRIEF							1	1.0								
AFORM-1	0067	ADMINISTRATIVE FORM							1	1.0								
AFORM-1	0068	MED/HIGH ALTITUDE TACTICAL FORM							1	1.0								
AFORM-1	0069	LOW ALTITUDE FORM							1	1.0								
AFORM-1	0070	DIVISION TACTICAL FORM							1	1.0								
AFORM-1	0071	FORMATION GROUND SCHOOL EXAM							1	1.0								
AAAH-1	0072	AAH STAGE BRIEF							1	1.0								
AAAH-1	0073	AIRCRAFT							1	1.0								

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		PERFORMANCE AND HANDLING																
AAAH-1	0074	AV-8B DEPARTURE AVOIDANCE							1	1.0								
AAAH-1	0075	3D MANEUVERING							1	1.0								
AAAH-1	0076	MISSION CROSSCHECK TIME							1	1.0								
AAAH-1	0077	AIRCRAFT PERFORMANCE AND SAFETY WORKING GROUP							1	1.0								
AAAH-1	0078	AIRCRAFT HANDLING AND DEPARTURE AVOIDANCE EXAM							1	1.0								
ATACFORM -1	0079	MEDIUM/HIGH ALTITUDE TACTICAL FORM							1	1.0								
ATACFORM -1	0080	LOW ALTITUDE TACTICAL FORM							1	1.0								
ATACFORM -1	0081	DIVISION TACTICAL FORM							1	1.0								
ANAV-1	0082	NAV STAGE BRIEF							1	1.0								
ANAV-1	0083	LOW LEVEL NAVIGATION							1	1.0								
ANAV-1	0084	OSCAR NAVIGATION SYSTMES CHANGES							1	1.0								
ANAV-1	0085	JMPS LOW LEVEL PLANNING							1	1.0								
ANAV-1	0086	NAVIGATION GROUND SCHOOL							1	1.0								
AAAR-1	0087	AAR STAGE BRIEF							1	1.0								
AAAR-1	0088	AERIAL REFUELING							1	1.0								
AAAR-1	0089	AERIAL REFUELING GROUND SCHOOL EXAM							1	1.0								
ATCT-1	0090	TCT STAGE BRIEF							1	1.0								

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
ATCT-1	0091	EXPENDABLE DECOYS							1	1.0								
ATCT-1	0092	ALR-67 RADAR WARNING RECEIVER							1	1.0								
ATCT-1	0093	ALE-39 COUNTERMEASURE DISPENSING SYSTEM							1	1.0								
ATCT-1	0094	ALQ-164 DEFENSIVE ELECTRONIC COUNTERMEASURES							1	1.0								
ATCT-1	0095	THREAT RADAR FUNDAMENTALS							1	1.0								
ATCT-1	0096	NON-RF SURFACE-TO- AIR MISSILES AND AAA							1	1.0								
ATCT-1	0097	RF SURFACE-TO-AIR MISSILES							1	1.0								
ATCT-1	0100	MAWTS-1 COMMON COURSEWARE, THREAT COUNTERTACTICS							1	1.0								
ATCT-1	0101	THREAT COUNTERTACTICS GROUND SCHOOL EXAM							1	1.0								
AAS-1	0102	AS STAGE BRIEF							1	1.0								
AAS-1	0103	INTRODUCTION TO MISSION PUBLICATIONS							1	1.0								
AAS-1	0104	A/G WEAPONS DELIVERY THEORY							1	1.0								
AAS-1	0105	COMPUTED DELIVERY THEORY							1	1.0								
AAS-1	0106	SUSPENSION EQUIPMENT							1	1.0								
AAS-1	0107	GP BOMBS							1	1.0								
AAS-1	0108	GP FUZING							1	1.0								
AAS-1	0109	25MM GUN							1	1.0								

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
AAS-1	0110	ROCKETS							1	1.0								
AAS-1	0111	WEAPON LIMITS AND RESTRICTIONS							1	1.0								
AAS-1	0112	WEAPONNEERING							1	1.0								
AAS-1	0113	MULTIPLE WEAPONS RELEASE WEAPONNEERING							1	1.0								
AAS-1	0114	FORWARD-FIRING ORDNANCE AND WEPONEERING							1	1.0								
AAS-1	0115	WARP							1	1.0								
AAS-1	0116	LASER THEORY							1	1.0								
AAS-1	0117	ANGLE RATE BOMBING SYSTEM							1	1.0								
AAS-1	0118	HEIGHT ABOVE TARGET							1	1.0								
AAS-1	0119	TARGET DESIGNATION METHODS							1	1.0								
AAS-1	0120	SMS & WEAPON SYSTEM PROGRAMMING							1	1.0								
AAS-1	0121	SMS & WEAPON SYSTEM PROGRAMMING OSCAR							1	1.0								
AAS-1	0122	COMPUTED WEAPONS DELIVERY MODES							1	1.0								
AAS-1	0123	DEGRADED WEAPONS DELIVERY MODES							1	1.0								
AAS-1	0124	WEAPON DELIVERY PROCEDURES, PART 1							1	1.0								
AAS-1	0125	WEAPON DELIVERY PROCEDURES, PART 2							1	1.0								
AAS-1	0126	JMPS LAB, ADVANCED MISSION PLANNING							1	1.0								
AAS-1	0127	AIR-TO-SURFACE GROUND SCHOOL EXAM							1	1.0								

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
ALAT-1	0128	MAWTS-1 LAT ASP 1-IV							1	1.0								
ALAT-1	0129	LAT STAGE EXAM							1	1.0								
AMECH-1	0130	MECH STAGE BRIEF							1	1.0								
AMECH-1	0131	TARGET ACQUISITION/DETECTION/ID							1	1.0								
AMECH-1	0132	ATTACK PROFILES							1	1.0								
AMECH-1	0133	LASER-GUIDED BOMBS AND LASER-GUIDED TRAINING ROUNDS							1	1.0								
AMECH-1	0134	STANDARD TARGET AREA TACTICS							1	1.0								
AMECH-1	0135	AIR-TO-SURFACE (A/S) PLANNING & TIMELINE MANAGEMENT							1	1.0								
AMECH-1	0136	REACTIVE WEAPONNEERING							1	1.0								
AMECH-1	0137	JMEM/JAWS							1	1.0								
AMECH-1	0138	AGM-65E							1	1.0								
AMECH-1	0139	TRANSITION PROFILES PLANNING LAB							1	1.0								
AMECH-1	0140	JDAM UPC							1	1.0								
AMECH-1	0141	TARGET AREA TACTICS GROUND SCHOOL EXAM							1	1.0								
ACAS-1	0142	CAS STAGE BRIEF							1	1.0								
ACAS-1	0143	OAS OVERVIEW							1	1.0								
ACAS-1	0144	CLOSE AIR SUPPORT (CAS)							1	1.0								
ACAS-1	0145	CAS EXECUTION							1	1.0								
ACAS-1	0146	CAS PLANNING LAB							1	1.0								
ACAS-1	0147	CAS GROUND SCHOOL							1	1.0								



AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		EXAM																
AAI-1	0148	AI PLANNING LAB							1	1.0								
AAA-1	0149	AA STAGE BRIEF							1	1.0								
AAA-1	0150	AIR COMBAT MANEUVERING (ACM) SAFETY AND AIR-TO- AIR SYSTEMS							1	1.0								
AAA-1	0151	FIGHTER PERFORMANCE COMPARISONS							1	1.0								
AAA-1	0152	AIM-9 SIDEWINDER, PART I							1	1.0								
AAA-1	0153	AIM-9 SIDEWINDER, PART II							1	1.0								
AAA-1	0154	COMBAT GUNNERY							1	1.0								
AAA-1	0155	SHOT VALIDATION							1	1.0								
AAA-1	0156	CMBT THRUST VECTOR CONTROL (CVTC)							1	1.0								
AAA-1	0157	THREAT AIRCRAFT							1	1.0								
AAA-1	0158	1V1 BASIC FIGHTER MANEUVERS (BFM)							1	1.0								
AAA-1	0159	AA GND SCHOOL EXAM							1	1.0								
ANS-1	0160	NS STAGE BRIEF							1	1.0								
ANS-1	0161	NIGHT FLYING ENVIRONMENT AND PHYSIOLOGY							1	1.0								
ANS-1	0162	INFRARED THEORY							1	1.0								
ANS-1	0163	NAVIGATION FLIR							1	1.0								
ANS-1	0164	NIGHT FLYING PROCEDURES							1	1.0								
ANS-1	0165	AIDED NIGHT FLYING PROCEDURES							1	1.0								
ANS-1	0166	NITE LAB							1	1.0								
ANS-1	0167	NS GROUND SCHOOL EXAM							1	1.0								

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
ANTPS-1	6000	OPEN BOOK AV-8B NATOPS EXAM							1	1.5								
ANTPS-1	6001	CLOSED BOOK AV-8B NATOPS EXAM							1	1.0								
ANTPS-1	6002	GRND EVAL IAW AV-8B NATOPS MANUAL							1	1.0								
ATRA-1	0171	RADAR THEORY							1	1.0								
ATRA-1	0172	AIR-TO-AIR RADAR CONSIDERATIONS							1	1.0								
ATRA-1	0173	AIR-TO-AIR RADAR CONTROLS AND DISPLAYS							1	1.0								
ATRA-1	0174	BASIC INTERCEPT GEOMETRY, PART 1							1	1.0								
ATRA-1	0175	BASIC INTERCEPT GEOMETRY, PART 2							1	1.0								
ATRA-1	0176	AIR-TO-AIR SEARCH TECHNIQUES							1	1.0								
ATRA-1	0177	INTRODUCTION TO AIR INTERCEPT CONTROL							1	1.0								
ATRA-1	0178	LITENING II EMPLOYMENT							1	1.0								
ATRA-1	0179	INTRODUCTION TO THE LITENING II TARGETING POD (OSCAR)							1	1.0								
ATRA-1	0180	LITENING II TPOD CAPABILITIES							1	1.0								
CORE SKILL ACADEMICS TOTAL									180	187.0	0	0.0	0	0.0				
FAMILIARIZATION (FAM)																		
SFAM-1	1100	COCKPIT,PRE-START, ENGINE START,TAXI CHECKLISTS			S		D	*			1	2.0				COMPLETE FAM STAGE GROUND/ACADEMIC TRAINING		1
			R,M,SS															
SFAM-1	1101	COCKPIT,PRE-START,			S		D	*			1	2.0			1100			1A

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		ENGINE START,TAXI CHECKLISTS																
SFAM-1	1102	COCKPIT,PRE-START, ENGINE START,TAXI CHECKLISTS			S		D	*			1	2.0			1101			2
SFAM-1	1103	TAKEOFF,IN-FLIGHT,LNDING CHKS/MANEUVERS/EP	R,M,SS		S		D	*			1	2.0			1102			3
SFAM-1	1104	TAKEOFF,IN-FLIGHT,LANDING CHECKS/MANEUVERS/EP	R,M,SS		S		D	*			1	2.0			1103			4
SFAM-1	1105	TAKEOFF,IN-FLIGHT,LANDING CHECKS/MANEUVERS/EP			S		D	*			1	2.0			1104			5
SFAM-1	1106	TAKEOFF,IN-FLIGHT,LANDING CHECKS/MANEUVERS/EP			S		D	*			1	2.0			1105			6
SFAM-1	1107	TAKEOFF,IN-FLIGHT,LANDING CHECKS/MANEUVERS/EP			S		D	*			1	2.0			1106			7
SFAM-1	1108	INTRO EP/REVIEW T/O,IN-FLT,LND CHKS AND MANEUVERS			S		D	*			1	2.0			1107			8
SFAM-1	1109	INTRO EP/REVIEW T/O,IN-FLT,LND CHKS AND MANEUVERS			S		D	*			1	2.0			1108			9
SFAM-1	1110	INTRO EP/REVIEW T/O,IN-FLT,LND CHKS AND MANEUVERS			S		D	*			1	2.0			1109			10
SFAM-1	1111	INTRO EP/REVIEW T/O,IN-FLT,LND CHKS AND MANEUVERS	R,M,SS		S		D	*			1	2.0			1110			11

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
SFAM-1	1112	INTRO EP AND PROGRESS CHECK	R,M,SS		S		D	*			1	2.0			1111			12
SFAM-1	1113	CTO,STO(S), HANDLING DRILLS, FNSL(S),VNSL(A)	R,M,SS		A	1	D	*					1	1.3	1112			13
SFAM-1	1114	TACAN,R+G LANDINGS,VNSL(S), PRESS-UP/REVIEW	R,M,SS		A	1	D	*					1	1.3	1113			14
SFAM-1	1115	GCA,CL,T+G LANDINGS/REVIEW	R,M,SS		A	1	D	*					1	1.3	1114			15
SFAM-1	1116	VTO ACCEL, RVL, DECEL-VL,BOX PATTERN/ REVIEW			A	1	D	*					1	1.3	1115			16
SFAM-1	1117	RVTO,HSSL/REVIEW			A	1	D	*					1	1.3	1116			17
SFAM-1	1118	PEDAL TURN/REVIEW			A	1	D	*					1	1.3	1117			18
SFAM-1	1119	T+G LANDINGS/REVIEW	R,M		A	1	D	*					1	1.3	1118			19
TOTAL FAM STAGE									0	0.0	13	26.0	7	9.1				
FAMILIARIZATION/INSTRUMENT (FAM/INST)																		
SFAM/INST-1	1120	INST PROCEDURES/ PARTIAL PANEL/ UNUSUAL ATTITUDE			S	1	D	*			1	2.0			1112			20
SFAM/INST-1	1121	AIRWAYS NAVIGATION/REVIEW	R,M		S	1	D	*			1	2.0			1120			21
SFAM/INST-1	1122	CRUISE PROFILE, MAX RANGE, MIN FUEL GCA/REVIEW			S	1	D	*			1	2.0			1121			22
SFAM/INST-1	1123	INST PROC, APP, MISSED APP			A	1	D						1	1.5	1122,1119			23
SFAM/INST-1	1124	AIRWAYS NAVIGATION MIN FUEL GCA	R		A	1	D						1	1.5	1123			24
SFAM/INST-1	1125	INST CHECK	R,M		S	1	D	*			1	1.5			1112,1124,	IGS		25
FAM/INST-1	1126	VFR STRAIGHT-IN/			A								1	1.3	1125			26

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		REVIEW																
SFAM/INST-1	1127	COMPOUND EMERGENCIES	R,M		S	1	D	*			1	2.0			1126			27
FAM/INST-1	1128	SAFE FOR SOLO CHECK	R,M,SS		A	1	D	*					1	1.3	1127			28
FAM/INST-1	1129	SOLO FLIGHT	R,M,SS		A	1	D	*					1	1.3	1128			29
TOTAL FAM/INST STAGE									0	0.0	5	9.5	5	6.9				
FORWARD OPERATING BASE OPERATIONS (FOB)																		
SFOB-1	1200	INTRODUCE FOB & EPS			S		D	*			1	1.0			1129	COMPLETE FOB STAGE GRND/ACAD TRAINING		30
FOB-1	1201	INTRODUCE FOB			A	1	D	*					1	1.2	1200			31
FOB-1	1202	PRACTICE FOB			A	1	D	*					1	0.8	1201			32
TOTAL FOB STAGE									0	0.0	1	1.0	2	2.0				
FIELD CARRIER LANDING PRACTICE (FCLP)																		
SFCLP-1	1210	INTRODUCE FCLP & EPS			S		D	*			1	1.0			1129	FCLP GROUND/ACAD TRAINING		35
FCLP-1	1211	PRACTICE FCLP			A	1	D	*					1	1.0	1210			36
FCLP-1	1212	PRACTICE FCLP			A	1	D	*					1	1.0	1211			37
FCLP-1	1213	PRACTICE FCLP			A	1	D	*					1	1.0	1212			38
FCLP-1	1214	PRACTICE FCLP			A	1	D	*					1	1.0	1213			39
FCLP-1	1215	PRACTICE FCLP			A	1	D	*					1	1.0	1214			40
FCLP-1	1216	FCLP (D) QUAL			A	1	D	*					1	1.0	1215	50 HOURS		41
TOTAL FCLP STAGE									0	0.0	1	1.0	6	6.0				
FORMATION (FORM)																		
FORM-1	1300	INTRODUCE ADMINISTRATIVE FORM PROCEDURES			A	2	D	*					1	1.3	1129	COMPLETE FORM STAGE GROUND/ACADEMIC TRAINING		45
FORM-1	1301	PRACTICE ADMINISTRATIVE FORM PROCEDURES			A	2	D	*					1	1.3	1300			46
TOTAL FORM STAGE									0	0.0	0	0.0	2	2.6				

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
ADVANCED AIRCRAFT HANDLING (AAH)																		
SAAH-1	1310	INTRO ADV A/C HANDLING			S	1	D	*			1	1.0			1301	AAH STAGE GROUND/ ACADEMIC TRNG		50
AAH-1	1311	INTRO ADV A/C HANDLING			A	1	D	*					1	1.0	1310			53
AAH-1	1312	REVIEW ADV A/C HANDLING			A	2	D	*					1	1.0	1311			54
TOTAL AAH STAGE									0	0.0	1	1.0	2	2.0				
TACTICAL FORMATION (TACFORM)																		
TAC FORM-1	1320	SECTION TACFORM @ MEDIUM ALTITUDE	R,M		A	2	D	*					1	1.0	1210	COMPLETE TACFORM STAGE GROUND/ ACADEMIC TRNG		60
TAC FORM-1	1321	COMM-OUT TURNS @ MEDIUM ALTITUDE			A	2	D	*					1	1.0	1211			61
TAC FORM-1	1322	SECTION TACFORM @ LOW LEVEL			A	2	D	*					1	1.0	1212			62
TAC FORM-1	1323	SECTION TACFORM @ HIGH ALTITUDE			A	2	D	*					1	1.0	1213			63
TAC FORM-1	1324	DIVISION FORMATION @ MEDIUM ALTITUDE			A	4	D	*					1	1.0	1214			64
TOTAL TACFORM STAGE									0	0.0	0	0.0	5	5.0				
NAVIGATION (NAV)																		
MIAV-1	1330	INTRODUCE SYSTEMS MANAGEMENT FOR LOW LEVEL NAVIGATION			M		D	*			1	0.8			1129	COMPLETE NAV STAGE GROUND/ ACADEMIC TRNG		65
SNAV-1	1331	INTRODUCE LOW LEVEL NAVIGATION	M,R		S		D	*			1	1.5			1330			
NAV-1	1332	INTRODUCE LOW LEVEL NAVIGATION			A	1	D	*					1	1.3	1331			
TOTAL NAV STAGE									0	0.0	2	2.3	1	1.3				
AIR-TO-AIR REFUELING (AAR)																		
AAR-1	1340	DAY AAR QUALIFICATION			A	1	D	*					1	1.5	1324	COMPLETE AAR STAGE GROUND/		80

AV-8B PILOT T&R MATRIX																			
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV	
																ACADEMIC TRNG			
TOTAL AAR STAGE									0	0.0	0	0.0	1	1.5					
THREAT COUNTERTACTICS (TCT)																			
MTCT-1	1350	INTRODUCE EW SUITE PROGRAMMING			M		D	*			1	0.8			1324	TCT STAGE BRIEF, GROUND/ ACADEMIC TRNG		85	
STCT-1	1351	INTRODUCE EW AND MED ALT THREAT COUNTERTACTICS			S		D	*			1	1.0			1350			86	
TCT-1	1352	MED ALTITUDE TCT			A	2	D	*					1	1.0	1351			87	
TOTAL TCT STAGE									0	0.0	2	1.8	1	1.0					
AIR-TO-SURFACE (AS)																			
MAS-1	1400	INTRODUCE COMPUTED WEAPONS DELIVERIES			M		D	*			1	1.0			1324	TCT GROUND SCHOOL		92	
SAS-1	1401	INTRODUCE COMPUTED WEAPONS DELIVERIES			S		D	*			1	1.0			1400				
SAS-1	1402	INTRO LOW ANGLE DELIVERIES			S		D	*			1	1.0			1401			93	
SAS-1	1403	INTRODUCE ARBS/TV DELIVERIES			S		D	*			1	1.0			1401			94	
SAS-1	1404	INTRODUCE ARBS/LST DELIVERIES			S		D	*			1	1.0			1403			95	
SAS-1	1405	INTRODUCE LOW ANGLE STRAFE/ ROCKET DELIVERIES			S		D	*			1	1.0			1402			97	
AS-1	1406	INTRODUCE COMPUTED WEAPONS DELIVERIES			A	1	D	*					1	1.0	1404			98	
AS-1	1407	REVIEW MEDIUM ANGLE DELIVERIES			A	2	D	*					1	1.0	1406			99	
AS-1	1408	INTRODUCE ARBS/TV DELIVERIES	M,R		A	2	D	*					1	1.0	1407			100	
AS-1	1409	INTRODUCE LOW ANGLE DELIVERIES			A	2	D	*					1	1.0	1408			102	
AS-1	1410	INTRODUCE LOW			A	2	D	*					1	1.0	1405,1409			103	

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## AV-8B PILOT T&amp;R MATRIX

AV-8B PILOT T&R MATRIX																			
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV	
		ANGLE STRAFE, HIGH DRAG DELIVERIES																	
TOTAL AS STAGE									0	0.0	6	6.0	5	5.0					
LOW ALTITUDE TACTICS (LAT)																			
SLAT-1	1420	INTRODUCE BASIC			S			*			1	1.0			1324			51	
SLAT-1	1421	INTRODUCE ADV			S			*			1	1.0			1420			52	
SLAT-1	1422	INTRODUCE TXRX			S			*			1	1.0			1420,1351				
LAT-1	1423	INTRODUCE BASIC			A	1		*					1	1.0	1421				
LAT-1	1424	INTRO ADV			A	2		*					1	1.0	1423			55	
LAT-1	1425	INTRO TXRX			A	2		*					1	1.0	1424,1352				
TOTAL LAT STAGE									0	0.0	3	3.0	3	3.0					
TARGET AREA MECHANICS (MECH)																			
MMECH-1	1430	INTRODUCE PGM			M			*			1	1.0			1409,0141	COMPLETE MECH, GROUND/ACADEMIC TRNG			
SMECH-1	1431	INTRO TRANSITION PROFILES AND HVYWT A/C HANDLING	R		S			*			1	1.0			1430			105	
SMECH-1	1432	INTRODUCE LOW ALTITUDE TRANSITION PROFILES, LMAV,PGM	R		S			*			1	1.0			1431,1421			106	
MECH-1	1433	INTRODUCE TRANSITION PROFILES			A	2		*					1	1.0	1431			109	
MECH-1	1434	INTRODUCE LOW ALTITUDE TRANSITION PROFILES AND MED ALT PGMS	R		A	1		*					1	1.0	1432,1424			110	
MECH-1	1435	INTRODUCE MEDIUM ALTITUDE SECTION ATTACKS			A	2		*					1	1.0	1431			111	



AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
MECH-1	1436	REVIEW MEDIUM ALTITUDE SECTION ATTACKS	R		A	2		*					1	1.0	1435			112
MECH-1	1437	INTRODUCE LOW ALTITUDE SECTION ATTACKS			A	2		*					1	1.0	1434,1425			113
TOTAL MECH STAGE									0	0.0	3	3.0	5	5.0				
CLOSE AIR SUPPORT (CAS)																		
MCAS-1	1440	INTRO 9-LINE & ATHS			M		D	*			1	1.0			1437,0147	CAS ACADEMIC/ GROUND SCHOOL COMPLETE		
SCAS-1	1441	INTRODUCE MEDIUM ALT CAS	R		S		D	*			1	1.0			1440			120
SCAS-1	1442	INTRODUCE MED ALT CAS			S		D	*			1	1.0			1441			
SCAS-1	1443	INTRODUCE LOW LEVEL CAS			S		D	*			1	1.0			1442			121
CAS-1	1444	INTRODUCE MEDIUM ALT CAS TYPE 1 CONTROL			A	1	D	*					1	1.0	1441			122
CAS-1	1445	INTRODUCE TYPE 2 CONTROL			A	1	D	*					1	1.0	1442			
CAS-1	1446	REVIEW MEDIUM ALT CAS			A	2	D	*					1	1.0	1445			123
CAS-1	1447	INTRODUCE LOW LEVEL CAS			A	2	D	*					1	1.0	1443,1446			124
TOTAL CAS STAGE									0	0.0	4	4.0	4	4.0				
AERIAL INTERDICTION (AI)																		
SAI-1	1450	INTRODUCE LOW ALT AI			S		D	*			1	1.0			1447,0148	COMPLETE AI GROUND/ ACAD TRNG		
AI-1	1451	REVIEW AERIAL INTERDICTION			A	2	D	*					1	1.0	1450			
TOTAL AI STAGE									0	0.0	1	1.0	1	1.0				

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
V/STOL CONSOLIDATION (VCON)																		
VCON-1	1220	V/STOL CON			A	1	D	*					1	1.3	1129			125
SVCON-1	1221	EP REVIEW			S		D	*			1	1.0			1129			126
VCON-1	1222	V/STOL CON			A	1	D	*					1	1.3	1129,1220			127
VCON-1	1223	V/STOL CON			A	1	D	*					1	1.3	1129,1222			128
TOTAL VCON STAGE									0	0.0	1	1.0	3	3.9				
AIR-TO-AIR (AA)																		
MAA-1	1500	INTRO AA PROGRAMMING			M		D	*			1	0.8			1324	COMPLETE A/A STAGE GROUND/ ACADEMIC TRNG		130
SAA-1	1501	INTRO TVC & RADAR ACM MODES			S		D	*			1	1.0			1500			131
AA-1	1502	INTRO BFM PROCEDURES & DRILLS			A	2	D	*					1	1.0	1501			133
AA-1	1503	1V1 OFFENSIVE BFM			A	2	D	*					1	1.0	1502			134
AA-1	1504	1V1 OFFENSIVE BFM			A	2	D	*					1	1.0	1503			135
AA-1	1505	1V1 DEFENSIVE BFM			A	2	D	*					1	1.0	1504			136
AA-1	1506	1V1 DEFENSIVE BFM			A	2	D	*					1	1.0	1505			137
AA-1	1507	1V1 NEUTRAL BFM			A	2	D	*					1	1.0	1506			138
TOTAL CAS STAGE									0	0.0	2	1.8	6	6.0				
NIGHT SYSTEMS (NS)																		
SNS-1	1600	INTRO NIGHT V/STOL & NVG USAGE			S		N*, NS	*			1	1.0			1324, 50 HOURS	COMPLETE NS STAGE GRND/ ACADEMIC TRNG		140
SNS-1	1601	INTRO NS V/STOL			S		NS	*			1	1.0			1600			141
NS-1	1602	INTRO NIGHT V/STOL & NVG USAGE			A	1	N*, NS	*					1	1.3	1601			142
NS-1	1603	INTRO NIGHT ADMIN FORMATION			A	2	N*, NS	*					1	1.3	1602			143
NS-1	1604				A	1	NS	*					1	1.3	1603			144
NS-1	1605				A	2	NS	*					1	1.3	1604			145

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
NS-1	1606				A	1	N*	*					1	1.3	1603			146
TOTAL NS STAGE									0	0.0	2	2.0	5	6.5				
NATOPS/CORE SKILL INTRODUCTION EVALUATION (NTPS)																		
NTPS	6101	AIRCRAFT SYSTEMS, NORMAL & EMERGENCY PROCEDURES	R,M,SS	E	S/A		D	365			1	1.5			1507, 1606	NATOPS GROUND/ ACADEMIC TRNG COMPLETE		195
NTPS	6103	CRM	R,M,SS	E	S/A		(NS)	365				1.0						
TOTAL NTPS STAGE									0	0.0	1	2.5	0	0.0				
CORE SKILL INTRODUCTION TOTAL									180	187.0	47	65.9	61	67.9				
TRANSITION GROUND SCHOOL (TRAN)																		
MTRAN-1	1900	INTRODUCE A/S RADAR CONTROLS & DISPLAYS			M			*			1	1.0			6101	COMPLETE TRANSITION STAGE GROUND/ ACADEMIC TRNG		90
MTRAN-1	1901	INTRODUCE A/S RADAR MODES			M			*			1	1.0			1900			
MTRAN-1	1902	INTRODUCE TPOD CONTROLS & DISPLAYS			M			*			1	1.0			1901			107
MTRAN-1	1903	INTRODUCE AGR & TPOD HAT			M			*			1	1.0			1902			96
MTRAN-1	1904	INTRODUCE TPOD BUDDY & SELF-LASE ATTACKS			M			*			1	1.0			1903			108
MTRAN-1	1905	INTRODUCE A/A CONTROLS & DISPLAYS (MTT)			M			*			1	1.0			1904			70
MTRAN-1	1906	INTRODUCE RADAR INTERCEPT: COLLISION BEARING			M			*			1	1.0			1905			71
MTRAN-1	1907	INTRODUCE RADAR INTERCEPT: FWD			M			*			1	1.0			1906			72

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AV-8B PILOT T&R MATRIX																			
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV	
		QUARTER																	
TOTAL TRAN STAGE									0	0.0	8	8.0	0	0.0					
CORE SKILL TRAINING (2000 PHASE TRAINING)																			
CORE SKILL ACADEMICS (ACAD)																			
ATCT-2	2000	EXPENDABLE DECOYS							1	1.0									
ATCT-2	2001	ALE-39 CMDS							1	1.0									
ATCT-2	2002	ALR-67 RWR							1	1.0									
ATCT-2	2003	ALQ-164 DEFENSIVE ECM							1	1.0									
ATCT-2	2004	TCT (MAWTS-1 COMMON COURSEWARE)							1	1.0									
ATCT-2	2005	NON-RF SAMS (MAWTS-1 GENERIC COURSEWARE)							1	1.0									
ATCT-2	2006	RF SAMS (MAWTS-1 GENERIC COURSEWARE)							1	1.0									
ATCT-2	2007	AAA SYSTEMS							1	1.0									
ATCT-2	2008	THREAT BRIEFING (SEMI-ACTIVE RF THREATS)							1	1.0									
ATCT-2	2009	AV-8B AERIAL REFUELING							1	1.0									
AAAR-2	2010	MAWTS-1 ASP TACAIR LAT, PART 1							1	1.0									
ALAT-2	2011	MAWTS-1 ASP TACAIR LAT, PART 2							1	1.0									
ALAT-2	2012	MAWTS-1 ASP TACAIR LAT, PART 3							1	1.0									
ALAT-2	2013	MAWTS-1 ASP TACAIR LAT, PART 4							1	1.0									
ALAT-2	2014	SURFACE-TO-AIR							1	1.0									

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		COUNTERTACTICS GAMEPLANS VS RANGE-KNOWN & RANGE-UNKNOWN THREATS (W/ AV-8B LATI)																
ALAT-2	2015	LAT STAGE EXAM							1	1.0								
ALAT-2	2016	HEIGHT ABOVE TARGET							1	1.0								
AAAS-2	2017	GENERAL PURPOSE BOMBS							1	1.0								
AAAS-2	2018	GENERAL PURPOSE BOMB FUZING							1	1.0								
AAAS-2	2019	25MM GUN							1	1.0								
AAAS-2	2020	ROCKETS							1	1.0								
AAAS-2	2021	FORWARD-FIRING ORDNANCE & WEAPONEERING							1	1.0								
AAAS-2	2022	LASER-GUIDED BOMBS & LASER-GUIDED TRNG ROUNDS							1	1.0								
AAAS-2	2023	ATTACK PROFILES							1	1.0								
AAAS-2	2024	STANDARD TARGET							1	1.0								
AAAS-2	2025	AIR-TO-SURFACE (A/S) PLANNING & TIMELINE MGMT							1	1.0								
AAAS-2	2026	CLUSTER WEAPONS & MUNITIONS							1	1.0								
AAAS-2	2027	JOINT DIRECT ATTACK MUNITION							1	1.0								
AAAS-2	2028	LASER GUIDED WEAPONS							1	1.0								
AAAS-2	2029	DIVISION TARGET AREA TACTICS							1	1.0								
AAAS-2	2030	CFF (BY FAC(A)/ PRIOR GFAC)							1	1.0								

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
AAAS-2	2031	WINGMAN CONTRACTS & RESPONSIBILITIES							1	1.0								
AAAS-2	2032	JMEMS A/S WEAPONNEERING SYSTEMS (JAWS) LAB							1	1.0								
AAAS-2	2033	SENSOR FOOTPRINT LAB							1	1.0								
ANS-2	2034	INFRARED THEORY							1	1.0								
ANS-2	2035	NAVFLIR							1	1.0								
ANS-2	2036	LUU02 PARACHUTE FLARES							1	1.0								
ANS-2	2037	NITE LAB							1	1.0								
ANS-2	2038	MAWTS-1 AV-8B NIGHT SYSTEMS MISHAP ANTHOLOGY (PRESENTED BY NSI)							1	1.0								
AAA-2	2039	ACM SAFETY & A/A SYSTEMS							1	1.0								
AAA-2	2040	AIRCRAFT PERFORMANCE							1	1.0								
AAA-2	2041	COMBAT GUNNERY							1	1.0								
AAA-2	2042	COMBAT THRUST VECTOR CONTROL							1	1.0								
AAA-2	2043	AIM-9							1	1.0								
AAA-2	2044	GAU-12							1	1.0								
AAA-2	2045	ALR-67 RADAR WARNING RECEIVER							1	1.0								
AAA-2	2046	ALE-39/47 COUNTERMEASURES DISPENSING SYSTEM							1	1.0								
AAA-2	2047	ALQ-164 DEFENSIVE ELECTRONIC COUNTERMEASURES							1	1.0								
AAA-2	2048	AV-8B DEPARTURE AVOIDANCE							1	1.0								
AAA-2	2049	AV-8B RADAR							1	1.0								

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		CONTROLS & DISPLAYS																
AAA-2	2050	AV-8B BASIC INTERCEPT GEOMETRY 1 & 2							1	1.0								
AAA-2	2051	AIR-TO-AIR SEARCH TECHNIQUES							1	1.0								
AAA-2	2052	1V1 BASIC FIGHTER MANEUVERS							1	1.0								
AAA-2	2053	2V1 BASIC FIGHTER MANEUVERS							1	1.0								
AAA-2	2054	AIR INTERCEPT CONTROL							1	1.0								
AAA-2	2056	TACTS DEBRIEF LAB							1	1.0								
AAA-2	2057	AIR-TO-AIR TIMELINE							1	1.0								
AACPM-2	8200	MACCS AGENCIES, FUNCTIONS & CONTROL OF A/C & MISSILES							1	1.0								
AACPM-2	8201	MWCS BRIEF							1	1.0								
AACPM-2	8202	ACA & AIRSPACE							1	1.0								
AACPM-2	8210	AVIATION GROUND SUPPORT							1	1.0								
AACPM-2	8230	ACE BATTLE STAFF							1	1.0								
AACPM-2	8231	BATTLE COMMAND DISPLAY							1	1.0								
AACPM-2	8240	SIX FUNCTIONS OF MARINE AVIATION							1	1.0								
AACPM-2	8241	JTAR/ASR INTRODUCTION & PRACTICAL APPLICATION							1	1.0								
AACPM-2	8242	SITE COMMAND PRIMER							1	1.0								
AACPM-2	8250	THEATER AIR GROUND							1	1.0								

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AV-8B PILOT T&R MATRIX																			
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV	
		SYSTEM																	
TOTAL ACAD STAGE									70	70.0	0	0.0	0	0.0					
FAMILIARIZATION (FAM)																			
SFAM-2	2100	NORM/INSTRUMENT PROCEDURES			S		D	*			1	1.0				COMPLETE GROUND/ ACADEMIC TRNG		200	
SFAM-2	2101	EP SIMULATOR	R		S		(NS)	30			1	1.0			2100, (2605)			201	
FAM-2	2102	DAY FAM V/STOL NAV INSTRUMENT	R		A	1+	(NS)	60					1	1.3	2101, (2605)			202	
TOTAL FAM STAGE									0	0.0	2	2.0	1	1.3					
THREAT COUNTERTACTICS (TCT)																			
STCT-2	2200	REVIEW S/A TCT			S		D	*			1	1.0			2102	COMPLETE GROUND/ ACADEMIC TRNG		230	
TCT-2	2201	DAY FAM V/STOL NAV INSTRUMENT	R		A	2	(NS)	180					1	1.3	2200, (2605)		2102	235	
TOTAL TCT STAGE									0	0.0	1	1.0	1	1.3					
AIR-TO-AIR REFUELING (AAR)																			
AAR-2	2300	NIGHT AAR	R		A	1+	N/ (NS)	365					1	1.3	1340, 2102, (2605)	COMPLETE GROUND/ ACADEMIC TRNG	2102	211	
TOTAL AAR STAGE									0	0.0	0	0.0	1	1.3					
LOW ALTITUDE TACTICS (LAT)																			
SLAT-2	2400	REVIEW BASIC & ADV LAT PROCEDURES			S		D	*			1	1.0			2101	COMPLETE GROUND/ ACADEMIC TRNG		220	
SLAT-2	2401	LOW ALTITUDE TCT	R		S		D	180			1	1.0			2200, 2400			221	
LAT-2	2402	LAT TGT MECH			A	2	D	*					1	1.3	2102, 2401		2102, 2401	430	
LAT-2	2403	SECTION LAT	R		A	2	D	365					1	1.3	2201, 2402		2102, 2201, 2401, 2402	431	
TOTAL LAT STAGE									0	0.0	2	2.0	2	2.6					



AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
AIR-TO-SURFACE (AS)																		
SAS-2	2500	REVIEW A/S SENSORS			S		D	*			1	1.0			2401	COMPLETE GROUND/ACADEMIC TRNG		231
SAS-2	2501	REVIEW COMPUTED DELIVERIES	R		S		D	*			1	1.0			2500			232
SAS-2	2502	FWD FIRING SIM			S		D	*			1	1.0			2501			
SAS-2	2503	JDAM SIM	R		S		D	*			1	1.0			2502			233
SAS-2	2504	LMAV/LGB SIM	R		S		D	*			1	1.0			2503			234
SAS-2	2505	CFF			S/A		(NS)	*			1	1.0				COMPLETE GROUND/ACADEMIC TRNG	4907,4911,4912,4951	
AS-2	2506	SENSORS			A	2+	(NS)	180					1	1.3	2504,(2605)		2102	236
AS-2	2507	A/S TIMELINES			A	2+	(NS)	180					1	1.3	2506,(2605)		2102	
AS-2	2508	HI/MED ANGLE GP	R		A	2+	(NS)	180					1	1.3	2507,(2605)		2102,2506	238
AS-2	2509	FWD FIRING			A	2+	(NS)	180					1	1.3	2508,(2605)		2102,2506	239
AS-2	2510	SGL/SEC/LOW ANGLE POP			A	2	(NS)	*					1	1.3	2510,(2605)		2102,2506,2507,(2402)	240
AS-2	2511	LASER-GUIDED WEAPONS			A	2	(NS)	180					1	1.3	2507,(2605)		2102,2506,2507	241
AS-2	2512	JDAM			A	2	(NS)	180					1	1.3	2507,(2605)		2102,2506,2507	242
AS-2	2513	SEC TGT MECH	R		A	2+	(NS)	180					1	1.3	2508,(2605)		2102,2506,2507,2509	243
AS-2	2514	REVIEW SEC TGT MECH PGM	R		A	2+	(NS)	90					1	1.3	2511,2512,(2605)		2102,2506,2511,2512	244
TOTAL AS STAGE									0	0.0	5	5.0	9	11.7				
NIGHT SYSTEMS (NS)																		
SNS-2	2600	SENSORS SIM			S		NS	*			1	1.0				COMPLETE GRND/ACAD TRNG, AS STG COMPLETE		250
SNS-2	2601	NS TAC ATK PROFILES	R		S		NS	*			1	1.0			2600			251
NS-2	2602	FAM/FORM	R	2	A		NS	180					1	1.3	2601		2102	252
NS-2	2603	PGM @ NIGHT		2	A		NS	*					1	1.3	2602		2102,2506,2507,2511,2512,2602	253

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
NS-2	2604	HIGH & LOW DIVE GP		2	A		NS	*					1	1.3	2603		2102,2506,2507,2508,2602	254
NS-2	2605	NIGHT TGT MECH (GP/PGM)	R	2	A		NS	*					1	1.3	2604		2102,2506,2507,2508,2511,2512,2513,2514,2602,2604	255
TOTAL NS STAGE									0	0.0	2	2.0	4	5.2				
AIR-TO-AIR (AA)																		
SAA-2	2700	TVC/AIRCRAFT HANDLING SIM	R		S		D	*			1	1.0				COMPLETE GRND/ACAD TRNG, AS STG COMPLETE		260
AA-2	2701	TVC/AIRCRAFT HANDLING			A	2	D	180					1	1.3	2700,2102		2102	261
AA-2	2702	1V1 OFFENSIVE BFM			A	1+	D	180					1	1.3	2701		2102,2701	262
AA-2	2703	1V1 DEFENSIVE BFM			A	1+	D	180					1	1.3	2702		2102,2701	263
AA-2	2704	1V1 HI ASPECT BFM	R		A	1+	D	180					1	1.3	2703		2102,2701,2702,2703	264
AA-2	2705	2V1 SEM	R		A	2+	D	180					1	1.3	2704		2102,2701,2702,2703,2704	271
SAA-2	2706	INTRO FWD QTR SIM			M/S		D	*			1	1.0			2700			265
SAA-2	2707	REVIEW FWD QTR SIM	R		M/S		(NS)	*			1	1.0			2706,(2605)			266
AA-2	2708	1V1 INTERCEPTS			A	1+	(NS)	180					1	1.3	2707,(2605)	ACPM 8200,8201,8202,8210,8230,8231,8240,8241,8242,8250	2102	273
TOTAL AA STAGE									0	0.0	3	3.0	6	7.8				
CORE SKILL TOTAL									70	70	16	16.0	25	33.2				
MISSION SKILLS (3000 PHASE TRAINING)																		
MISSION SKILLS ACADEMICS (ACAD)																		
ACAS-3	3000	AUTOMATIC TARGET HANDOFF SYSTEM (ATHS)/DIGITAL CAS							1	1.0								
ACAS-3	3001	CAS EXECUTION							1	1.0								
ACAS-3	3002	MAWTS-1 JCAS LECTURE							1	1.0								
AAR-3	3003	ARMED							1	1.0								

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		RECONNAISSANCE																
AAR-3	3004	ARMED RECONNAISSANCE PROCEDURES							1	1.0								
ASCAR-3	3005	SCAR TACTICS, TECHNIQUES & PROCEDURES							1	1.0								
AAI-3	3006	AIR INTERDICTION PLANNING & EXECUTION							1	1.0								
AACPM-3	8300	AIR DEFENSE							1	1.0								
AACPM-3	8310	FORWARD ARMING REFUELING POINT (FARP) OPERATIONS							1	1.0								
AACPM-3	8311	MARINE CORPS TACTICAL FUEL SYSTEMS							1	1.0								
AACPM-3	8320	SOINT STRUCTURE & JOINT AIR OPERATIONS							1	1.0								
AACPM-3	8321	JOINT AIR TASKING CYCYCLE PHASE 1: STRATEGY DEVELOPMENT							1	1.0								
AACPM-3	8322	JOINT AIR TASKING CYCLE PHASE 2: TARGET DEVELOPMENT							1	1.0								
AACPM-3	8323	JOINT AIR TASKING CYCLE PHASE 3: WEAPONEERING AND ALLOCATION							1	1.0								
AACPM-3	8324	JOINT AIR TASKING CYCLE PHASE 4:							1	1.0								

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## AV-8B PILOT T&amp;R MATRIX

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		JOINT ATO PRODUCTION																
AACPM-3	8325	JOINT AIR TASKING CYCLE PHASE 5: FORCE EXECUTION							1	1.0								
AACPM-3	8326	JOINT AIR TASKING CYCLE PHASE 6: COMBAT ASSESSMENT							1	1.0								
AACPM-3	8340	INTEGRATING FIRES & AIRSPACE WITHIN THE MAGTF							1	1.0								
AACPM-3	8350	PHASING CONTROL ASHORE							1	1.0								
AACPM-3	8351	TACRON ORGANIZATIONS & FUNCTIONS							1	1.0								
TOTAL ACAD STAGE									21	21.0	0	0.0	0	0.0				
CLOSE AIR SUPPORT (CAS)																		
SCAS-3	3100	TYPE 1 CNTRL CAS SIM	R		S		(NS)	*			1	1.0			(2605)	COMPLETE GROUND/ ACADEMIC TRNG. A/S STAGE COMPLETE		300
SCAS-3	3101	TYPE 2/3 CNTRL CAS SIM			S		(NS)	*			1	1.0			3100			301
SCAS-3	3102	DIGITAL URBAN CAS SIM			S		(NS)	*			1	1.0			3101			302
CAS-3	3103	DAY TYPE 1 CNTRL CAS	R		A	2	D	90					1	1.3	3102		2102,2506,2507,2508(2509,2510),2513	303
CAS-3	3104	DAY TYPE 2/3 CNTRL CAS			A	2	D	180					1	1.3	3102		2102,2506,2507,2511,2512,2514	304
CAS-3	3105	NIGHT TYPE 1 CNTRL CAS	R		A	2	NS	180					1	1.3	2605,3103		2102,2506,2507,2508,(2509,2510),2513,2602,3103	305
CAS-3	3106	NIGHT TYPE 2/3	R		A	2	NS	180					1	1.3	3103,3104,(3105)		2102,2506,2507,2511,2512,	306

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		CNTRL CAS															2514,2602,3104	
CAS-3	3107	URBAN CAS			A	2	(NS)	*					1	1.3	3103,3104,(3105), (3106)		2102,2506,2507,2511,2512, 2514,(2602)	307
TOTAL CAS STAGE									0	0.0	3	3.0	5	6.5				
ARMED RECONNAISSANCE (AR)																		
SAR-3	3200	DAY AR SIM			S		D	*			1	1.0				COMPLETE GRND/ ACADEMIC TRNG. A/S STAGE COMPLETE		310
AR-3	3201	AR (GP)			A	2+	(NS)	180					1	1.3	(2605),3200		2102,2506,2507,2513	311
AR-3	3202	DAY AR (PGM)	R		A	2+	D	90					1	1.3	3200		2102,2506,2507,2508,2511, 2512,2513,2514,3201	312
AR-3	3203	NIGHT MED ALT AR WITH PGMS	R		A	2+	NS	180					1	1.3	2605,3201,3202		2102,2506,2602,3201	313
TOTAL AR STAGE									0	0.0	1	1.0	3	3.9				
STRIKE COORDINATION AND RECONNAISSANCE (SCAR)																		
SCAR-3	3300	DAY SCAR			A	2	D	180					1	1.3		COMPLETE GRND/ ACADEMIC TRNG. AR STAGE COMPLETE	2102,2506,2513,3201	320
SCAR-3	3301	NIGHT SCAR	R		A	2	NS	180					1	1.3	3300		2102,2506,2507,2513,2514, 2602,2605,3201,3202,3300	321
TOTAL SCAR STAGE									0	0.0	0	0.0	2	2.6				
AIR INTERDICTION (AI)																		
SAI-3	3400	AI INTRODUCTION SIM			S		D	*			1	1.0				COMPLETE GRND/ ACADEMIC TRNG. AR STAGE COMPLETE		350

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
AI-3	3401	DAY AI MED ALT			A	2+	D	90					1	1.3	3400		2102, 2201, 2506, 2507, 2511, 2512, 2514	351
AI-3	3402	NIGHT AI MED ALT			A	2+	NS	180					1	1.3	2605,3401		2102, 2201, 2506, 2507, 2511,2512, 2514, 2602,3401	352
TOTAL AI STAGE									0	0.0	1	1.0	2	2.6				
SHORE-BASED EXPEDITIONARY (EXP)																		
EXP-3	3500		R			1	(NS)	365					1	1.3		FAM STAGE COMPLETE		
TOTAL EXP STAGE									0	0.0	0	0.0	1	1.3				
MISSION SKILL TOTAL									21	21.0	5	5.0	13	16.9				
CORE PLUS (4000 PHASE TRAINING)																		
CORE PLUS ACADEMICS (ACAD)																		
AFCLP-4	2060	V/STOL/LSO NATOPS, PART 1							1	1.0								
AFCLP-4	2061	V/STOL/LSO NATOPS, PART 1							1	1.0								
AFCLP-4	2062	LHA/LHD/MCS NATOPS							1	1.0								
AFCLP-4	2063	DAY FCLP							1	1.0								
ACQ-4	4007	NIGHT CQ							1	1.0								
AFOB-4	4008	FORWARD BASE OPERATIONS							1	1.0								
ALAT-4	4009	NS LAT CONSIDERATIONS							1	1.0								
AAE-4	4010	ASSAULT SUPPORT ESCORT							1	1.0								
ALLCAS-4	4011	LOW ALTITUDE CAS EXECUTION							1	1.0								
ALLAI-4	4012	LOW ALTITUDE AI EXECUTION							1	1.0								
AAAD-4	4013	COMBAT SECTION TACTICS							1	1.0								
AAAD-4	4014	AV-8B INTERCEPT MECHANICS (MAWTS-1							1	1.0								

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		ASP)																
AAAD-4	4015	AIR-TO-AIR TIMELINES							1	1.0								
AAAD-4	4016	DARG CONSIDERATIONS							1	1.0								
TOTAL ACAD STAGE									14	14.0	0	0.0	0	0.0				
FIELD CARRIER LANDING PRACTICE DAY (FCLP (D))																		
SFCLP-2	4100	FCLP SIM	R		S		D	*			1	1.0			2102	COMPLETE GROUND/ ACADEMIC TRNG		400
FCLP-2	4101	DAY FCLP QUAL	R		A	1	D	365					1	2.0	4100		2102	401
FIELD CARRIER LANDING PRACTICE NIGHT (FCLP (N))																		
SFCLP-4	4102	NIGHT FCLP SIM	R		S		N	*			1	1.0			4100	COMPLETE GROUND/ ACADEMIC TRNG		402
FCLP-4	4103	NIGHT FCLP	R		A	1	N	*					1	2.0	4101,4102		2102,4101	403
SFCLP-4	4104	NIGHT FCLP SIM (NVG)	R		S		NS	*			1	1.0			2605,4102			404
FCLP-4	4105	NIGHT FCLP (NVG)	R		A	1	NS	365					1	2.0	4100, 4103,4104		2102,4101,2602	405
TOTAL FCLP STAGE									0	0.0	3	3.0	3	6.0				
CARRIER QUALIFICATION (DAY) (CQ (D))																		
SCQ-4	4130	DAY CQ SIM	R		S		D	*			1	1.0			4100	COMPLETE GRND/ ACADEMIC TRNG		410
CQ-4	4131	DAY CQ QUAL	R		A	1	D	365					1	3.0	4101,4130		2102	411
CARRIER QUALIFICATION (NIGHT) (CQ (N))																		
SCQ-4	4133	NIGHT CQ SIM	R		S		N	*			1	1.0			4130,4102	COMPLETE GRND/ ACADEMIC TRNG		412
CQ-4	4134	NIGHT CQ	R		A	1	N	*					1	2.0	4131,4103		2102,4103	413

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
SCQ-4	4135	NIGHT CQ SIM (NVG)	R		S		NS	*			1	1.0				COMPLETE GRND/ ACADEMIC TRNG		414
CQ-4	4136	NIGHT CQ (NVG)	R		A	1	NS	365					1	3.0	4131,4105,4135		2102,2602,4105	415
TOTAL CQ STAGE									0	0.0	3	3.0	3	8.0				
FORWARD BASE OPERATIONS (FOB)																		
SFOB-4	4161	FOB SIM	R		S		D	*			1	1.0			2102	COMPLETE GRND/ ACADEMIC TRNG		420
FOB-4	4162	DAY FOB	R		A	1	D	365					1	2.0	4161		2102	421
SFOB-4	4163	NIGHT FOB SIM	R		S		NS	*			1	1.0			4161,2605			422
FOB-4	4164	NIGHT FOB	R		A	1	NS	365					1	2.0	4162,4163,2605		2102,2401,2602,4201	423
TOTAL FOB STAGE									0	0.0	2	2.0	2	4.0				
ADVANCED LOW ALTITUDE TACTICS (ADV LAT)																		
SADV LAT-4	4200	BASIC/ADVANCED NLAT SIM			S		NS	*			1	1.0			2403,2605	COMPLETE GRND/ ACADEMIC TRNG. AR STAGE COMPLETE		432
SADV LAT-4	4201	NLAT TGT MECH/ TCT	R		S		NS	180			1	1.0			4200			433
ADV LAT-4	4202	BASIC LAT (NVG)			A		NS	180					1	1.3	4201		2102,2401,2602,4201	434
ADV LAT-4	4203	ADVANCED LAT (NVG)	R		A		NS	180					1	1.3	4202		2102, 2401, 2403, 2602, 4201, 4202	435
ADV LAT-4	4204				A		NS	180					1	1.3	4203		2102,2401,2602,4202,4203	436
ADV LAT-4	4205		R		A		NS	180					1	1.3	4204		2102,2401,2403,2506,2510, 2513,2512,2602,4202, 4203,4204	437
TOTAL LAT STAGE									0	0.0	2	1.0	4	5.2				
AERIAL ESCORT (AE)																		
AE-4	4300	ASSAULT SPT ESCORT	R		A	2/2+	(NS)	365					1	1.3	3103, 3104, 3201, 3202, (3105), (3106), (3203)	COMPLETE GRND/ ACADEMIC TRNG. AR STAGE COMPLETE	2102,2506,2513,3201	440



AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
AE-4	4301	GCE MISSION	R		A	2/2+	(NS)	365					1	1.3	3103, 3104, 3201, 3202, (3105), (3106), (3203)	COMPLETE GRND/ACADEMIC TRNG. AR STAGE COMPLETE	2102, 2506, (2602)	441
TOTAL AI STAGE									0	0.0	0	0.0	2	2.6				
LOW ALTITUDE CLOSE AIR SUPPORT (LL CAS)																		
LLCAS-4	4400	LOW ALTITUDE CAS	R		A	2	(NS)	365					1	1.3	3103, 3104, (3105), (3106), (4205)	COMPLETE GRND/ACADEMIC TRNG. AR STAGE COMPLETE	2102, 2401, 2506, 2507, 2509, 2513 (2602),(3103), (3104), (4202), (4203), (4204), (4205)	450
TOTAL LL CAS STAGE									0	0.0	0	0.0	1	1.3				
LOW ALTITUDE CLOSE ARMED INTERDICTION (LL AI)																		
LLAI-4	4401	LOW ALTITUDE AI	R		A	2	(NS)	365					1	1.3	3103, 3104, (3105), (3106), (4205)	COMPLETE GRND/ACADEMIC TRNG. AR STAGE COMPLETE	2102, 2401, 2506, 2507, 2509, 2513 (2602),(3103), (3104), (4202), (4203), (4204), (4205)	451
TOTAL LL AI STAGE									0	0.0	0	0.0	1	1.3				
MULTISENSOR IMAGERY RECONNAISSANCE (MIR)																		
LLAI-4	4500	MIR	R		A	2	(NS)	365					1	1.3	(2605)	COMPLETE GRND/ACADEMIC TRNG. AR STAGE COMPLETE	2102, (2602)	460
TOTAL MIR STAGE									0	0.0	0	0.0	1	1.3				
ACTIVE AIR DEFENSE (AAD)																		
SAAD-4	4600	INTERCEPT (IR2+)			S		(NS)	*			1	1.0				COMPLETE GRND/ACADEMIC TRNG. AR STAGE COMPLETE		267
SAAD-4	4601	SRR SIM			S		(NS)	*			1	1.0			4600			268
SAAD-4	4602	INTERCEPT (SAR-1) SIM	R		S		(NS)	*			1	1.0			4601, (2605)			269
SAAD-4	4603	DECOY TACTICS			S		(NS)	*			1	1.0			4602			331
SAAD-4	4604	DARG	R		S		(NS)	*			1	1.0			4603, (2605)			332
AAD-4	4605	2V1 SHORT RANGE INTERCEPT			A	2+	(NS)	180					1	1.3	4604, (2605)		2102, 2701, 2702, 2703, 2704, 2705, 2708	
AAD-4	4606	2V2 SINGLE GROUP	R		A	2+	(NS)	180					1	1.3	4605, (2605)		2102, 2701, 2702, 2703,	274

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
																	2704, 2705, 2708, 4605	
AAD-4	4607	2VX DARG	R		A	2+	(NS)	180					1	1.3	4606, (2605)		2102, 2701, 2702, 2703, 2704, 2705, 2708, 4606	
TOTAL AD STAGE									0	0.0	5	5.0	3	3.9				
OFFENSIVE ANTI-AIR WARFARE (AAW)																		
SOAAW-4	4700	AGGRESSED AI			S		(NS)	*			1	1.0			2705,2708, 3401,3402			
OAAW-4	4701	AGGRESSED AI (SEC)	R		A	2+	(NS)	180					1	1.3	4700		2102, 2201, 2505, 2506, 2708, 3401, (3402), 4605, 4606	
OAAW-4	4702	AGGRESSED AI (DIV)			A	3+	(NS)	180					1	1.3	4701		2102, 2201, 2505, 2506, 2708, 3401, (3402), 4605, 4606,4701	353
TOTAL AAW STAGE									0	0.0	2	2.0	2	2.6				
LARGE FORCE EXERCISE (LFE)																		
LFE-4	4800	DAY LFE			A	4+	D	365					1	1.3		AS STAGE COMPLETE. ACM QUAL REQUIRED IF AIR THREAT EXISTS,LED BY ACTI/ACMFL	2102, 2505, 2506, 2708, 3401, (3402), 4605, 4606	470
LFE-4	4801	NIGHT LFE	R		A	4+	NS	365					1	1.3	2605	AS STAGE COMPLETE. ACM QUAL REQUIRED IF AIR THREAT EXISTS, LED BY ACTI/ACMFL	2102, 2201, 2505, 2506, 2708, 3401, (3402), 4605, 4606,4701	471
TOTAL LFE STAGE									0	0.0	0	0.0	2	2.6				
FORWARD AIR CONTROLLER (AIRBORNE) (FAC(A))																		
SFAC(A)	4900	FAC(A) PROC (SIM)			S		D	*			1	1.0				COMPLETE		480

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
-4																GRND/ ACAD TRAINING IAW JFAC(A) MOA, DIV LDR W/ FAC/ FAC(A) EXPERIENCE, OR A MISSION CDR		
SFAC(A)-4	4901	NIGHT FAC(A) PROC			S		NS	*			1	1.0			4900			
SFAC(A)-4	4902	URBAN TYPE 1/2/3			S		D	*			1	1.0			4901			485
SFAC(A)-4	4903	URBAN TYPE 1/2/3			S		NS	*			1	1.0			4902			
FAC(A)-4	4904	FW TYPE 1/2	R		A	2	D	180					1	1.3	4903		2102, 2506, 3103, (3104)	482
FAC(A)-4	4905	FW TYPE 1/3	R		A	2	(NS)	90					1	1.3	4903		2102, 2506, 3103	483
FAC(A)-4	4906	RW TYPE 1/2/3			A	2	(NS)	365					1	1.3	4903		2102,2506	484
FAC(A)-4	4907	AIRSPOT			A	2	(NS)	*					1	1.3	4903		2102,2506	486
FAC(A)-4	4908	NIGHT FAC(A) BASICS	R		A	2	NS	180					1	1.3	4904, 4905, 4906, 4907		2102, 2506, 3104, 3105, 3106, 4905	487
SFAC(A)-4	4909	DAY INTEGRATION			S		D	*			1	1.0			4908			
SFAC(A)-4	4910	NIGHT INTEGRATION			S		NS	*			1	1.0			4909			
FAC(A)-4	4911	DAY INTEGRATION	R		A	2	D	365					1	1.3	4910		2102, 2506, 4906	
FAC(A)-4	4912	NIGHT INTEGRATION	R		A	2	NS	365					1	1.3	4911		2102, 2506, 2602, 3105, 3106, 4906, 4911	
FAC(A)-	4951	FAC(A) ESCORT	R		A	2	(NS)	365					1	1.3		SECTION	2102, 2506, (2602)	495

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AV-8B PILOT T&R MATRIX																			
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV	
4																LEADER; CFF LECTURE FROM JFAC(A) ASP BEFORE COORD MARKS VIA SEAD CFF			
TOTAL FAC(A) STAGE									0	0.0	6	6.0	8	10.4					
CORE PLUS TOTAL									14	14.0	23	23.0	32	49.2					
INSTRUCTOR TRAINING (5000 PHASE TRAINING)																			
INSTRUCTOR TRAINING ACADEMICS (ACAD)																			
AIUT-5	5000	MONITOR BRIEF/DEBRIEF OF SNAV-1331							1	1.0								559	
AIUT-5	5001	MONITOR BRIEF/DEBRIEF OF LATE STAGE FAMILIARIZATION SORTIE							1	1.0								570	
AIUT-5	5002	MONITOR AS TRO A/A RADAR INTERCEPT SORTIE							1	1.0								592	
AFLSE-5	5010	MAWTS-1 FLSE DESIG LECTURE							1	1.0									
AFLSE-5	5011	A/S BRIEFING LAB							1	1.0									
TOTAL ACAD STAGE									5	5.0	0	0.0	0	0.0					
SWTO-5	5100	MAWTS-1 COURSE CATALOG		E	S			*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	500	
SWTO-5	5101	MAWTS-1 COURSE CATALOG		E	S			*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	501	
SWTO-5	5102	MAWTS-1 COURSE CATALOG		E	S			*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	502	
SWTO-5	5103	MAWTS-1 COURSE CATALOG		E	S			*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	503	

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
WTO-5	5104	MAWTS-1 COURSE CATALOG		E	A	2	(NS)	*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	504
WTO-5	5105	MAWTS-1 COURSE CATALOG		E	A	2	(NS)	*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	505
SLATI-5	5200	MAWTS-1 COURSE CATALOG		E	S			*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	510
SLATI-5	5201	MAWTS-1 COURSE CATALOG		E	S			*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	511
LATI-5	5202	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.0	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	512
LATI-5	5203	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.0	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	513
LATI-5	5204	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.0	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	514
SNSI-5	5300	MAWTS-1 COURSE CATALOG		E	S		NS	*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	520
SNSI-5	5301	MAWTS-1 COURSE CATALOG		E	S		NS	*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	521
NSI-5	5302	MAWTS-1 COURSE CATALOG		E	A	2	NS	*					1	1.0	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	522
NSI-5	5303	MAWTS-1 COURSE CATALOG		E	A	2	NS	*					1	1.0	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	523
SNSLATI-5	5401	MAWTS-1 COURSE CATALOG		E	S		NS	*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	524
SNSLATI-5	5402	MAWTS-1 COURSE CATALOG		E	S		NS	*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	525
NSLATI-5	5403	MAWTS-1 COURSE CATALOG		E	A	2	NS	*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	
SACTI-5	5500	MAWTS-1 COURSE CATALOG		E	S		NS	*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	530
ACTI-5	5501	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	531
ACTI-5	5502	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	532
ACTI-5	5503	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	533

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
SFAC(A) I-5	5601	MAWTS-1 COURSE CATALOG		E	S			*			1	1.0			PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	540
SFAC(A) I-5	5602	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	541
SFAC(A) I-5	5603	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	542
SFAC(A) I-5	5604	MAWTS-1 COURSE CATALOG		E	A	2		*					1	1.3	PER MAWTS-1 COURSE CAT		PER MAWTS-1 COURSE CAT	543
IUT-5	5701	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG		PER VMAT-203 IUT FSG	
IUT-5	5702	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG		PER VMAT-203 IUT FSG	
IUT-5	5703	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG		PER VMAT-203 IUT FSG	
IUT-5	5704	VMAT-203 IUT FSG		E	A	1	N*	*					1	1.3	PER VMAT-203 IUT FSG		PER VMAT-203 IUT FSG	
IUT-5	5705	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG		PER VMAT-203 IUT FSG	
IUT-5	5706	VMAT-203 IUT FSG		E	A	1	D	*					1	2.0	PER VMAT-203 IUT FSG		PER VMAT-203 IUT FSG	
SIUT-5	5800	VMAT-203 IUT FSG		E	S		D	*			1	1.0			PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		550
SIUT-5	5801	VMAT-203 IUT FSG		E	S		D	*			1	1.0			PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		551
IUT-5	5802	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		552
IUT-5	5803	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		553
SIUT-5	5804	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		554
IUT-5	5805	VMAT-203 IUT FSG		E	A	2	D	*					1	1.3	PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		555
IUT-5	5806	VMAT-203 IUT FSG		E	A	4	D	*					1	1.3	PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		556
IUT-5	5807	VMAT-203 IUT FSG		E	A	4	D	*					1	1.3	PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		557
IUT-5	5808	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG	FRSI		558
SIUT-5	5809	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	LATE STAGE FAM(I) AND WTO OR LATI OR ACTI		559

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
IUT-5	5810	VMAT-203 IUT FSG		E	A	1	D	*					1	1.1	PER VMAT-203 IUT FSG	DIVISION LEAD, WTO		560
SIUT-5	5811	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	FRSI & WTO		561
SIUT-5	5812	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	FRSI & WTO		562
IUT-5	5813	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	FRSI & WTO		563
IUT-5	5814	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	FRSI & WTO		564
IUT-5	5815	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	FRSI & WTO		565
SIUT-5	5816	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	FRSI & WTO		566
IUT-5	5817	VMAT-203 IUT FSG		E	A	1	D	*					1	1.1	PER VMAT-203 IUT FSG	FRSI & WTO		567
IUT-5	5818	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	FRSI & WTO		568
IUT-5	5819	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG	CAS(I)		569
IUT-5	5820	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG	CAS(I)		570
SIUT-5	5821	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	CAS(I)		571
SIUT-5	5822	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	CAS(I)		572
IUT-5	5823	VMAT-203 IUT FSG		E	A	1	D	*					1	1.3	PER VMAT-203 IUT FSG	CAS(I)		
SIUT-5	5824	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	LFAM(I)		574
SIUT-5	5825	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	LFAM(I)		575
IUT-5	5826	VMAT-203 IUT FSG		E	A	1	NS	*					1	1.3	PER VMAT-203 IUT FSG	LSI-5704 & LFAM(I)		576
IUT-5	5827	VMAT-203 IUT FSG		E	A	2	NS	*					1	1.3	PER VMAT-203 IUT FSG	LSI-5704 & LFAM(I)		577
IUT-5	5828	VMAT-203 IUT FSG		E	A	2	NS	*					1	1.3	PER VMAT-203 IUT FSG	LSI-5704 & LFAM(I)		
SIUT-5	5829	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	LFAM(I) & WTO LATI, OR ACTI		
IUT-5	5830	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	LFAM(I) & WTO LATI, OR ACTI		580
IUT-5	5831	VMAT-203 IUT FSG		E	A	1	D	*					1	1.1	PER VMAT-203 IUT FSG	LFAM(I) & WTO LATI, OR ACTI		581
SIUT-5	5832	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	ACTI		582
IUT-5	5833	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	ACTI		583
IUT-5	5834	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	ACTI		584
IUT-5	5835	VMAT-203 IUT FSG		E	A	2	D	*					1	1.1	PER VMAT-203 IUT FSG	ACTI		585

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AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
SIUT-5	5836	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	LATI		586
SIUT-5	5837	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	LATI		587
IUT-5	5838	VMAT-203 IUT FSG		E	A	2	D	*					1	1.3	PER VMAT-203 IUT FSG	LATI		588
IUT-5	5839	VMAT-203 IUT FSG		E	A	2	D	*					1	1.3	PER VMAT-203 IUT FSG	LATI		589
SIUT-5	5840	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	LSI-5705 AND MAIN BASE LSS		590
SIUT-5	5841	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	FRSI		591
IUT-5	5842	VMAT-203 IUT FSG		E	A	2	D	*					1	1.3	PER VMAT-203 IUT FSG	FRSI		
SIUT-5	5843	VMAT-203 IUT FSG		E	S		D	*			1	1.5			PER VMAT-203 IUT FSG	FRSI		593
SFLSE-5	5900	FLSE DESIGNATION FLT		E	S		(NS)	*			1	1.0				SEE PHASE DESCRIPTION		
SFLSE-5	5901	FLSE DESIGNATION FLT		E	S		(NS)	*			1	1.0				SEE PHASE DESCRIPTION		
INSTRUCTOR STAGE TOTAL									5	5.0	32	40.0	46	56.8				
REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS (RQD) (6000 PHASE TRAINING)																		
ACADEMIC 6000 SERIES																		
NATOPS ACADEMICS (ANTPS)																		
ANTPS-6	6000	OPEN BOOK AV-8B NATOPS EXAM	M,SS	E					1	1.5								
ANTPS-6	6001	CLOSED BOOK AV-8B NATOPS EXAM	M,SS	E					1	1.0								
ANTPS-6	6002	GROUND EVALUATION IAW AV-8B NATOPS MANUAL	M,SS	E					1	1.0								
INSTRUMENT ACADEMICS (AINST)																		
AINST-1	6004	INSTRUMENT GROUND SCHOOL	M,SS	E					1	8.0								
AINST-1	6005	INSTRUMENT GROUND SCHOOL EXAM	M,SS	E					1	1.0								
SECTION LEAD ACADEMICS (ASL)																		
ASL-6	6009	FLIGHT BRIEFING & DEBRIEFING							1	1.0								
ASL-6	6010	AV-8B T&R MANUAL &							1	1.0								



AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		TRNG MANAGEMENT																
ASL-6	6011	STANDARDIZED SECTION LEAD BUILD EXAM							1	1.0								
DIVISION LEAD ACADEMICS (ADL)																		
ADL-6	6012	STANDARDIZED DL EXAM							1	1.0								
MISSION COMMANDER ACDEMICS (AMC)																		
AMC-6	6013	STRIKE MISSION COMMANDER, PART 1							1	1.0								
AMC-6	6014	STRIKE MISSION COMMANDER, PART 2							1	1.0								
AVIATION CARREER PROGRESSION MODEL ACADEMICS (AACPM)																		
AACPM-6	8630	TACTICAL AIR COMMAND CENTER (TACC)							1	1.0								
AACPM-6	8660	JOINT OPS INTRO							1	1.0								
AACPM-6	8640	JOINT DATA NETWORK							1	1.0								
AACPM-6	8641	MAGTF THEATER & NATIONAL ISR EMPLOYMENT							1	1.0								
AACPM-6	8620	ESG/CSG INTEGRATION							1	1.0								
TOTAL ACAD STAGE									16	23.5	0	0.0	0	0.0				
NTPS-6	6101	NATOPS CHECK	R,M,SS	E	S/A			365			1	1.0			6000,6001			600
REQ-6	6102	INST CHECK	R,M,SS	E	S/A	(NS)		365			1	1.0			6004,6005			601
NTPS-6	6103	CRM	R,M,SS	E	S/A	(NS)		365										602
SSL-6	6200	SL INSTL TCT SIM		E	S	(NS)	*				1	1.0				SEE PHASE DESCRIPTION		620
SSL-6	6201	SL PGM EMPLOYMENT		E	S	(NS)	*				1	1.0			6200			621
SL-6	6202	SL PGM EMPLOYMENT		E	A	2 (NS)	*						1	1.3	6201		2102, 2506, 2507, 2511, 2512	622

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
SL-6	6203	SL CAS TYPE 1		E	A	2	(NS)	*					1	1.3	6201		2102, 2506, 2507, 3103, (3105)	624
SL-6	6204	SL CAS TYPE 2/3	R	E	A	2	(NS)	*					1	1.3	6201		2102, 2506, 3104, (3106)	625
SL-6	6205	SL AIR INTERDICTION		E	A	2	(NS)	*					1	1.3	6201		2102, 2506, 3401, (2402)	
SL-6	6206	SL SCAR		E	A	2	(NS)	*					1	1.3	6301	8630, 8660	2102, 2506, 3300, (3301)	626
SACMFL-6	6300	ACMFL DARG SIM		E	M/S			*			1	1.0				SEE PHASE DESCRIPTION		
ACMFL-6	6301	ACMFL 1V1	R	E	A	1+	D	*					1	1.3	6300		2704, 2102, 2701, 2702, 2703	623
ACMFL-6	6302	ACMFL 2V1		E	A	2	D	*					1	1.3	6301		2705, 2102, 2701, 2702, 2703, 2704	
ACMFL-6	6303	ACMFL DARG	R	E	A	2+	(NS)	*					1	1.3	6302		4607, 4606, 4605, 2708, 2705, 2704, 2703, 2702, 2701, 2102	627
DL-6	6400	DL TGT AREA MECHANICS		E	A	3+	(NS)	*					1	1.3		SEE PHASE DESCRIPTION	2102, 2506, 2512, 2513	630
DL-6	6401	ARMED RECCE		E	A	3+	(NS)	*					1	1.3	6400		2102, 2506, 3202, (3203)	631
DL-6	6402	AI (DAY)	R	E	A	3+	D	*					1	1.3	6400	ACMFL REQUIRED FOR AIR THREAT	2102, 2506, 3401	632
DL-6	6403	AI (NIGHT)		E	A	3+	NS	*					1	1.3	6400	ACMFL REQD FOR AIR THREAT. ACPM 8640,8641	2102, 2506, 3402	633
MC-6	6500	MC (STRIKE)		E	A	4+	(NS)	*					1	2.0		SEE STAGE DESCRIPTION	2102, 2506, 3401, (3402)	636
MC-6	6501	MC (SCAR)		E	A	4+	(NS)	*					1	2.0	6500	ACPM 8620	2102, 2506, 3300, (3301)	637
SFCF-6	6600	PMCF SIM		E	S		D	*			1	1.5				PER MAG ORDER		640
FCF-6	6601	PMCF			A	1	D	180					1	1.5	6600	PER MAG ORDER	2102	641
SDEMO-6	6700	AIR SHOW DEMO SIM		E	S		D	*			1	1.5				PER MCO AND MAG ORDER		642
DEMO-6	6701	LEVEL III AIR SHOW DEMO			A	1	D	365					1	0.8		PER MCO AND MAG ORDER	2102	643
LSO-6	6750	LSO: DAY BASIC FIELD		E												Per LSO NATOPS.		700

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
LSO-6	6751	LSO: NIGHT BASIC FIELD		E												Per LSO NATOPS.		701
LSO-6	6752	LSO: DAY BASIC SHIP		E												Per LSO NATOPS.		702
LSO-6	6753	LSO: NIGHT BASIC SHIP		E												Per LSO NATOPS.		703
LSO-6	6754	LSO: DAY ADVANCED		E												Per LSO NATOPS.		704
LSO-6	6755	LSO: NIGHT ADVANCED		E												Per LSO NATOPS.		705
LSO-6	6756	LSO: DAY TRAINING		E												Per LSO NATOPS.		706
LSO-6	6757	LSO: NIGHT TRAINING		E												Per LSO NATOPS.		707
LSI-6	6770	LSI: DAY FACILITY		E												PER DIRECTIVES		710
LSI-6	6771	LSI: NIGHT FACILITY		E												PER DIRECTIVES		711
LSS-6	6772	LSS: DAY ROAD		E												PER DIRECTIVES		712
LSS-6	6773	LSI: NIGHT FACILITY		E												PER DIRECTIVES		713
LSS-6	6774	LSI: NIGHT FACILITY		E												PER DIRECTIVES		714
LSS-6	6775	LSI: NIGHT FACILITY		E												PER DIRECTIVES		715
TRK-6	6800	STRATEGIC AAR			A	1+		365							1340		2102	650
TRK-6	6801	STRATEGIC AAR			A	1+ (N) / (NS)		365							1340, (2300)		2102, 6800	210
TRK-6	6802	ALQ-164 EMPLOYMENT			A	1+ (NS)	*											652
TRK-6	6803	EMPLOY GAU-12(AA)			A	1+	*								ACM QUAL			666
TRK-6	6804	ADVERSE WX, HIGH THREAT			A	2 (NS)	*						1	1.3	4205, 4912			491
TRK-6	6805	UAS/UCAV INTEGRATION			A	2 (NS)	*						1	1.3	4912			492

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## AV-8B PILOT T&amp;R MATRIX

STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
TRK-6	6806	NSFS AIRSPOT			A	2	(NS)	*					1	1.3	4912			493
TRK-6	6807	AC-130 CFF			A	2	(NS)	*					1	1.3	4912			494
TRK-6	6808	RANGE UNAVAILABLE																668
TRK-6	6809	ORDNANCE UNAVAILABLE																669
TRK-6	6810	SYLLABUS SUPPORT UNAVAILABLE																670
TRK-6	6900	DAY CAL SITE OPERATIONS			A	1		*										693
TRK-6	6901	NIGHT CAL SITE OPERATIONS			A	1	NS	*							6900			694
TRK-6	6902	DAY ROAD OPERATIONS																695
TRK-6	6903	NIGHT ROAD OPERATIONS																696
TRK-6	6904	LSO: CONTROL DAY FCLP																721
TRK-6	6905	LSO: CONTROL NIGHT FCLP (UNAIDED)																
TRK-6	6906	LSO: CONTROL NIGHT FCLP (AIDED)																722
TRK-6	6907	LSO: CONTROL DAY SHIP																723
TRK-6	6908	LSO: CONTROL NIGHT SHIP (UNAIDED)																724
TRK-6	6909	LSO: CONTROL NIGHT SHIP (AIDED)																725
TRK-6	6910	TRAINING LSO: CONTROL DAY																726
TRK-6	6911	TRAINING LSO: CONTROL NIGHT																727
TRK-6	6912	LSI: CONTROL DAY FACILITY																730
TRK-6	6913	LSI: CONTROL NIGHT																731

AV-8B PILOT T&R MATRIX																		
STAGE	TRNG CODE	T&R DESCRIPTION	POI	E	DEVICE	# OF A/C	CONDITION	REFLY	# OF ACAD	ACAD TIME	# OF SIM	SIM TIME	# OF FLTS	FLT TIME	PREREQUISITE	NOTES	CHAINING	EVENT CONV
		FACILITY																
TRK-6	6914	LSS: CONTROL DAY ROAD																732
TRK-6	6915	LSS: CONTROL NIGHT ROAD																733
TRK-6	6916	LSS: CONTROL DAY CAL SITE																734
TRK-6	6917	LSI: CONTROL NT CAL SITE																
TRK-6	6918	LSO: CONTROL DAY APPR & EPS						180										
TRK-6	6919	LSO: CONTROL NT APPR & EPS						180										

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222. T&R SYLLABUS ORDNANCE MATRIX. These matrices display 1000 to 6000 phase ordnance and external syllabus support requirements.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>BASIC POI CORE SKILL INTRODUCTION (1000 PHASE EVENTS)</b>									
<b>FAMILIARIZATION (FAM)</b>									
<b>SFAM-1</b>	<b>1100</b>	<b>1</b>	Introduce the AV-8B cockpit and after entering cockpit, pre-start, starting engine, and before taxi checks.						
<b>SFAM-1</b>	<b>1101</b>		Review the AV-8B cockpit and after entering cockpit, pre-start, starting engine, and before taxi checks.						
<b>SFAM-1</b>	<b>1102</b>	<b>2</b>	Introduce takeoff/in-flight/landing checks and maneuvers. Practice normal cockpit check procedures.						
<b>SFAM-1</b>	<b>1103</b>	<b>3</b>	Introduce takeoff/in-flight/landing checks and maneuvers, PAR, and emergency procedures. Practice normal cockpit check procedures.						

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SFAM-1	1104	4	Introduce takeoff/in- flight/landing checks and maneuvers, emergency procedures, and TACAN approach.						
SFAM-1	1105	5	Introduce takeoff/in- flight/landing checks, maneuvers, and emergency procedures.						
SFAM-1	1106	6	Introduce takeoff/in- flight/landing checks, maneuvers, and emergency procedures.						
SFAM-1	1107	7	Introduce takeoff/in- flight/landing checks, maneuvers, and emergency procedures.						
SFAM-1	1108	8	Introduce emergency procedures. Practice takeoff/in- flight/landing checks and maneuvers.						

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SFAM-1	1109	9	Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.						
SFAM-1	1110	10	Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.						
SFAM-1	1111	11	Introduce emergency procedures. Practice takeoff/in-flight/landing checks and maneuvers.						
SFAM-1	1112	12	Introduce emergency procedures and progress check.						
FAM-1	1113	13	Introduce CTO, STOL flap STO, handling drills, and STOL flap FNSL, and auto flap VNSL.						



STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
FAM-1	1114	14	Introduce TACAN approach, roll-and-go landings, STOL flap VNSL, and press-up. Practice takeoff/in-flight/landing checks and maneuvers.						MOA, RSTD
FAM-1	1115	15	Introduce PAR, CL, touch-and-go landings. Practice takeoff/in-flight/landing checks and maneuvers.						MOA, RSTD
FAM-1	1116	16	Introduce RVL, VTO accel, decel-VL, and box pattern. Practice takeoff/in-flight/landing checks and maneuvers.						
FAM-1	1117	17	Introduce RVTO and HSSL. Review takeoff/in-flight/landing checks, and procedures.						
FAM-1	1118	18	Introduce pedal turn. Practice takeoff/in-flight/landing checks and procedures.						

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
FAM-1	1119	19	Intro SAAHS-off RVL. Practice touch-and-go landing, takeoff/in- flight/landing checks and procedures.						
SINST-1	1120	20	Introduce instrument flight planning, instrument flight procedures, partial panel instrument procedures, unusual attitude flight, and approaches. Practice takeoff/in- flight/landing checks and procedures.						
SINST-1	1121	21	Introduce airways navigation on a round-robin flight. Practice instrument flight procedures and instrument flight planning, takeoff/in- flight/landing checks and procedures.						

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SINST-1	1122	22	Introduce min fuel PAR. Review instrument flight procedures, airways navigation, and instrument flight planning.						
INST-1	1123	23	Introduce instrument flight planning, instrument flight procedures, approach procedures, and missed approach procedures.						
INST-1	1124	24	Introduce airways navigation, round-robin flight, and minimum fuel GCA.						

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>SINST-1</b>	<b>1125</b>	<b>25</b>	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.						
<b>FAM-1</b>	<b>1126</b>	<b>26</b>	Introduce VFR straight in SAAHS-off DECEL to VL. Review takeoff/in-flight/landing checks, and procedures.						
<b>SFAM-1</b>	<b>1127</b>	<b>27</b>	Introduce compound emergencies.						
<b>FAM-1</b>	<b>1128</b>	<b>28</b>	Safe for solo check.						
<b>FAM-1</b>	<b>1129</b>	<b>29</b>	Solo flight.						

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>FORWARD OPERATING BASE OPERATIONS (FOB)</b>									
SFOB-1	1200	30	Introduce Forward Operating Base Operations (FOB) and emergency procedures.						
FOB-1	1201	31	Introduce Forward Operating Base Operations.						Air facility and LSS
FOB-1	1202	31	Practice Forward Operating Base Operations.						Air facility and LSS
<b>FIELD CARRIER LANDING PRACTICE (FCLP)</b>									
SFCLP-1	1210	35	Introduce day FCLP normal and emergency procedures.						
FCLP-1	1211	36	Introduce day FCLP.						Simulated L-Class ship with LSO and launch officer.
FCLP-1	1212	37	Introduce simulated NORDO approach. Review day FCLP.						Simulated L-Class ship with LSO and launch officer.
FCLP-1	1213	38	Review day FCLP.						Simulated L-Class ship with LSO and launch officer.
FCLP-1	1214	39	Review day FCLP.						Simulated L-Class ship with LSO and launch officer.
FCLP-1	1215	40	Review day FCLP.						Simulated L-Class ship with LSO and launch officer.
FCLP-1	1216	41	Day FCLP qualification.						Simulated L-Class ship with LSO and launch officer.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>FORMATION (FORM)</b>									
FORM-1	1300	45	Introduce administrative section formation.						MOA , RSTD
FORM-1	1301	46	Practice administrative section formation.						MOA , RSTD
<b>ADVANCED AIRCRAFT HANDLING (AAH)</b>									
SAAH-1	1310	50	Introduce advanced aircraft handling.						
AAH-1	1311	53	Introduce advanced aircraft handling.						MOA, RSTD
AAH-1	1312	54	Introduce advanced aircraft handling.						MOA, RSTD
<b>TACTICAL FORMATION (TACFORM)</b>									
TACFORM-1	1320	60	Introduce section tactical formation at medium altitude.						MOA, RSTD
TACFORM-1	1321	61	Introduce comm-out maneuvering at medium altitude.						MOA, RSTD
TACFORM-1	1322	62	Introduce section tactical formation at low level.						MOA, RSTD
TACFORM-1	1323	63	Introduce section tactical formation at high altitude.						MOA, RSTD
TACFORM-1	1324	64	Introduce division formation at medium altitude.						MOA, RSTD

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>NAVIGATION (NAV)</b>									
<b>MNAV-1</b>	<b>1330</b>	<b>65</b>	Introduce ingress/egress string and CST NAV system.						
<b>SNAV-1</b>	<b>1331</b>	<b>66</b>	Introduce navigation at low altitude.						
<b>NAV-1</b>	<b>1332</b>	<b>66</b>	Introduce navigation at low altitude.						MTR
<b>AIR-TO-AIR REFUELING (AAR)</b>									
<b>AAR-1</b>	<b>1340</b>	<b>80</b>	Day Air-to-Air Refueling (AAR) qualification.					Aerial refueling platform.	AAR
<b>THREAT COUNTERTACTICS (TCT)</b>									
<b>MTCT-1</b>	<b>1350</b>	<b>85</b>	Introduce Exp programming, ECM panel, and CMDS functions.						
<b>STCT-1</b>	<b>1351</b>	<b>86</b>	Introduce EW suite and applicable communication and surface to air threat countertactics at medium altitude.						
<b>TCT-1</b>	<b>1352</b>	<b>87</b>	Introduce surface-to-air threat countertactics at medium altitude		ALQ-164, Chaff, Flares, TACTS Pod	1,40,10,1		Hi Fi EW.	TACTS range, Electronic Warfare range, TACTS

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>AIR-TO-SURFACE (AS)</b>									
MAS-1	1400	92	Introduce A/S stores programming and computed weapons deliveries.		Mk-76	12			
SAS-1	1401	92	Introduce computed weapons deliveries from medium altitude.		Mk-76	12			
SAS-1	1402	93	Introduce 10 degree computed deliveries.		Mk-76,Mk-82 HD	6,2			
SAS-1	1403	94	Introduce ARBS/TV deliveries.		Mk-76	12			
SAS-1	1404	95	Introduce ARBS/LST and deliveries.		Mk-76	12			
SAS-1	1405	97	Introduce GAU-12 and rocket deliveries.		25mm,5" Zuni RKTS	300,8			
AS-1	1406	98	Introduce computed weapons deliveries.		Mk-76	6			RKD RNG
AS-1	1407	99	Practice medium angle deliveries.		Mk-76,Flares	6,10			RKD RNG, EXP
AS-1	1408	100	Introduce ARBS/TV deliveries.		Mk-76,Flares	6,10			RKD RNG, EXP
AS-1	1409	102	Introduce 10 degree deliveries with low drag ordnance.		Mk-76	6			RKD RNG



STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
AS-1	1410	103	Introduce GAU-12 employment and 10-degree deliveries with high drag ordnance.		25mm,BDU-45, Flares	300,2,20			STRAFE, HVY INERT, WISS, EXP
LOW ALTITUDE (LAT)									
SLAT-1	1420	51	Introduce basic LAT procedures and rules of conduct.						
SLAT-1	1421	52	Review basic and introduce advanced LAT procedures.						
SLAT-1	1422	86	Introduce low altitude transition and surface to air threat countertactics at low altitude.						
LAT-1	1423	54	Introduce basic and advanced LAT procedures.						LAT, MOA, RSTD,
LAT-1	1424	55	Review basic and introduce advance LAT procedures.						LAT, MOA, RSTD
LAT-1	1425	87	Introduce surface-to-air threat countertactics at low altitude.						LAT, TACTS/HI FI EW
TARGET AREA MECHANICS (MECH)									
MMECH-1	1430		Introduce PGM basic functionality and employment.		GBU-12,GBU-38	2,2			

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>SMECH-1</b>	<b>1431</b>	<b>105</b>	Introduce transition profiles and heavyweight aircraft handling and reactive weaponeering.		Mk-82LD,GBU-12	6,2			
<b>SMECH-1</b>	<b>1432</b>	<b>106</b>	Introduce low altitude transition profiles.		Mk-82,AGM-65E,GBU-12,GBU-38	1,1,1,1			
<b>MECH-1</b>	<b>1433</b>	<b>109</b>	Introduce transition profiles.		Mk-82, Mk-82LD, CAGM-65E, or CAGM-65E/GBU-38, Flares	3,1/2,1/1,10		GROUND BASED LASER OR LTG POD EQUIPED A/C.	HE, JDAM, LASER, EXP,
<b>MECH-1</b>	<b>1434</b>	<b>110</b>	Introduce low altitude transition profiles and PGM employment.		Mk-76,LGTR	6,1		GROUND BASED LASER OR LTG POD EQUIPED A/C	TGT,WISS, LSR
<b>MECH-1</b>	<b>1435</b>	<b>111</b>	Introduce section target area tactics at medium altitude .		Mk-76,Flares	6, 10			TGT,WISS, EXP
<b>MECH-1</b>	<b>1436</b>	<b>112</b>	Review section target area tactics at medium altitude .		Mk-76,Flares	6,10			TGT,WISS, EXP
<b>MECH-1</b>	<b>1437</b>	<b>113</b>	Introduce section target area attacks at low altitude.		Mk-76,Flares	6,10			TGT,WISS, EXP
<b>CLOSE AIR SUPPORT (CAS)</b>									
<b>MCAS-1</b>	<b>1440</b>		Introduce 9-line entry and ATHS set-up.		Mk-82LD	6			
<b>SCAS-1</b>	<b>1441</b>	<b>120</b>	Introduce CAS at medium altitude.		Mk-82LD	6			

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SCAS-1	1442		Perform CAS attacks at medium altitude. Type 2/3 terminal attack control shall be in effect.		GBU-12,GBU-38	2,2			
SCAS-1	1443	121	Introduce CAS at low altitude.		Mk-82HD	6			
CAS-1	1444	122	Introduce CAS at medium altitude.		Mk-76	6		FAC, FAC(A) or simulated FAC with marking capability.	TGT, EXP
CAS-1	1445		Introduce Type 2 control.		Sim GBU-12, Sim GBU-38	1,2		FAC, FAC(A) or simulated FAC with marking capability.	TGT, EXP
CAS-1	1446	123	Review CAS at medium altitude.		Mk-76,Flares	6,20		FAC, FAC(A) or simulated FAC with marking capability.	TGT, EXP
CAS-1	1447	124	Introduce CAS at low altitude.		Mk-76,Flares	6,20		FAC, FAC(A) or simulated FAC with marking capability.	TGT, EXP
<b>AERIAL INTERDICTION (AI)</b>									
SAI-1	1450		Introduce low altitude AI.						
AI-1	1451		Review low altitude AI.		BDU-45, Chaff, Flares	2,20,10			TGT, RSTD, MTR,EXP
<b>V/STOL CONSOLIDATION (VCON)</b>									
VCON-1	1220		V/STOL consolidation.						
VCON-1	1221		Review Emergency Procedures						
VCON-1	1222		V/STOL consolidation.						

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
VCON-1	1223		V/STOL consolidation.						
AIR-TO-AIR (AA)									
MAA-1	1500	130	Introduce A/A weapons programming and basic functions.						
SAA-1	1501	131	Introduce aircraft Thrust Vector Control (TVC) and RADAR ACM modes. Introduce air-to-air weapons employment and IR Missile Defense (IRMD). Practice high and slow speed departure recovery.						
AA-1	1502	133	Introduce BFM procedures and drills, aircraft handling, and TVC.		Captive AIM-9	1			AA
AA-1	1503	134	Introduce 1V1 offensive BFM.		Captive AIM-9, TACTS Pod, Flares	1,1,20		TACTS debrief facility.	AA, TACTS, EXP
AA-1	1504	135	Review 1V1 offensive BFM.		Captive AIM-9, TACTS Pod, Flares	1,1,20		TACTS debrief facility.	AA, TACTS, EXP
AA-1	1505	136	Introduce 1V1 defensive BFM.		Captive AIM-9, TACTS Pod, Flares	1,1,20		TACTS debrief facility.	AA, TACTS, EXP
AA-1	1506	137	Review 1V1 defensive BFM.		Captive AIM-9, TACTS Pod, Flares	1,1,20		TACTS debrief facility.	AA, TACTS, EXP
AA-1	1507	138	Introduce 1V1 neutral BFM.		Captive AIM-9, TACTS Pod, Flares	1,1,20		TACTS debrief facility.	AA, TACTS, EXP

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>NIGHT SYSTEMS (NS)</b>									
<b>SNS-1</b>	<b>1600</b>	<b>140</b>	Introduce night V/STOL procedures and NVD usage.						
<b>SNS-1</b>	<b>1601</b>	<b>141</b>	Introduce night V/STOL procedures with NVDs.						
<b>NS-1</b>	<b>1602</b>	<b>142</b>	Introduce night V/STOL procedures and NVD usage.						MOA, RSTD
<b>NS-1</b>	<b>1603</b>	<b>143</b>	Introduce night administrative formation.						MOA, RSTD
<b>NS-1</b>	<b>1604</b>	<b>144</b>	NS V/STOL consolidation.						MOA, RSTD
<b>NS-1</b>	<b>1605</b>	<b>145</b>	Introduce NS formation.						MOA, RSTD
<b>NS-1</b>	<b>1606</b>	<b>146</b>	Review night unaided procedures, take-offs, and landings. Practice night unaided procedures and V/STOL.						

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>NATOPS / CORE SKILL INTRODUCTION EVALUATION (NTPS)</b>									
REQ	6101	195	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.	X					
REQ	6103		Complete CRM training	X					
<b>TRANSITION GROUND SCHOOL (TRAN)</b>									
MTRAN-1	1900	90	Introduce A/S RADAR controls and displays.						
MTRAN-1	1901	91	Introduce A/S RADAR modes.		Mk-76	6			
MTRAN-1	1902	107	Introduce TPOD controls and displays.		TPOD	1			
MTRAN-1	1903	96	Introduce AGR mode and TPOD HAT.		Mk-76	12			
MTRAN-1	1904	108	Introduce TPOD buddy and self-lase attacks.		GBU-12,TPOD	4,1			

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
MTRAN-1	1905	70	Introduce A/A RADAR controls and displays.						
MTRAN-1	1906	71	Introduce A/A RADAR intercept.						
MTRAN-1	1907	72	Introduce A/A RADAR intercept.						
<b>CORE SKILLS (2000 PHASE TRAINING)</b>									
<b>FAMILIARIZATION (FAM)</b>									
SFAM-2	2100	200	Review normal and instrument procedures.						
SFAM-2	2101	201	Review emergency procedures.						
FAM-2	2102	202	Review familiarization, navigation, and/or instrument flight.						
<b>THREAT COUNTERTACTICS (TCT)</b>									
STCT-2	2200	230	Review Surface-to- Air threat countertactics.		TPOD, Mk-82LD, ALQ-164	1,3,1	Expendables		
TCT-2	2201	235	Review Surface-to- Air threat countertactics.		TPOD, ALQ-164, TACTS Pod, Chaff, Flares	1,1,1,60,120	Free-Fall ordnance Expendables		TACTS, EW, RSTD, MOA, SST; TACTS debrief facility. Reference Range Support Matrix

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>AIR-TO-AIR REFUELING (AAR)</b>									
AAR-2	2300	211	Introduce night AAR.					Compatible KC-130, strategic or tactical tanker IAW ATP-52B.	AAR. Reference Range Support Matrix
<b>LOW ALTITUDE TACTICS (LAT)</b>									
SLAT-2	2400	220	Review basic and advanced LAT procedures.						
SLAT-2	2401	221	Review threat countertactics at low altitude.		ALQ-164,Mk-83HD,25mm, exp.	1,4,300	Expendables		
LAT-2	2402	430	Introduce low altitude section target area tactics at comfort level.		Mk-76/Mk-82/BDU-45/ Mk-83/Mk-83 inert/CBU-99, 20 Chaff, 40 Flares	6/4/4/2/2/4,20,40	Free-Fall (and or clusters), Expendables		LAT, TGT, HE or INERT. Reference Range Support Matrix
LAT-2	2403	431	Introduce low altitude threat countertactics in section at comfort level.		Mk-76/Mk-82/BDU-45/ Mk-83/Mk-83 inert/CBU-99, Chaff, Flares	6/4/4/2/2/4,20,40	Simulated high drag, free-fall (and/or clusters), Expendables		LAT,MTR, EXP. Reference Range Support Matrix.
<b>AIR-TO-SURFACE (AS)</b>									
SAS-2	2500	231	Review AS sensors (TPOD and APG-65) and AS timelines.		TPOD	1			
SAS-2	2501	232	Review computed deliveries from medium and low altitude.		TPOD,Mk-82 H/L sel on ITERs, expendables	1,6	Expendables		



STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SAS-2	2502		Review GAU-12 and rocket deliveries from medium and low altitude.		TPOD, 25mm, 5", 2.75", expendables	1,300,4,7	Expendables		
SAS-2	2503	233	Introduce JDAM deliveries.		TPOD, GBU-38, GBU-32 with DSU-33, expendables	1,2,1	Expendables		
SAS-2	2504	234	Introduce LMAV and LGB deliveries.		TPOD, GBU-12 on ITES, GBU-16, LMAV, expendables	1,4,1,1	Expendables		
AS-2	2505		Introduce 81mm & 105mm artillery call for fire						
AS-2	2506	236	Review A/S sensors: TPOD and APG-65.		TPOD	1	Radar-capable aircraft, Expendables		RSTD, LSR, RDR TGT, IR TGT. Reference Range Support Matrix.
AS-2	2507		Review A/S timelines.		TPOD	1	Radar-capable aircraft, Expendables		RSTD, LSR, IR TGT, RECCE ARRAY, EXP. Reference Range Support Matrix.
AS-2	2508	238	Introduce LCIP/LAUT deliveries and review BCWD from medium and low altitude.		TPOD, Mk-76/Mk-82/BDU-45, Chaff, Flares	1,6/4/4,20,60	Expendables		RKD RNG, LSR, LT INERT, EXP. Reference Range Support Matrix.
AS-2	2509	239	Review medium and low altitude GAU-12 and rocket deliveries.		TPOD, 25mm, 2.75" Rockets/5" Rockets, Chaff, Flares	1,300,7/4,20,60	Expendables		RKD RNG, LSR, EXP. Reference Range Support Matrix.

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
AS-2	2510	240	Introduce pop-up attacks from low altitude.		TPOD, Mk-76/Mk-82/BDU-45/ Mk-83/ Mk-83 inert, Chaff, Flares	1,6/4/4/2/2,60,120	Expendables		RKD RNG, LSR, STRAFE, LT INERT, EXP. Reference Range Support Matrix.
AS-2	2511	241	Introduce LMAV and LGB deliveries.		TPOD, GBU-12/GBU-12 inert/GBU-16/GBU-16 inert/ LGTR, CATM-65E/AGM-65E, Chaff, Flares	1,2/2/2/2/2,1/1,20,40	Expendables		RSTD, LGB, AS MISSILE, EXP, WISS or RKD RNG. Reference Range Support Matrix.
AS-2	2512	242	Introduce JDAM deliveries.		TPOD, GBU-32/GBU-32 inert/GBU-38/GBU-38 inert	1,2/2/2/2	Expendables		RSTD, JDAM, LSR, EXP, WISS or RKD RNG. Reference Range Support Matrix.
AS-2	2513	243	Review visual target area tactics.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, 25mm, 2.75" Rockets/5" Rockets, Chaff, Flares	1,6/4/4/2/2,300,4,20,60	Expendables		RSTD, LSR, LT INERT, WISS or RKD RNG, WISS. Reference Range Support Matrix.
AS-2	2514	244	Review target area tactics using medium and high altitude standoff delivery profiles.		TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/GBU-16 inert/LGTR/ CATM-65E, Chaff, Flares	1,2/2/2/2/2/2/2/2/1,10,20	Expendables		RSTD, JDAM, LGB, HE. Reference Range Support Matrix.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>NIGHT SYSTEMS (NS)</b>									
<b>SNS-2</b>	<b>2600</b>	<b>250</b>	Introduce TPOD employment at night. Review NVD use, normal procedures, and aircraft systems management at night..		TPOD	1			
<b>SNS-2</b>	<b>2601</b>	<b>251</b>	Introduce NS tactical attack profiles.		TPOD,Mk-82LD w/ DSU-33,GBU-16,GBU-32/38	1,2,1,2	Expendables		
<b>NS-2</b>	<b>2602</b>	<b>252</b>	Review FAM/FORM procedures at night. Introduce night TPOD employment. Review NVD use, normal procedures, and aircraft systems management at night.		TPOD	1			RSTD,LSR. Review Range Support Matrix.
<b>NS-2</b>	<b>2603</b>	<b>253</b>	Introduce PGM attack profiles at night.		TPOD,GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares	1,1/1/1/1/2/2/2/2,10,20	Expendables		RSTD, JDAM, LGB, EXP, WISS. . Review Range Support Matrix.

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
NS-2	2604	254	Introduce computed deliveries from medium and low altitude at night.		TPOD, Mk-76/ Mk-82/ BDU-45, Chaff, Flares	1,6/4/4,10,20	Expendables		RSTD, LGB, WISS or RKD, RNG, EXP. . Review Range Support Matrix.
NS-2	2605	255	Introduce section target area tactics at night.		TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Mk-76/Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ 5" Rockets, Chaff, Flares	1,2/2/2/2/2/2/2/2, 3/2/2/1/1/4,10,20	Free-Fall ordnance Expendables		RSTD, LGB or JDAM, WISS or RKD, RNG, EXP. . Review Range Support Matrix.
<b>AIR-TO-AIR</b>									
SAA-2	2700	260	Review TVC procedures and A/A TACADMIN.		AIM-9M, AIM-120,expendables	2,2	Expendables		
AA-2	2701	261	Review TVC procedures and A/A TACADMIN.		1 AIM-9/1 CATM-9, 1 TACTS Pod, Flares	1/1,1,60	Expendables		AA,TACTS, EXP. . Review Range Support Matrix.
AA-2	2702	262	Review 1V1 offensive BFM.		CATM-9, TACTS Pod, Chaff, Flares	1,1,40,140	Expendables		AA,TACTS, EXP. . Review Range Support Matrix.
AA-2	2703	263	Review 1V1 defensive BFM.		CATM-9, TACTS Pod, Chaff, Flares	1,1,40,140	Expendables		AA,TACTS, EXP. . Review Range Support Matrix.
AA-2	2704	264	Review 1V1 high aspect BFM against a Category II+ adversary.		CATM-9, TACTS Pod, Chaff, Flares	1,1,40,140	Expendables		AA,TACTS, EXP. . Review Range Support Matrix.
AA-2	2705	271	Introduce 2V1 section engaged maneuvering.		CATM-9, TACTS Pod, Chaff, Flares	1,1,40,140	Expendables	One adversary (dissimilar preferred).	Review Range Support Matrix.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SAA-2	2706	265	Introduce forward quarter intercepts.		AIM-9M, AIM-120, ALQ-164, expendables	4,2,1	Expendables		
SAA-2	2707	266	Review forward quarter intercepts.		AIM-9M, AIM-120, ALQ-164, expendables	4,2,1	Expendables		
AA-2	2708	273	Perform 1V1 intercepts against a single adversary.		CATM-9, TACTS Pod, Chaff, Flares	1,1,20,70	Expendables	TACTSAIC/ GCI. TACTS debrief facility.	Review Range Support Matrix.
<b>FIELD CARRIER LANDING PRACTICE (FCLP)</b>									
SFCLP-4	2800	400	Review day FCLP.						
FCLP-4	2801	401	Review day FCLP.					FCLP Facility	
<b>MISSION SKILLS (3000 PHASE TRAINING)</b>									
<b>CLOSE AIR SUPPORT (CAS)</b>									
SCAS-3	3100	300	Review CAS execution under Type 1 control.		TPOD,GBU-12,Mk-82 LD w/DSU- 33,25mm,SAFI-T, expendables	1,1,4,300	Expendables		
SCAS-3	3101	301	Review CAS execution under Type 2 and 3 control.		TPOD,GBU-12,GBU- 38,ALQ-164, expendables	1,1,2,1	Expendables		
SCAS-3	3102	302	Introduce digitally aided CAS in the urban environment.		TPOD,GBU-51,GBU- 38,AGM-65E,25mm, SAFI-T, expendables	1,1,2,1,300	Expendables		
CAS-3	3103	303	Review day CAS execution under Type1 control.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk- 83 inert/ GBU-12/ GBU-12 inert/ GBU- 16/ GBU-16 inert/ LGTR/ 5" Rocket, 25mm, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2/4, 300,20,60	Free-Fall ordnance or PGMs, Expendables	JTAC or FAC(A).	Reference Range Support Matrix.

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
CAS-3	3104	304	Review day CAS execution under Type 2 and 3 terminal attack control.		TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares	1,2/2/2/2/2/2/2/2, 10,20	Expendables	JTAC or FAC(A).	Reference Range Support Matrix.
CAS-3	3105	305	Review night CAS execution under Type 1 terminal attack control.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ 5" Rocket, 25mm, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2/4, 300,10,20	Free-Fall ordnance or PGMs, Expendables	JTAC or FAC(A).	Reference Range Support Matrix.
CAS-3	3106	306	Review night CAS execution under Type 2 and 3 control.		TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares	1,2/2/2/2/2/2/2/2, 10,20	Expendables	JTAC or FAC(A).	Reference Range Support Matrix.
CAS-3	3107	307	Introduce CAS execution in an urban environment.		TPOD, GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, 2.75" Rockets/ 5" Rockets, 25mm, Chaff, Flares	1,2/2/1/1/2/2/2/2/2, 7/4,300,10,20	Expendables	JTAC or FAC(A).	Reference Range Support Matrix.
<b>ARMED RECONNAISSANCE (AR)</b>									
SAR-3	3200	310	Conduct day medium altitude AR.		TPOD,GBU-32/38,GBU-12,CBU-99/100 w/ FMU-140,25mm SAFI-T,Chaff, Flares	1,2,1,2,300, 60, 120	Expendables		

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
AR-3	3201	311	Conduct medium altitude AR with PGM and GP munitions.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ CBU-99/ Mk-77, 2.75" Rockets/ 5" Rockets, 25mm Chaff, Flares.	1,6/4/4/2/2/2/2,7/4,300,20,60	Free-Fall ordnance Expendables		RSTD, LSR, COMPLEX, EXP. Reference Range Support Matrix.
AR-3	3202	312	Conduct day medium altitude AR with PGMs.		TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares.	1,2/2/2/2/2/2/2,20,60	Expendables		RSTD, LGB, JDAM, COMPLEX, EXP. Reference Range Support Matrix.
AR-2	3203	313	Conduct night medium altitude AR with PGMs.		TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares.	1,2/2/2/2/2/2/2,10,20	Expendables		RSTD, LGB, JDAM, COMPLEX, EXP. Reference Range Support Matrix.
<b>STRIKE COORDINATION AND RECONNAISSANCE (SCAR)</b>									
SCAR-3	3300	320	Conduct day SCAR.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ CBU-99/ Mk-77, 2.75" Rockets/ 5" Rockets, 25mm, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2/2/2/2/2,7/4,300,20,60	Free-Fall ordnance, Expendables	One section AR assets.	Reference Range Support Matrix.
SCAR-3	3301	321	Conduct night SCAR.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/Mk-83 inert/ GBU-12/	1,6/4/4/2/2/2/2/1/1/2/2/2/2/2,7/4,300,4/4,10,20	Free-Fall ordnance, Expendables	One section AR assets.	Reference Range Support Matrix.

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
					GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ CBU-99/ Mk-77, 2.75" Rockets/ 5" Rockets, 25mm, LUU-2/ LUU-19, Chaff, Flares				
<b>AIR INTERDICTION (AI)</b>									
<b>SAI-3</b>	<b>3400</b>	<b>350</b>	Introduce medium altitude AI.		TPOD, GBU-32, ALQ-164, 300 gal fuel tank, expendables	1,2,2,1	Expendables		
<b>AI-3</b>	<b>3401</b>	<b>351</b>	Perform a medium altitude AI with a RF SAM threat.		TPOD, GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, TACTS Pod, ALQ-164, Chaff, Flares	1,2/2/1/1/2/2/2/2, 1,1,20,60	Free-Fall ordnance or PGMs, Expendables		Reference Range Support Matrix.
<b>AI-3</b>	<b>3402</b>	<b>352</b>	Introduce night medium altitude AI with a RF SAM threat.		TPOD, GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, TACTS Pod, ALQ-164, Chaff, Flares	1,2/2/1/1/2/2/2/2, 1,1,10,20	Free-Fall ordnance or PGMs, Expendables		Reference Range Support Matrix.
<b>SHORE-BASED EXPEDITIONARY (EXP)</b>									
<b>EXP-3</b>	<b>3500</b>		Review expeditionary shore-based operations.						



STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>CORE PLUS (4000 PHASE TRAINING)</b>									
<b>FIELD CARRIER LANDING PRACTICE (FCLP)</b>									
SFCLP-4	4102	402	Introduce FCLP at night (unaided).						
FCLP-4	4103	403	Introduce FCLP at night (unaided).						FCLP Facility.
SFCLP-4	4104	404	Introduce FCLP at night (aided).						
FCLP-4	4105	405	Introduce FCLP at night (aided).						NVD compatible FCLP Facility.
<b>CARRIER QUALIFICATION (CQ)</b>									
SCQ-3	4130	410	Perform day CQ.						
CQ-3	4131	411	Complete day CQ qualification.						L-Class ship.
SCQ-4	4133	412	Perform CQ at night (unaided).						
CQ-4	4134	413	Perform CQ at night (unaided).						L-Class ship.
SCQ-4	4135	414	Perform CQ at night (aided).						
CQ-4	4136	415	Perform CQ at night (aided).						L-Class ship.
<b>FORWARD BASE OPERATIONS (FOB)</b>									
SFOB-4	4161	420	Practice day FOB operations.						
FOB-4	4162	421	Practice day FOB operations.						Air facility or road.
SFOB-4	4163	422	Practice FOB operations at night.						
FOB-4	4164	423	Practice FOB operations at night.						Air facility or road.
<b>ADVANCED LOW ALTITUDE (LAT)</b>									
SLAT-4	4200	432	Introduce basic and advanced NS LAT.		ALQ-164, expendables	1	Expendables		

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SLAT-4	4201	433	Review basic and advanced NS LAT. Introduce target attacks and threat countertactics in the LAT environment.						
LAT-4	4202	434	Introduce basic NS LAT.						LAT. Reference Range Support Matrix.
LAT-4	4203	435	Introduce advanced NS LAT.		ALQ-164, Chaff, Flares	1,20,40	Expendables		LAT. Reference Range Support Matrix.
LAT-4	4204	436	Introduce NS LAT as a wingman.						LAT. Reference Range Support Matrix.
LAT-4	4205	437	Introduce target area tactics at low altitude at night.		ALQ-164, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, Chaff, Flares	1,6/4/4/2/2, 20,40	Sim free-fall ordnance Expendables		LAT, TACTS, HE or INERT, TGT. Reference Range Support Matrix.
AE-4	4300	440	Conduct an ASE mission.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, 2.75" Rockets/ 5" Rockets, 25mm, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2/2/2/2, 7/4,300,20,60	Free-Fall ordnance or PGMs, Expendables	Assault support assets.	Reference Range Support Matrix.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
AE-4	4301	441	Conduct a GCE mission.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, Chaff, Flares	1,6/4/4/2/2/2/1/1/2/2/2/2, 10,20	Free-Fall ordnance or PGMs, Expendables	Ground Convoy.	Reference Range Support Matrix.
<b>LOW ALTITUDE CLOSE AIR SUPPORT (LL CAS)</b>									
LLCAS-4	4400	450	Introduce CAS at low altitude, day or night, at comfort level.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, 2.75" Rockets/ 5" Rockets, 25mm, Chaff, Flares	1,6/4/4/2/2,7/4,300,20,60	Free-Fall ordnance Expendables	JCAS, JTAC.	Reference Range Support Matrix.
<b>LOW ALTITUDE AIR INTERDICTION (LL AI)</b>									
LLAI-4	4401	451	Introduce low altitude AI in a medium threat environment at comfort level.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, CBU-99/ Mk-77, CATM-9, TACTS Pod, ALQ-164, Chaff, Flares	1,6/4/4/2/2,2/2,1,1,1,20,60	Free-Fall ordnance Expendables	GCI/AIC, radar equipped adversary.	Reference Range Support Matrix.
<b>MULTI-SENSOR IMAGERY RECONNAISSANCE (MIR)</b>									
MIR-4	4500	460	Perform MIR.		TPOD	1			Reference Range Support Matrix.
<b>AIR DEFENSE (AD)</b>									
SAAD-4	4600	267	Introduce section intercepts against a single IR-2+ group.		AIM-9M, AIM-120,expendables	2,2	Expendables		
SAAD-4	4601	268	Introduce short range radar mechanics.		AIM-9M, AIM-120,expendables	2,2	Expendables		
SAAD-4	4602	269	Introduce section intercepts against a single SAR-1 group.		AIM-9M, AIM-120,expendables	2,2	Expendables		

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SAAD-4	4603	331	Two groups and decoy tactics.		AIM-9M, AIM-120, expendables	2,2	Expendables		
SAAD-4	4604	332	Introduce DARGin a JEZ for a continuous VUL.		AIM-9M, AIM-120, expendables	2,2	Expendables		
AAD-4	4605		Introduce 2V1 short range intercepts to section engaged maneuvering.		CATM-9, TACTS Pod, Chaff, Flares	1,1,30,30	Expendables		TACTS range, radar adversary (dissimilar preferred) and GCI/AIC. Reference Range Support Matrix.
AAD-4	4606	274	Introduce section intercepts against a single group.		CATM-9, TACTS Pod, Chaff, Flares	1,1,30,30	Expendables	2 SAR-1 radar adversaries and GCI/AIC.	Reference Range Support Matrix.
AAD-4	4607	332	2 V X DARG (point defense).		CATM-9, TACTS Pod, Chaff, Flares	1,1,30,30	Expendables	radar adversary and GCI/AIC.	Reference Range Support Matrix.
<b>OFFENSIVE ANTI-AIR WARFARE (OAAW)</b>									
SOAAW-4	4700	350	Introduce medium altitude AI with an RF SAM air-to-surface and air-to-air threat.		TPOD, GBU-32, AIM-9M, 300 DROP, expendables	1,2,2,2	Expendables		
OAAW-4	4701	351	Introduce medium altitude AI with an RF SAM air-to-surface and air-to-air threat.		TPOD, TACTS Pod, GBU-12/ GBU-16/ GBU-32/ GBU-38, ALQ-164, CATM-9, Chaff, Flares	1,1,3/3/3/3,1,1,30,30	Expendables	radar adversary and GCI/AIC.	TACTS range, Reference Range Support Matrix.
OAAW-4	4702	353	Introduce medium altitude division AI with an RF SAM air-to-surface and air-to-air threat.		TPOD, TACTS Pod, GBU-12/ GBU-16/ GBU-32/ GBU-38, ALQ-164, CATM-9, Chaff, Flares	1,1,3/3/3/3,1,1,30,30	Expendables	radar adversary and GCI/AIC.	TACTS range, Reference Range Support Matrix.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>LARGE FORCE EXERCISE (LFE)</b>									
LFE-4	4800	470	Execute a day LFE.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, CATM-9, TACTS Pod, ALQ-164, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2/2/2/2,1,1,1,60,120	Free-Fall ordnance Expendables	Adversaries, Tanker, Blue air, GCI.	Reference Range Support Matrix per scenario.
LFE-4	4801	471	Execute a night LFE.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, CATM-9, TACTS Pod, ALQ-164, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2/2/2/2,1,1,1,60,120	Free-Fall ordnance Expendables	Adversaries, Tanker, Blue air, GCI.	Reference Range Support Matrix per scenario.
<b>FORWARD AIR CONTROLLER (AIRBORNE) {FAC(A)}</b>									
SFAC(A)-4	4900	480	Type 1, 2, and 3 control procedures in a day, low threat environment.						
SFAC(A)-4	4901		Type 1, 2, and 3 control procedures in a night, low threat environment.		TPOD 5" rockets/Mk-82, Chaff,Flares	1,4/4	Expendables		

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SFAC(A)-4	4902	485	Introduce Type 1, 2, and 3 terminal attack control procedures in a daylight, urban environment.		TPOD w/ 5" rockets/Mk-82, Chaff,Flares	1,4,1,1	Expendables		
SFAC(A)-4	4903		Introduce Type 1, 2, and 3 terminal attack control procedures in a night, urban environment.		TPOD w/ 5" rockets/Mk-82, Chaff,Flares	1,4,1,1	Expendables		
FAC(A)-4	4904	482	Introduce Type 1 and 2 control procedures of fixed-wing CAS assets in a low threat environment.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, 2.75" Rockets/ 5" Rockets, Chaff, Flares	1,6/4/4/2/2, 7/4,20,40		One or 2 FW CAS elements with live, inert or captive PGMs or LASER Guided Weapons and a ground FAC/JTAC. LSTs are desired to aid in Type I control.	Reference Range Support matrix.
FAC(A)-4	4905	483	Introduce Type 1 and 3 control procedures of fixed-wing CAS assets with GP ordnance in a low threat environment.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, 2.75" Rockets/ 5" Rockets, Chaff, Flares	1,6/4/4/2/2, 7/4,20,40		One or 2 FW CAS elements with live or inert GP ordnance and a ground FAC/JTAC.	Reference Range Support matrix.
FAC(A)-4	4906	484	Introduce Type 1, 2, and 3 control procedures of rotary wing CAS assets in a low threat environment.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, 2.75" Rockets/ 5" Rockets, Chaff, Flares	1,6/4/4/2/2, 7/4,20,40		One or two RW CAS elements with live/captive Hellfire and a ground FAC.	Reference Range Support matrix.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
FAC(A)-4	4907	486	Introduce mortar/artillery airspot.		TPOD, Chaff, Flares	1,20,40		Naval Surface Fire Support asset and a ground FAC or FO or NGLO. NSFS asset requires a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds.	Reference Range Support matrix.
FAC(A)-4	4908	487	Introduce Type 1 and 2 control procedures at night in a low threat environment.		TPOD, 2.75" Rockets/ 5" Rockets/ Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, LUU-19/ LUU-2, Chaff, Flares	1,7/4/6/4/4/2/2, 4/4,10,20	RP rockets or GP ordnance	One or 2 RW CAS elements with live/captive Hellfire and a ground FAC/JTAC.	Reference Range Support matrix.
SFAC(A)-4	4909	488	Introduce multiple asset integration procedures in a day, high threat environment.						
SFAC(A)-4	4910	489	Introduce multiple asset integration procedures in a night, medium threat environment.						

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>FAC(A)-4</b>	<b>4911</b>		Introduce multiple asset integration procedures in a day, medium threat environment.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, 2.75" Rockets/ 5" Rockets, Chaff, Flares	1,6/4/4/2/2, 7/4,20,60	RP rockets or GP ordnance	One FW CAS element, 1 additional Fire support asset (RW CAS/UAS CAS/IDFS) and a ground FAC. If IDFS is to be used 10 HE rds, 4 WP rds for marking or suppression required.	Reference Range Support matrix.
<b>FAC(A)-4</b>	<b>4912</b>		Introduce asset integration procedures in a night, medium threat environment.		TPOD, 2.75" Rockets/ 5" Rockets/ Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert, LUU-19/LUU-2, Chaff, Flares	1,7/4/6/4/4/2/2, 4/4,10,20	RP rockets or GP ordnance	One FW CAS element, 1 additional Fire support asset (RW CAS/UAS CAS/IDFS) and a ground FAC. If IDFS is to be used 10 HE rds, 4 WP rds for marking or suppression required.	Reference Range Support matrix.
<b>FAC(A)-5</b>	<b>4951</b>	<b>495</b>	Conduct aerial escort (AE) by introducing FAC(A) escort.		TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2,20,40	Free-Fall or PGM	2+ CAS aircraft. Indirect fire and C3 agencies preferred.	Reference Range Support matrix.
<b>INSTRUCTOR TRAINING (5000 PHASE)</b>									
<b>SWTO-5</b>	<b>5100</b>	<b>500</b>	WTO certification sim.	<b>X</b>					



STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SWTO-5	5101	501	WTO certification sim.	X					
SWTO-5	5102	502	WTO certification sim.	X					
SWTO-5	5103	503	WTO certification sim.	X					
WTO-5	5104	504	WTO certification sortie.	X					
WTO-5	5105	505	WTO certification sortie.	X					
SLATI-5	5200	510	LATI certification sim.	X					
SLATI-5	5201	511	LATI certification sim.	X					
LATI-5	5202	512	LATI certification sortie.	X					
LATI-5	5203	513	LATI certification sortie.	X					
LATI-5	5204	514	LATI certification sortie.	X					
SNSI-5	5300	520	NSI certification sim.	X					
SNSI-5	5301	521	NSI certification sim.	X					
NSI-5	5302	522	NSI certification sortie.	X					
NSI-5	5303	523	NSI certification sortie.	X					
SNSLATI-5	5401	524	NSLATI certification sim.	X					
SNSLATI-5	5402	525	NSLATI certification sim.	X					
NSLATI-5	5403	526	NSLATI certification sortie.	X					

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
<b>SACTI-5</b>	<b>5500</b>	<b>530</b>	ACTI certification sim.	X					
<b>ACTI-5</b>	<b>5501</b>	<b>531</b>	ACTI certification sortie.	X					
<b>ACTI-5</b>	<b>5502</b>	<b>532</b>	ACTI certification sortie.	X					
<b>ACTI-5</b>	<b>5503</b>	<b>533</b>	ACTI certification sortie.	X					
<b>SFAC(A)I-5</b>	<b>5601</b>	<b>540</b>	FAC(A)I certification sim.	X					
<b>FAC(A)I-5</b>	<b>5602</b>	<b>541</b>	FAC(A)I certification sortie.	X					
<b>FAC(A)I-5</b>	<b>5603</b>	<b>542</b>	FAC(A)I certification sortie.	X					
<b>FAC(A)I-5</b>	<b>5604</b>	<b>543</b>	FAC(A)I certification sortie.	X					
<b>IUT-5</b>	<b>5701</b>		Observe LSI control of FAM solo flight.	X					
<b>IUT-5</b>	<b>5702</b>		Introduction to LSI control of FAM solo flight.	X					
<b>IUT-5</b>	<b>5703</b>		Review LSI control of FAM solo flights.	X					
<b>IUT-5</b>	<b>5704</b>		Review LSI control introducing night LSI procedures.	X					
<b>IUT-5</b>	<b>5705</b>		Review LSS control and introduce FOB operations from an approved EAF site.	X					
<b>IUT-5</b>	<b>5706</b>		Review LSO control per LSO NATOPS for FCLP operations.	X					

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SIUT-5	5800	550	Practice normal procedures.	X					
SIUT-5	5801	551	Review normal and emergency procedures.	X					
IUT-5	5802	552	Introduce normal procedures from the rear seat of the TAV-8B.	X					
IUT-5	5803	553	Review normal procedures from the rear seat of the TAV-8B.	X					
SIUT-5	5804	554	Introduce simulator instructional techniques.	X					
IUT-5	5805	555	Introduce basic and tactical formation as lead.	X					
IUT-5	5806	556	Introduce division formation.	X					
IUT-5	5807	557	Review division formation as lead.	X					
IUT-5	5808	558	Monitor an aerial refueling sortie.	X					
SIUT-5	5809	559	Review threat countertactics.	X					
IUT-5	5810	560	Introduce threat countertactics chase.	X					
SIUT-5	5811	561	Review high and low angle dive deliveries.	X					
SIUT-5	5812	562	Review transition profiles.	X					

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
IUT-5	5813	563	Review high and low angle dive deliveries.	X					
IUT-5	5814	564	Review target area tactics.	X					
IUT-5	5815	565	Review TPOD attacks as lead.	X					
SIUT-5	5816	566	Monitor medium altitude CAS simulator.	X					
IUT-5	5817	567	Review CAS as SCAR.	X					
IUT-5	5818	568	Monitor low altitude CAS sortie from rear seat.	X					
IUT-5	5819	569	Introduce FAM stage maneuvers.	X					
IUT-5	5820	570	Practice FAM stage maneuvers.	X					
SIUT-5	5821	571	Review FAM stage maneuvers and dangerous errors.	X					
SIUT-5	5822	572	Introduce instrument procedures in the FAM stage.	X					
IUT-5	5823	573	Review instrument procedures in the FAM stage.	X					
SIUT-5	5824	574	Monitor early stage FAM simulator.	X					
SIUT-5	5825	575	Review FAM stage maneuvers and dangerous errors.	X					

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
IUT-5	5826	576	Introduce Night Systems stage maneuvers.	X					
IUT-5	5827	577	Monitor Night Systems formation maneuvers.	X					
IUT-5	5828	578	Introduce Night System formation maneuvers.	X					
SIUT-5	5829	579	Monitor advanced aircraft handling simulator.						
IUT-5	5830	580	Introduce advanced aircraft handling chase.	X					
IUT-5	5831	581	Review advanced aircraft handling maneuvers.	X					
SIUT-5	5832	582	Monitor TVC simulator.	X					
IUT-5	5833	583	Review TVC and BFM maneuvers.	X					
IUT-5	5834	584	Chase TVC maneuvers.	X					
IUT-5	5835	585	Review 1V1 BFM.	X					
SIUT-5	5836	586	Review Basic and Advanced LAT maneuvers	X					
SIUT-5	5837	587	Review Low Altitude Threat Reaction.	X					
IUT-5	5838	588	Review Basic and Advanced LAT maneuvers	X					

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
IUT-5	5839	589	Review Low Altitude Threat Reaction.	X					
SIUT-5	5840	590	Monitor FOB simulator.	X					
SIUT-5	5841	591	Fly NATOPS check with program/model manager.	X					
IUT-5	5842	592	Review A/A RADAR intercept sortie.	X					
IUT-5	5843		Monitor FOB simulator	X					
FLSE-5	5900		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.	X	TPOD,GBU-12,GBU-38,25mm SEL 1-5	1,1,2,300			
FLSE-5	5901		Conduct an objective evaluation of the FLSEs knowledge of and adherence	X	AIM-9,AIM-120,ALQ-164, 25MM	2,2,1,300		GCI/AIC trained controller for brief/flight/debrief	

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
			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.						
<b>REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS (RQD) (6000 TRAINING)</b>									
<b>REQ-6</b>	<b>6101</b>		Conduct an objective evaluation of the aviator's knowledge of mission planning, briefing, normal operating procedures, crew resource management, aircraft systems, performance criteria, emergency procedures, and debriefing.	<b>X</b>					

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
REQ-6	6102		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.	X					
REQ-6	6103		Complete CRM training evaluation.	X					
SSL-6	6200	620	Demonstrate proficiency instructing a medium altitude threat countertactics simulator. Evaluate basic instruction ability, knowledge of threat systems, and threat countertactics.	X	TPOD,Mk-83HD w/ DSU-33,CBU-99/100, ALQ-164,expendables	1,2,1,1	Expendables		



STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SSL-6	6201	621	Demonstrate proficiency weaponeering PGM, optimizing aircraft sensors and target area tactics execution. Evaluate PGM and applicable employment systems knowledge.	X	TPOD,GBU-12/16,GBU-32/38,SEL-2	1,2,1	Expendables		
SL-6	6202	622	Demonstrate proficiency weaponeering PGM, optimizing aircraft sensors, and leading a target area tactics flight.	X	TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares	1,2/2/2/2/2/2/2/2,10,20	Expendables		Reference Range Support matrix.
SL-6	6203	624	Demonstrate proficiency leading CAS under Type 1 terminal attack control.	X	TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, 25mm, Chaff, Flares	1,6/4/4/2/2/2/2/1/1/2,300,20,60	PGM or Free-Fall Rod, Expendables	JTAC	Reference Range Support matrix.
SL-6	6204	625	Demonstrate proficiency leading CAS under type 2 and/or 3 terminal attack control.	X	TPOD, GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR, Chaff, Flares	1,2/2/2/2/2/2/2/2,10,20	Expendables	JTAC	Reference Range Support matrix.

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SL-6	6205		Demonstrate proficiency leading a medium altitude AI with an RF SAM threat.	X	GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ GBU-12/ GBU-12 inert/ GBU-16/2 GBU-16 inert/ LGTR, ALQ-164, Chaff, Flares	2/2/2/2/2/2/2/2,1,10,20	PGM or Free-Fall Rod, Expendables	Minimum 1 section of AR assets.	Reference Range Support matrix
SL-6	6206	626	Demonstrate proficiency leading SCAR.	X	TPOD,Mk-76/Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ CBU-99/ Mk-77, 2.75" Rockets/ 5" Rockets, 25mm, Chaff, Flares	1,6/4/4/2/2/2/2/1,1/1/2/2/2/2/2/2,7/4,300,20,60	PGM or Free-Fall Rod, Expendables	Minimum 1 section of AR assets.	Reference Range Support matrix

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
SACMFL-6	6300		Demonstrate proficiency as a section lead in lane defense and section intercepts against 2 groups, sweeper/striker profiles incorporating organic ARG defense capabilities in a JEZ for a continuous VUL.	X	AIM-9M-8, Expendables	4	Expendables		
ACMFL-6	6301	623	Demonstrate proficiency in leading a section during a 1V1 high aspect BFM against a Category II+ adversary.	X	CATM-9-8, TACTS Pod, Flares	1,1,30	Expendables		Reference Range Support matrix.
ACMFL-6	6302		Demonstrate proficiency in leading a section during a 2V1 short range intercepts to section engaged maneuvering sortie.	X	CATM-9,, TACTS Pod, Chaff, Flares	1,1,30,30	Expendables		Reference Range Support matrix.

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
ACMFL-6	6303	627	Demonstrate proficiency in leading a section during a 2 V X DCA (Point defense) sortie.	X	CATM-9, TACTS Pod, Chaff, Flares	1,1,30,30	Expendables	Radar equipped adversaries (2min) GCI/AIC	Reference Range Support matrix.
DL-6	6400	630	Division proficiency executing a division target area tactics sortie.	X	TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, Chaff, Flares	1,6/4/4/2/2/2/2/ 1/1/2/2/2/2/2, 20,60	PGM or Free-Fall Rod, Expendables		Reference Range Support matrix.
DL-6	6401	631	Demonstrate proficiency executing division AR.	X	TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert/ CBU-99/ Mk-77, 2.75" Rockets/ 5" Rockets, 25mm, Chaff, Flares	1,6/4/4/2/2/2/2/ 1/1/2/2/2/2/2/2, 7/4,300,20,60	PGM or Free-Fall Rod, Expendables		Reference Range Support matrix.
DL-6	6402	632	Demonstrate proficiency executing division day AI.	X	TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, CATM-9,TACTS Pod, ALQ-164,Chaff,Flares	1,6/4/4/2/2/2/2/ 1/1/2/2/2/2/2, 1,1,1,20,60	PGM or Free-Fall Rod, Expendables		Reference Range Support matrix.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
DL-6	6403	633	Demonstrate proficiency executing division AI at night.	X	TPOD, Mk-76/ Mk-82/ BDU-45/ Mk-83/ Mk-83 inert/ GBU-12/ GBU-12 inert/ GBU-16/ GBU-16 inert/ LGTR/ GBU-32/ GBU-32 inert/ GBU-38/ GBU-38 inert, CATM-9, TACTS Pod, ALQ-164, Chaff, Flares	1,6/4/4/2/2/2/2/ 1/1/2/2/2/2/2, 1,1,1,20,60	PGM or Free-Fall Rod, Expendables		Reference Range Support matrix.
MC-6	6500	636	Lead a day or night AI LFE as the Mission Commander	X	Per scenario			Adversaries, Tanker, Blue air, GCI/AIC.	Reference Range Support matrix.;
MC-6	6501	637	Lead a day or night large force SCAR package as the Mission Commander.	X	Per scenario			Per scenario.	Reference Range Support matrix.
SFCF-6	6600	640	Functional Check Flight (FCF) workup sim.	X					
FCF-6	6601	641	Conduct a FCF.						
SDEMO-6	6700	642	Demo Pilot workup sim.	X					
DEMO-6	6701	643	Demonstration flight. Initial event shall be monitored by MAG commanding officer or his designated representative.						
LSO-6	6750	700	Day Basic Field LSO.	X					FCLP facility.

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
LSO-6	6751	701	Night Basic Field LSO.	X					FCLP facility.
LSO-6	6752	702	Day Basic Ship.	X					L-class ship.
LSO-6	6753	703	Night Basic Ship.	X					L-class ship.
LSO-6	6754	704	Advanced Day LSO.	X					FCLP facility and L-class ship.
LSO-6	6755	705	Advanced Night LSO.	X					FCLP facility and L-class ship.
LSO-6	6756	706	Training Day LSO.	X					FCLP facility and L-class ship.
LSO-6	6757	707	Training Night LSO.	X					FCLP facility and L-class ship.
LSI-7	6770	710	Day Facility LSI.	X					Main facility.
LSI-7	6771	711	Night Facility LSI.	X					Main facility.
LSS-7	6772	712	Day Road LSS.	X					Road training facility or road base.
LSS-7	6773	713	Night Road LSS.	X					Road training facility or road base.
LSS-7	6774	714	Day CAL Site LSS.	X					CAL site.
LSS-7	6775	715	Night CAL Site LSS.	X					CAL site.
TRK-6	6800	650	Conduct day AAR.						
TRK-6	6801	210	Conduct strategic tanking.						
TRK-6	6802	652	Employ ALQ-164.		ALQ-164	1			EW Range.
TRK-6	6803	666	Air-to-air gunnery.		25mm	300			Tow Aircraft.

STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
TRK-6	6804	491	Introduce adverse weather procedures in a high threat environment.		free fall or forward firing ordnance, expendables			UAS/UCAV. Ground FAC. One or 2 FW CAS elements with live or inert free fall or forward firing or weapons and a ground FAC.	Reference Range Support matrix.
TRK-6	6805	492	Introduce UAS/UCAV integration.		TPOD , expendables		Expendables	LGW Capable UAS /UCAV , GFAC /JTAC	Reference Range Support matrix.
TRK-6	6806	493	Introduce Naval Surface Fire Support airspot.		TPOD, expendables		Expendables	UAS/UCAV. Ground FAC. Naval ship with surface-to-surface guns.	Reference Range Support matrix.
TRK-6	6807	494	Introduce AC-130 Call For Fire.		TPOD, expendables		Expendables	(1) AC-130 and Ground /air FAC.	Reference Range Support matrix.
TRK-6	6808	668	Range requirement unavailable.						
TRK-6	6809	669	Ordnance requirement unavailable.						
TRK-6	6810	670	Syllabus support unavailable.						
TRK-6	6900	693	Day CAL site operations.					Approved CAL site	
TRK-6	6901	694	Night CAL site operations.					Approved CAL site.	
TRK-6	6902	695	Road operations.					Approved road.	
TRK-6	6903	696	Night road operations.					Approved road.	

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STAGE	NEW CODE	OLD CODE	GOAL/ DESCRIPTION	EVALUATION	ORDNANCE TYPE	ORDNANCE QUANTITY	NOTES	EXTERNAL SYLLABUS SUPPORT	RANGES
TRK-6	6904	720	Control Day FCLP LSO.					FCLP facility.	
TRK-6	6905	721	Control Night FCLP LSO.					FCLP facility.	
TRK-6	6906	722	Control Aided Night FCLP LSO.					FCLP facility.	
TRK-6	6907	723	Control Day Ship LSO.					L-class ship.	
TRK-6	6908	724	Control Night Ship LSO.					L-class ship.	
TRK-6	6909	725	Control Night Aided Ship LSO.					L-class ship.	
TRK-6	6910	726	Control Day Training LSO.					FCLP facility or L-class ship.	
TRK-6	6911	727	Control Night Training LSO.					FCLP facility or L-class ship.	
TRK-6	6912	730	Control Day LSI Facility.					Main operating facility.	
TRK-6	6913	731	Control Night LSI Facility.					Main operating facility.	
TRK-6	6914	732	Control Day LSS Road.					Road training site or road site.	
TRK-6	6915	733	Control Night LSS Road.					Road training site or road site.	
TRK-6	6916	734	Control Day LSS CAL Site.					CAL site.	
TRK-6	6917	735	Control Night LSS CAL Site.					CAL site.	
TRK-6	6918	N/A	Control Day EP Simulator as LSO					R/NAWST LHA/D	
TRK-6	6919	N/A	Control Night EP Simulator as LSO					R/NAWST LHA/D	
TRK-6	6920	N/A	Execute Call for Fire			Mortars or Artillery.			



223. SYLLABUS EVALUATION FORMS. See Appendix A for annual NATOPS and instrument check scenarios and ATFs.

224. SIMULATOR MISSION ESSENTIAL SUBSYSTEMS MATRIX (MESM)

1. Events designated by an "S" in the event header shall be flown/conducted in a training device equipped to meet the objectives listed in the event description; each event requires specific simulator capabilities. For each individual event, a simulator is categorized as Full Mission Capable (FMC), Partial Mission Capable (PMC), or Non-Mission Capable (NMC) based on the status of mission-essential simulator subsystems. The following definitions apply:

a. FMC. All simulator subsystems required to meet the training objectives for the event to be flown/conducted are installed and operating properly.

b. PMC. A simulator subsystem or capability considered highly desirable, but not essential, to meet the training objectives is not installed or is not operating properly. While the event can still be completed, the quality of training is degraded.

c. NMC. The device lacks the capability to complete the event due to a critical subsystem or capability being inoperative or not installed. A simulator will be considered NMC if its configuration is greater than 3 months out of date as compared with the current aircraft/system configuration.

2. Completion of an event in a PMC simulator shall be noted on the ATF with a description of the impact to training. Commanding officers shall be notified of all scheduled events in NMC simulators. Each commanding officer should notify DC/Aviation APW-71/APC (Info appropriate MCI/MARCORBASE, CG TECOM ATB, and PMA-205[MARFED]) by DMS message (via the applicable chain of command) when NMC simulators due to aircraft configuration changes occur for greater than 6 months or when, in the commanding officer's judgment, the NMC rate has had an adverse effect on the squadron's ability to train.

3. Simulator MESM Application. The matrix below illustrates how the absence of a particular simulator subsystem or capability affects simulator MC status for each training event in this Manual. All simulator events will be completed in an FMC or a PMC simulator as determined by the MESM. Completion of an event in a PMC simulator shall be noted on the ATF with a description of the impact to training. Under no circumstances will an event be completed in a device determined to be NMC for that event without the approval of the commanding officer.

Failed Subsystem	NMC for:	PMC for:
Seat Motion	SFAM, SFCLP, SFBO, SLAT, SAA-260, SLATI, SNSLATI	
Aural	SAA, STCT, SWTO, SLATI, SACTI, SNSI, SNSLATI, SAS-230	All events
Visual	All events	
NVG Visual	SNS, SLAT-432/433, SNSI, SNSLATI, SFCLP-404, SCQ-414, SFBO-422	
Basic Moving Models	SINT, SFORM, MECH, CAS, SAA, SAAW, SACTI	
FLIR	SNS, SNSI, SNSLATI, SFCLP-402/404, SCQ-412/414, SFBO-422	SNAV, SLAT
TPOD	SMECH, SAS-231/232/233/234, SNS, SCAS-300-301, SAR, SFAC(A), SWTO, SNSI, SFAC(A)I	SCAS-302, SAI-350
Radar	SAS 090, 091, AS 101, SINT 070/071/072, SAS-231, SAA-265/266/267/268/269/270, SAI-350, SWTO-500, SACTI-530	
Gun	SAS 097, SINT, SAA, SAS-232, SNS-251, SCAS, SAR, SAAW, SLATI-433, SFAC(A), SWTO-501/502/503, SNSI-520, SNSLATI-526, SACTI, SFAC(A)I	SAI
Weapons/WMC	SAA, SAS, SINT, SMECH, SCAS, SNS-251, SAR, SAAW, SAI, SLAT-433, SFAC(A), SWTO, SNSI, SNSLATI-526, SACTI, SFAC(A)I	
INS/GPS	Any event	
COMM/NAV	SNAV 065/ 066, SLAT, SCAS, SFAC(A), SFAC(A)I, SLATI, SNSLATI	Any event
TAMMAC		SMECH, SCAS
Flight Instruments	SFAM 020, 021, 025 Any event	Any event
Engine Instruments	SFAM, EP event	Any event
Flight Controls	Any event	
ASE/RWR	SINT, STCT, SMECH, SCAS, SAA, SAAW, SAS-230, SAR, SAI, SLAT, SFAC(A), SWTO, SLATI, SNSI, SNSLATI, SACTI, SFAC(A)I	SAS

Failed Subsystem	NMC for:	PMC for:
ALQ-164	STCT, SAR, SAI, SLAT, SWTO, SNSI, SLATI, SNSLATI	
AIM-9	SINT, SAA, SAAW, SWTO, SAI, SACTI	
AIM-120	SINT, SAA, SAAW, SWTO, SAI, SACTI	
BRIEF/DEBRIEF FACILITIES	STAGE CHECK/ PROGRESS RIDES, SWTO, SLATI, SNSLATI, SACTI, SFAC(A), SFAC(A)I	Any event
TEN	STCT, SCAS, SAA, SMECH, SAS, SNS-251, SAR, SAAW, SWTO, SLATI, SNSLATI, SACTI, SFAC(A), SFAC(A)I	
JMPS / AMU	SWTO, SLATI, SNSLATI, SACTI, SFAC(A), SFAC(A)I	Any event other than SFCLP, SFBO
Link functionality	SFORM, SINT, SAS, STCT, SMECH, SCAS	SWTO, SLATI, SNSLATI, SACTI, SFAC(A), SFAC(A)I, SAR, SAI
Notes: 1. PMC at instructor/ squadron discretion		

4. Simulator event briefs shall be identical, both procedurally and in content, to aircraft/system event briefs. The length of the brief should be based upon the mission to be flown/conducted and content to be covered and should not be forced to fit into the standard simulator briefing period.

5. If the simulator is not available, simulator periods may be flown in the aircraft or conducted on the system.

6. Scheduling. The time between a simulator event and the corresponding aircraft/system event should be minimized to the maximum extent possible.

NAVMC 3500.51A  
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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, OPNAVINST 3710.7 series, and SOPs.

APPENDIX A

**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:
    1. Brake Failure
    2. NWS Failure
    3. Skid Light
  - c. **Takeoff**. PUI will perform a heavy weight STO and a VT0. Respond to two or more:
    1. Engine Overtemp
    2. Lack of Engine Performance
    3. Fire Light
    4. AC Power Failure
    5. IGV Failure in Full Closed Position
    6. Abort Call From Tower
  - d. **Airborne**. Respond to one or more (one shall be taken to a full stop):
    1. Birdstrike With Engine Surge
    2. Flaps Drive to Full Down
    3. AC Electrical failure
    4. Flameout
    5. Canopy Light
    6. Oil Light
    7. HYD 1 Failure
    8. Stuck Throttle in High Power Position
    9. Single Lane DECS Failure
  - e. **Landing**. PUI will perform a CL, VNSL, RVL, and a VL. Respond to one or more:
    1. Oil Light
    2. Unsafe Gear Indications
    3. Nozzle Failure at Other Than Full Aft
    4. Flap Failure at Low Angles
    5. HYD 1 Failure
    6. NWS Failure
    7. Max Crosswind Landing
    8. Total Electrical Failure

APPENDIX A

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:
    1. Brake Failure
    2. NWS Failure
    3. Skid Light
  - c. Takeoff. PUI will perform a heavy weight STO and a VTO. Respond to two or more:
    1. Abnormal Engine Indications on Run-Up
    2. Nozzle Failure on STO
    3. Asymmetric Flap Failure
    4. Symmetric Flap Failure
    5. Flaps Fail in Full Down Position
    6. Fire Indication at Liftoff
    7. Abort Call From Tower
  - d. Airborne. Respond to one or more (one shall be taken to a full stop):
    1. Engine Surge
    2. Flaps Drive to Full Down
    3. AC Electrical Failure
    4. Flameout
    5. Tank Overpressure Light
    6. Oil Light
    7. Rough Running Engine
    8. HYD 1 Failure
    9. Stuck Throttle
  - e. Landing. PUI will perform a CL, VNSL, RVL, and a VL. Respond to one or more:
    1. Loss of Duct Pressure
    2. Unsafe Gear Indications
    3. Loss of Brakes
    4. Flap Failure at Low Angles
    5. SAAHS Failure
    6. Max Crosswind Landing
    7. Hot and Heavy RVL

APPENDIX A

<b>NATOPS Check Grade Sheet</b>									
<b>IP</b>					<b>PUI</b>				
<b>DATE</b>					<b>MISSION</b>				
<b>EVENT</b>					<b>T&amp;R CODES (AS REQ)</b>				
<b>T/M/S</b>					<b>TRAINING AREA</b>				
<b>FLIGHT POSITION</b>					<b>DAY / NIGHT // HIGH/LO LIGHT</b>				
<b>NATOPS Oral Exam (Pass/Fail)</b>					<b>WEATHER</b>				
<b>Closed Book NATOPS Exam Score</b>									
<b>Open Book NATOPS Exam Score</b>									
<b>ITEM</b>			<b>g</b>	<b>cg</b>	<b>σ</b>	<b>Mission Description:</b>			
<b>1</b>	<b>Basic Pilot Skills</b>					<b>Remarks:</b>			
a	CRM								
b	Headwork								
c	Basic Airwork								
<b>1</b>	<b>Preflight</b>								
a	Plan								
b	Brief								
c	Preflight Prep								
<b>3</b>	<b>GENERAL EXECUTION</b>								
a	Taxi Procedures								
b	Takeoffs (1)								
c	(2)								
d	(3)								
f	(4)								
g	Admin Out								
h	Admin Back								
i	Tactical								
j	Comm Procedures								
k	Landings [1]								
l	[2]								
m	[3]								
n	[4]								
o	[5]								
p	[6]								
q	[7]								
<b>4</b>	<b>Emergencies</b>								
a	[1]								
b	[2]								
c	[3]								
d	[4]								
f	[5]								
g	[6]								
h	[7]								
i	[8]								
GPA = _____									
<b>INSTRUCTOR SIGN</b>			<b>STUDENT SIGN</b>			<b>PTO REVIEW</b>			
Calculate GPA: Q = 4, CQ=2, UQ=0. Add up the values of the graded items and divide by the number of graded items.									
UQ- Lack of ability and/or knowledge. Requires substantial input from IP for safe execution and/or mission accomp									
CQ - Safe but limited proficiency. Requires frequent input from the IP.									
Q - Correct. Recognizes and corrects errors. Requires minimal input from the IP.									



Instrument Grade Sheet										
<u>IP</u>						<u>PUJ</u>				
<u>DATE</u>						<u>MISSION</u>				
<u>EVENT</u>						<u>T&amp;R CODES (AS REQ)</u>				
<u>T/M/S</u>						<u>TRAINING AREA</u>				
<u>FLIGHT POSITION</u>						<u>WEATHER</u>				
<b>ITEM</b>		<b>DND</b>	<b>Unsat</b>	<b>BA</b>	<b>A</b>	<b>AA</b>	<b>Mission Description:</b>			
<b>1</b>	<b>PLAN &amp; PREP</b>						<b>Remarks:</b>			
a	CRM									
b	Plan									
c	Brief									
<b>2</b>	<b>Admin</b>									
a	Out									
b	Back									
<b>3</b>	<b>GENERAL EXECUTION</b>									
a	Instrument Takeoff									
b	Profiles									
c	En Route Procedures									
d	Formation									
e	TACAN Navigation									
f	INS Navigation									
g	Holding									
<b>4</b>	<b>Approaches</b>									
a	TACAN									
b	GCA									
c	GCA									
d	Landings									
<b>5</b>	<b>DEBRIEF</b>									
a	Recall / Reconstruction									
b	Analysis									
<b>6</b>	<b>Mission Evaluation</b>	<b>Success</b>			<b>Inc</b>					
a	Mission Success									
						<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory				
<b>INSTRUCTOR SIGN</b>		<b>STUDENT SIGN</b>				<b>PTO REVIEW</b>				
DND - Not applicable or not observed UNSAT - Unsafe or complete lack of ability and/or knowledge. Requires substantial input from IP for safe execution and/or mission accomp BA - Safe but limited proficiency. Requires frequent input from the IP. A - Correct. Recognizes and corrects errors. Requires occasional input from the IP. AA - Correct. efficient, skillful, and without hesitation. Requires minimal input from the IP.										