



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

NAVMC 3500.50B
C 465
26 JUN 2012

NAVMC 3500.50B

From: Commandant of the Marine Corps
To: Distribution List

Subj: FA-18 TRAINING AND READINESS MANUAL (SHORT TITLE: FA-18 T&R MANUAL)

Ref: (a) NAVMC 3500.14C

Encl: (1) FA-18 Training and Readiness (T&R) Manual

1. Purpose. In accordance with the reference, publish revised standards and regulations regarding the training of FA-18 aircrew per enclosure (1).

2. Cancellation. NAVMC 3500.50A Ch 1

3. Scope. Highlights of major T&R planning considerations included in this Manual are as follows:

a. Moved Offensive Anti-Air Warfare (OAAW) from the Core Plus Mission Essential Task List (METL) to the Core METL for FA-18D squadrons.

b. Moved Close Air Support (CAS) from the Core Skills phase to the Mission Skills phase for the FA-18C/D.

c. Created the Fighter Attack Instructor (FAI) Program of Instruction (POI), combining Air-to-Ground and Air-to-Air instruction under one certification.

d. Created Night Systems Instructor (NSI) and Night Systems Low Altitude Tactics Instructor (NSLATI) POIs.

e. Flight Leadership Standardization Evaluator (FLSE):

(1) Redefined eligibility for certification and currency requirements.

(2) Reduced FLSE-evaluated events from 9 to 4 in the Section Lead syllabus and from 4 to 2 events in the Division Lead syllabus.

(3) Eliminated the FLSE sortie requirement in the Mission Commander syllabus.

f. Reduced Section Lead syllabus events from 26 to 19 and reduced Division Lead syllabus events from 8 to 7.

g. Increased simulator events by 24.6 percent in the FA-18C syllabus and by 46.3 percent in the FA-18D syllabus.

h. Incorporated Instructor syllabus work-up sorties.

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

3 0 1011 \$015

i. Added a training metric, Core Model Training Standard (CMTS), an objective optimum training standard used to reflect aircrew trained to Core Skill Proficiency/Mission Skill Proficiency (CSP/MSP) per crew position.

4. Information. Recommended changes to this Manual are invited and may be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General (CG), Training and Education Command (TECOM), Marine Air Ground Task Force Training and Education Standards Division (MTESD), Aviation Standards Branch (ASB) using standard Naval correspondence or the Automated Message Handling System plain language address: CG TECOM MTESD.

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

6. Certification. Reviewed and approved this date.



R. C. FOX
By direction

DISTRIBUTION: PCN 10031977100

CHAPTER 1
FA-18 TRAINING AND READINESS UNIT REQUIREMENTS

VMFA

	PARAGRAPH	PAGE
TRAINING AND READINESS REQUIREMENTS.....	1.0	1-3
MISSION.....	1.1	1-3
TABLE OF ORGANIZATION (T/O).....	1.2	1-3
SIX FUNCTIONS OF MARINE AVIATION.....	1.3	1-3
ABBREVIATIONS.....	1.4	1-4
DEFINITIONS.....	1.5	1-5
MISSION ESSENTIAL TASK LIST (METL).....	1.6	1-6
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION MATRIX.....	1.7	1-6
MET TO CORE/MISSION/CORE PLUS SKILL MATRIX.....	1.8	1-7
MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS.....	1.9	1-7
CORE MODEL MINIMUM REQUIREMENTS (CMMR) FOR READINESS REPORTING (DRRS-MC).....	1.10	1-9
CORE MODEL TRAINING STANDARD (CMTS).....	1.11	1-10
INSTRUCTOR DESIGNATIONS.....	1.12	1-11
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD).....	1.13	1-11

VMFA (AW)

MISSION.....	1.14	1-12
TABLE OF ORGANIZATION (T/O).....	1.15	1-12
SIX FUNCTIONS OF MARINE AVIATION.....	1.16	1-12
ABBREVIATIONS.....	1.17	1-13
DEFINITIONS.....	1.18	1-14
MISSION ESSENTIAL TASK LIST (METL).....	1.19	1-15
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION MATRIX.....	1.20	1-15
MET TO CORE/MISSION/CORE PLUS SKILL MATRIX.....	1.21	1-16
MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS	1.22	1-17
CORE MODEL MINIMUM REQUIREMENTS (CMMR) FOR READINESS REPORTING (DRRS-MC).....	1.23	1-18
CORE MODEL TRAINING STANDARD (CMTS).....	1.24	1-19
INSTRUCTOR DESIGNATIONS.....	1.25	1-20
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, AND DESIGNATIONS (RCQD).....	1.26	1-20
EXTERNAL SYLLABUS RESOURCE REQUIREMENTS.....	1.27	1-20
APPENDIX A VMFA MET WORKSHEETS.....		A-1
APPENDIX B VMFA(AW) MET WORKSHEETS.....		B-1

NAVMC 3500.50B
26 Jun 12

BLANK PAGE

CHAPTER 1

FA-18A/C/D TRAINING AND READINESS UNIT REQUIREMENTS

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

1.1 VMFA MISSION. Support the MAGTF commander by destroying surface targets and enemy aircraft, and escort friendly aircraft, day or night, under all weather conditions during expeditionary, joint or combined operations

1.2 VMFA TABLE OF ORGANIZATION (T/O). Refer to Table of Organization 8830 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for FA-18A/C squadrons. As of this publication date, VMFA Squadron is authorized:

VMFA Squadron
12 Aircraft
19 Pilots

1.3 SIX FUNCTIONS OF MARINE AVIATION

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

1.4 ABBREVIATIONS

CORE SKILLS (2000 Phase)	
FAM	Familiarization
AAR	Air-to-Air Refueling
AS	Air-to-Surface
NS	Night Systems
AA	Air-to-Air
LAT	Low Altitude Tactics
MISSION SKILLS (3000 Phase)	
EXP	Expeditionary Shore-Based Operations
CAS	Close Air Support
AR	Armed Reconnaissance
SCAR	Strike Coordination and Reconnaissance
AAD	Active Air Defense
SEAD	Suppression Of Enemy Air Defenses
OAAW	Offensive Anti-Air Warfare
AI	Air Interdiction
CORE PLUS (4000 Phase)	
CORE PLUS SKILLS	
FCLP	Field Carrier Landing Practice
LFE	Large Force Exercise
NSLAT	Night Systems Low Altitude Tactics
CORE PLUS MISSION SKILLS	
CQ	Aviation Operations From Expeditionary Sea-Based Sites
MIR	Multi-Sensory Imagery Reconnaissance
AESC	Aerial Escort
AMT	Attack Maritime Targets
FAC(A)	Forward Air Controller (Airborne)
INSTRUCTOR TRAINING (5000 Phase)	
WTI	Weapons and Tactics Instructor
FAC(A) I	Forward Air Controller (Airborne) Instructor
LATI	Low Altitude Tactics Instructor
FLSE	Flight Leadership Standardization Evaluator
TAC(A) I	Tactical Air Coordinator (Airborne) Instructor
NSLATI	Night Systems Low Altitude Tactics Instructor
NSI	Night Systems Instructor
FAI	Fighter Attack Instructor
COMBAT LEADERSHIP (6000 Phase)	
SEC LDR	Section Leader
DIV LDR	Division Leader
MSN CMDR	Mission Commander
REQUIREMENTS, QUALIFICATIONS, CERTIFICATIONS, AND DESIGNATIONS (RCQD) (6000 Phase)	
FCP	Functional Check Pilot

1.5 DEFINITIONS

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

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

VMFA FA-18A/C		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	ABBREVIATION	DESCRIPTION
MCT 1.3.3.3.2	EXP	Conduct Aviation Operations from Expeditionary Shore-Based Sites
MCT 3.2.3.1.1	CAS	Conduct Close Air Support
MCT 3.2.3.1.2.2	AR	Conduct Armed Reconnaissance
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance
MCT 6.1.1.8	AAD	Conduct Active Air Defense
MCT 3.2.3.2.1	SEAD	Conduct Suppression of Enemy Air Defenses
MCT 3.2.3.2	OAAW	Conduct Offensive Anti-air Warfare
MCT 3.2.3.1.2.1	AI	Conduct Air Interdiction
CORE PLUS		
MET	ABBREVIATION	DESCRIPTION
MCT 1.3.3.3.1	CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 2.2.5.2.2	MIR	Conduct Multi-Sensor Imagery Reconnaissance
MCT 6.1.1.11	AESC	Conduct Aerial Escort
MCT 3.2.7.5	AMT	Attack Enemy Maritime Targets
MCT 3.2.5.4	FAC (A)	Conduct Forward Air Control (Airborne)

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

VMFA FA-18A/C							
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION							
CORE							
MET	ABBREVIATION	SIX FUNCTIONS OF MARINE AVIATION					
		OAS	ASPT	AAW	EW	CoA&M	AerRec
MCT 1.3.3.3.2	EXP	X	X	X			X
MCT 3.2.3.1.1	CAS	X	X				X
MCT 3.2.3.1.2.2	AR	X	X				X
MCT 3.2.3.1.2.3	SCAR	X				X	X
MCT 6.1.1.8	AAD			X			
MCT 3.2.3.2.1	SEAD	X					
MCT 3.2.3.2	OAAW			X			
MCT 3.2.3.1.2.1	AI			X			
CORE PLUS							
MCT 1.3.3.3.1	CQ		X				
MCT 2.2.5.2.2	MIR						X
MCT 6.1.1.11	AESC		X				
MCT 3.2.7.5	AMT	X					
MCT 3.2.5.4	FAC (A)			X			

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

VMFA FA-18A/C																						
MISSION ESSENTIAL TASK (MET) to CORE/MISSION/CORE PLUS SKILL MATRIX																						
MET	CORE													CORE PLUS 4000 PHASE								
	SKILLS 2000 PHASE						MISSION SKILLS 3000 PHASE							SKILLS			MISSION SKILLS					
	FAM	AAR	AS	NS	AA	LAT	EXP	CAS	AR	SCAR	OAAW	SEAD	AI	AAD	LFE	NSLAT	FCLP/CQ	MIR	AAD	AESC	AMT	FAC (A)
MCT 1.3.3.3.2 EXP	X		X			X	X								X							
MCT 3.2.3.1.1 CAS		X					X								X	X						
MCT 3.2.3.1.2.2 AR	X	X	X			X		X							X	X						
MCT 3.2.3.1.2.3 SCAR	X	X	X			X			X						X	X						
MCT 3.2.3.2 OAAW	X	X		X	X					X					X	X						
MCT 3.2.3.2.1 SEAD	X	X									X				X	X						
MCT 3.2.3.1.2.1 AI	X	X	X	X	X	X							X		X	X						
MCT 6.1.1.8 AAD	X	X		X	X									X	X							
CORE PLUS																						
MCT 1.3.3.3.1 CQ	X			X	X	X										X						
MCT 2.2.5.2.2 MIR																		X				
MCT 6.1.1.8 AAD																			X			
MCT 6.1.1.11 AESC															X	X				X		
MCT 3.2.7.5 AMT																X					X	
MCT 3.2.5.4 FAC (A)	X	X													X							X

1.9 MISSION ESSENTIAL TASK (MET) OUTPUT STANDARDS. The following MET output standards are the required level of performance a VMFA squadron must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable VMFA squadron is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 1.3 hour average sortie duration. It assumes >70% FMC aircraft and >90% T/O aircrew on hand. If unit FMC aircraft is <70% or T/O aircrew <90%, core capability will be degraded by a like

percentage.

VMFA FA-18A/C			
MET OUTPUT STANDARDS MATRIX			
CORE			
MET	ABBREVIATION	MAXIMUM DAILY SORTIES	MAXIMUM SORTIES PER MET
MCT 1.3.3.3.2	EXP	20	20
MCT 3.2.3.1.1	CAS		20
MCT 3.2.3.1.2.2	AR		20
MCT 3.2.3.1.2.3	SCAR		20
MCT 3.2.3.2	OAAW		20
MCT 3.2.3.2.1	SEAD		16
MCT 3.2.3.1.2.1	AI		20
MCT 6.1.1.8	AAD		20
CORE PLUS			
MET	ABBREVIATION	MAXIMUM DAILY SORTIES	MAXIMUM SORTIES PER MET
MCT 1.3.3.3.1	CQ	20	20
MCT 2.2.5.2.2	MIR		20
MCT 6.1.1.11	AESC		16
MCT 3.2.7.5	AMT		20
MCT 3.2.5.4	FAC (A)		4

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

1.10.1 The CMMR Readiness Reporting Matrix depicts the minimum crew composition (defined as a combination of qualifications and designations) reflecting the number of crews required per MET and minimum Combat Leadership requirements for readiness reporting purposes. The number of crews formed using the below minimum standards per crew capture the readiness capability of a squadron to perform the MET sortie under all light levels.

VMFA FA-18A/C			
CMMR READINESS REPORTING MATRIX			
VMFA MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY			
CORE			
MET	ABBREVIATION	PILOT	CREWS REQUIRED BY MET
MCT 1.3.3.3.2	EXP	MSP	12
MCT 3.2.3.1.1	CAS	MSP	12
MCT 3.2.3.1.2.2	AR	MSP	12
MCT 3.2.3.1.2.3	SCAR	MSP	10
MCT 3.2.3.2	OAAW	MSP	10
MCT 3.2.3.2.1	SEAD	MSP	6
MCT 3.2.3.1.2.1	AI	MSP	10
MCT 6.1.1.8	AAD	MSP	10
CORE PLUS			
MET	ABBREVIATION	PILOT	CREWS REQUIRED BY MET ¹
MCT 1.3.3.3.1	CQ	MSP	16
MCT 2.2.5.2.2	MIR	MSP	12
MCT 6.1.1.11	AESC	MSP	8
MCT 3.2.7.5	AMT	MSP	12
MCT 3.2.5.4	FAC(A)	MSP	2
COMBAT/FLIGHT LEADERSHIP CMMR			
DESIGNATION		PILOTS	
SECTION LEADER (SL)		10	
DIVISION LEADER (DL)		6	
MISSION COMMANDER (MC)		4	

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

VMFA FA-18A/C CMTS MATRIX	
CORE	
SKILLS (2000 Phase)	PILOTS
FAM	12
AAR	12
AS	12
NS	12
AA	12
LAT	8
MISSION SKILLS (3000 Phase)	PILOTS
EXP	12
CAS	12
AR	12
SCAR	10
OAAW	10
SEAD	6
AI	10
AAD	10
CORE PLUS (4000 Phase)	
SKILLS	PILOTS ¹
FCLP/CQ	[0/ (15)]
LFE	8
NSLAT	4
MISSION SKILLS	PILOTS ¹
MIR	[4/ (12)]
AAD	[4/ (10)]
AESC	[4/ (8)]
AMT	[4/ (12)]
FAC (A)	[1/ (2)]

Note¹: In the Core Plus METS the first number represents the number of individuals the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET capable individuals the squadron should train if that MET becomes required within an Assigned Mission/Directed Mission Set.

26 Jun 12

1.12 INSTRUCTOR DESIGNATIONS (5000 Phase). Squadron requests for instructor designations in excess of those authorized per NAVMC 3500.50B shall be requested in writing to Marine Air Group Commanding Officers.

VMFA FA-18A/C	
INSTRUCTOR DESIGNATION CMTS MATRIX (5000 Phase)	
INSTRUCTOR DESIGNATIONS	PILOTS
LATI	2
NSI	2
NSLATI	2*
FAC(A)I	1
FLSE	2
WTI	2
MDTC / SFTI (TOPGUN)	2
LSO	3
FAI	2**

* NSLATIs count towards the NSI and LATI requirements

** CO, XO, WTIs, SFTIs, or MDTC graduates who are also designated FAIs will not count towards the FAI requirement. VMFAs may have a maximum of four (4) FAIs, with a target of three (3).

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

VMFA FA-18A/C	
RCQD MATRIX (6000 PHASE)	
QUALIFICATION OR DESIGNATION	PILOTS
FCP	3

1.14 VMFA(AW) MISSION. Support the MAGTF commander by providing supporting arms coordination, conducting multi-sensor imagery, and destroying surface targets and enemy aircraft day or night, under all weather conditions during expeditionary, joint, or combined operations.

1.15 VMFA(AW) TABLE OF ORGANIZATION (T/O). Refer to Table of Organization 8830 managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength for FA-18D squadrons. As of this publication date, VMFA(AW) (FA-18D) squadrons are authorized:

FA-18D Squadron

12 Aircraft

19 Pilots

19 WSOs

Note

1 Pilot and 1 WSO equal 1 Crew

1.16 SIX FUNCTIONS OF MARINE AVIATION

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

1.17 ABBREVIATIONS

CORE SKILLS (2000 Phase)	
FAM	Familiarization
AAR	Air-to-Air Refueling
AS	Air-to-Surface
NS	Night Systems
AA	Air-to-Air
LAT	Low Altitude Tactics
MISSION SKILLS (3000 Phase)	
EXP	Expeditionary Shore-Based Operations
CAS	Close Air Support
AR	Armed Reconnaissance
SCAR	Strike Coordination and Reconnaissance
SEAD	Suppression Of Enemy Air Defenses
AI	Air Interdiction
AAD	Active Air Defense
FAC(A)	Forward Air Controller (Airborne)
TAC(A)	Tactical Air Coordination (Airborne)
OAAW	Offensive Anti-Air Warfare
CORE PLUS (4000 Phase)	
CORE PLUS SKILLS	
FCLP	Field Carrier Landing Practice
LFE	Large Force Exercise
NSLAT	Night Systems Low Altitude Tactics
CORE PLUS MISSION SKILLS	
CQ	Expeditionary Sea-Based Operations
MIR	Multi-Sensory Imagery Reconnaissance
AESC	Aerial Escort
AMT	Attack Maritime Targets
INSTRUCTOR TRAINING (5000 Phase)	
WTI	Weapons and Tactics Instructor
FAC(A) I	Forward Air Controller (Airborne) Instructor
LATI	Low Altitude Tactics Instructor
FLSE	Flight Leadership Standardization Evaluator
TAC(A) I	Tactical Air Coordinator (Airborne) Instructor
NSLATI	Night Systems Low Altitude Tactics Instructor
NSI	Night Systems Instructor
FAL	Fighter Attack Instructor
TAC(A) I	Tactical Air Controller (Airborne) Instructor
COMBAT LEADERSHIP (6000 Phase)	
SEC LDR	Section Leader
DIV LDR	Division Leader
MSN CMDR	Mission Commander
REQUIREMENTS, QUALIFICATIONS, CERTIFICATIONS, AND DESIGNATIONS (RCQD) (6000 Phase)	
FCP	Functional Check Pilot

1.18 DEFINITIONS

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

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

VMFA(AW) FA-18D		
MISSION ESSENTIAL TASK LIST (METL)		
CORE		
MET	ABBREVIATION	DESCRIPTION
MCT 1.3.3.3.2	EXP	Conduct Aviation Operations from Expeditionary Shore-Based Sites
MCT 3.2.3.1.1	CAS	Conduct Close Air Support
MCT 3.2.3.1.2.2	AR	Conduct Armed Reconnaissance
MCT 3.2.3.1.2.3	SCAR	Conduct Strike Coordination and Reconnaissance
MCT 3.2.3.2.1	SEAD	Conduct Suppression of Enemy Air Defenses
MCT 3.2.3.1.2.1	AI	Conduct Air Interdiction
MCT 6.1.1.8	AAD	Conduct Active Air Defense
MCT 3.2.5.4	FAC(A)	Conduct Forward Air Control (Airborne)
MCT 3.2.3.2	OAAW	Conduct Offensive Anti-Air Warfare
MCT 5.3.2.7.2	TAC(A)	Conduct Tactical Control (Airborne)
CORE PLUS		
MET	ABBREVIATION	DESCRIPTION
MCT 1.3.3.3.1	CQ	Conduct Aviation Operations From Expeditionary Sea-Based Sites
MCT 2.2.5.2.2	MIR	Conduct Multi-Sensor Imagery Reconnaissance
MCT 6.1.1.11	AEBC	Conduct Aerial Escort
MCT 3.2.7.5	AMT	Attack Enemy Maritime Targets

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

VMFA(AW) FA-18D							
MISSION ESSENTIAL TASK (MET) TO SIX FUNCTIONS OF MARINE AVIATION							
CORE							
MET	ABBREVIATION	SIX FUNCTIONS OF MARINE AVIATION					
		OAS	ASPT	AAW	EW	CoA&M	AerRec
MCT 1.3.3.3.2	EXP	X	X	X			X
MCT 3.2.3.1.1	CAS	X	X				X
MCT 3.2.3.1.2.2	AR	X	X				X
MCT 3.2.3.1.2.3	SCAR	X				X	X
MCT 3.2.3.2.1	SEAD	X					
MCT 3.2.3.1.2.1	AI			X			
MCT 6.1.1.8	AAD			X			
MCT 3.2.5.4	FAC(A)	X					
MCT 3.2.3.2	OAAW			X			
MCT 5.3.2.7.2	TAC(A)		X				
CORE PLUS							
MCT 1.3.3.3.1	CQ		X				
MCT 2.2.5.2.2	MIR						X
MCT 6.1.1.11	AEBC		X				
MCT 3.2.7.5	AMT	X					

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

VMFA(AW) FA-18D																								
MISSION ESSENTIAL TASK (MET) to CORE/MISSION/CORE PLUS SKILL MATRIX																								
MET	CORE															CORE PLUS 4000 PHASE								
	SKILLS 2000 PHASE						MISSION SKILLS 3000 PHASE									SKILLS		MISSION SKILLS						
	FAM	ARR	AS	NS	AA	LAT	EXP	CAS	AR	SCAR	SEAD	AI	AAD	FAC(A)	OAAW	TAC(A)	LFE	NSLAT	FCIP/CQ	MIR	FAC(A)	AAD	AESC	AMT
MCT 1.3.3.3.2 EXP	X			X			X										X							
MCT 3.2.3.1.1 CAS	X	X				X	X										X	X						
MCT 3.2.3.1.2.2 AR	X	X	X					X									X	X						
MCT 3.2.3.1.2.3 SCAR	X	X	X						X								X	X						
MCT 3.2.3.2.1 SEAD	X	X								X							X	X						
MCT 3.2.3.1.2.1 AI	X	X	X	X	X	X					X						X	X						
MCT 6.1.1.8 AAD	X	X		X	X							X					X							
MCT 3.2.5.4 FAC(A)	X	X	X	X									X				X	X						
MCT 3.2.3.2 OAAW	X	X		X	X									X										
MCT 5.3.2.7.3 TAC(A)	X	X													X	X								
CORE PLUS																								
MCT 1.3.3.3.1 CQ	X			X														X						
MCT 2.2.5.2.2 MIR	X																			X				
MCT 3.2.5.4 FAC(A)																					X			
MCT 6.1.1.8 AAD																						X		
MCT 6.1.1.11 AESC	X	X					X						X				X	X					X	
MCT 3.2.7.5 AMT	X	X					X	X	X	X							X							X

1.22 MISSION ESSENTIAL TASKS (MET) OUTPUT STANDARDS. The following MET output standards are the required level of performance a VMFA(AW) squadron must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of unit training events. A core capable VMFA(AW) squadron is able to sustain the number of sorties listed below on a daily basis during contingency/combat operations. The sortie rates are based on 1.3 hour average sortie duration. It assumes >70% FMC aircraft and >90% T/O aircrew on hand. If unit FMC aircraft is <70% or T/O aircrew <90%, core capability will be degraded by a like percentage.

VMFA(AW) FA-18D			
MET OUTPUT STANDARDS MATRIX			
CORE			
MET	ABBREVIATION	MAXIMUM DAILY SORTIES	MAXIMUM SORTIES PER MET
MCT 1.3.3.3.2	EXP	20	20
MCT 3.2.3.1.1	CAS		20
MCT 3.2.3.1.2.2	AR		20
MCT 3.2.3.1.2.3	SCAR		20
MCT 3.2.3.2.1	SEAD		12
MCT 3.2.3.1.2.1	AI		20
MCT 6.1.1.8	AAD		20
MCT 3.2.5.4	FAC (A)		12
MCT 3.2.3.2	OAAW		8
MCT 5.3.2.7.2	TAC (A)		8
CORE PLUS			
MET	ABBREVIATION	MAXIMUM DAILY SORTIES	MAXIMUM SORTIES PER MET
MCT 1.3.3.3.1	CQ	20	20
MCT 2.2.5.2.2	MIR		20
MCT 6.1.1.11	AESC		16
MCT 3.2.7.5	AMT		20

1.23 CORE MODEL MINIMUM REQUIREMENTS (CMMR) FOR READINESS REPORTING (DRRS-MC). The paragraphs and tables below delineate the minimum aircrew qualifications and designations required to execute the MET output standards of para 1.22. Chapter 7 of the Aviation T&R Program Manual provides additional guidance and a detailed description of readiness reporting using the Defense Readiness Reporting System - Marine Corps (DRRS-MC).

1.23.1 The CMMR Readiness Reporting Matrix depicts the minimum crew composition (defined as a combination of qualifications and designations) reflecting the number of crews required per MET and minimum Combat Leadership requirements for readiness reporting purposes. The number of crews formed using the below minimum standards per crew capture the readiness capability of a squadron to perform the MET sortie under all light levels.

VMFA (AW) FA-18D				
CMMR READINESS REPORTING MATRIX				
VMFA (AW) MINIMUM CREW QUALIFICATIONS / DESIGNATIONS REQUIRED FOR MET CAPABILITY				
CORE				
MET	ABBREVIATION	PILOTS	WSO	CREWS REQUIRED BY MET
MCT 1.3.3.3.2	EXP	MSP	MSP	12
MCT 3.2.3.1.1	CAS	MSP	MSP	12
MCT 3.2.3.1.2.2	AR	MSP	MSP	12
MCT 3.2.3.1.2.3	SCAR	MSP	MSP	10
MCT 3.2.3.2.1	SEAD	MSP	MSP	6
MCT 3.2.3.1.2.1	AI	MSP	MSP	10
MCT 6.1.1.8	AAD	MSP	MSP	10
MCT 3.2.5.4	FAC (A)	MSP	MSP	6
MCT 3.2.3.2	OAAW	MSP	MSP	8
MCT 5.3.2.7.3	TAC (A)	MSP	MSP	4
CORE PLUS				
MET	ABBREVIATION	PILOTS	WSO	CREWS REQUIRED BY MET ¹
MCT 1.3.3.3.1	CQ	MSP	MSP	0
MCT 2.2.5.2.2	MIR	MSP	MSP	8
MCT 6.1.1.11	AESC	MSP	MSP	8
MCT 3.2.7.5	AMT	MSP	MSP	8
COMBAT/FLIGHT LEADERSHIP CCMR				
DESIGNATION		PILOTS	WSO	
SECTION LEADER (SL)		10	10	
DIVISION LEADER (DL)		6	6	
MISSION COMMANDER (MC)			4	

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

VMFA(AW) FA-18D CMTS MATRIX		
CORE		
SKILLS (2000 Phase)	PILOTS	WSO
FAM	16	16
AAR	12	N/A
AS	12	12
NS	12	12
AA	12	12
LAT	8	8
MISSION SKILLS (3000 Phase)	PILOTS	WSO
EXP	16	16
CAS	12	12
AR	12	12
SCAR	10	10
SEAD	6	6
AI	10	10
AAD	10	10
FAC (A)	8	8
OAAW	8	8
TAC (A)		4*
CORE PLUS (4000 Phase)		
SKILLS	PILOTS ¹	WSO ¹
FCLP/CQ	[0/(0)]	[0/(0)]
LFE	[6/(8)]	[6/(8)]
NSLAT	[2/(6)]	[2/(6)]
MISSION SKILLS	PILOTS ¹	WSO ¹
MIR	[4/(8)]	[4/(8)]
AAD	[4/(8)]	[4/(8)]
AESC	[4/(8)]	[4/(8)]
FAC (A)	[4/(8)]	[4/(8)]
AMT	[4/(8)]	[4/(8)]

* TAC(A) training requirement may be filled by a pilot or WSO. Requirement equals 4 MSP TAC(A) in total.

Note¹: In the Core Plus METS the first number represents the number of individuals the squadron is expected to train at all times in order to retain a cadre of capability within the squadron. The second number represents the number of MET capable individuals the squadron should train if that MET becomes required within an Assigned Mission/Directed Mission Set.

1.25 INSTRUCTOR DESIGNATIONS (5000 Phase). Squadron requests for instructor designations in excess of those authorized per NAVMC 3500.50B shall be requested in writing to Marine Air Group Commanding Officers.

VMFA (AW) FA-18D		
INSTRUCTOR DESIGNATION MATRIX (5000 Phase)		
INSTRUCTOR DESIGNATIONS	PILOTS	WSO
LATI	2	N/A
NSLATI	2*	N/A
NSI		3
FAC(A)I		3
FLSE	2	1
TAC(A)I		2
WTI	2	2
MDTC / SFTI (TOPGUN)	2	2
LSO	2	N/A
FAI		2**

* NSLATIs count towards the NSI and LATI requirements

** CO, XO, WTIs, SFTIs, or MDTC graduates who are also designated FAIs will not count towards the FAI requirement. VMFA(AW)s may have a maximum of six (6) FAIs, with a target of four (4).

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

VMFA (AW) FA-18D		
RCQD MATRIX (6000 PHASE)		
QUALIFICATION OR DESIGNATION	PILOTS	WSO
FCP	3	N/A

1.27 UNIT EXTERNAL SYLLABUS RESOURCE REQUIREMENTS. In addition to the range requirements listed below, reference Chapter 2 of this T&R manual for additional external syllabus resource requirements.

Category	Abbreviation	Name	Description	Notes
CAT I	MOA	Special Use Airspace or MOA	Per Flight Information Publications	
CAT I	RSTD	Restricted/Warning Area	Per Flight Information Publications	
CAT I	MTR	Military Training Route	Per Flight Information Publications	
CAT I	LAT	LAT Course	Approved LAT course. Normally preferred over an MTR for dedicated LAT sorties.	
CAT I	AA	Air-to-Air Range	Any airspace that can support BFM or ACM. May include Restricted Airspace, MOAs, or Warning Areas, for example.	For Intercepts/BVR, a minimum airspace of 40 nm is usually required.
CAT I	AA GUNS	Air-to-Air Gunnery Range	Any airspace that can support Air-to-Air Gunnery on a towed Banner. Implies Restricted Airspace or Warning Areas, for example.	

<u>Category</u>	<u>Abbreviation</u>	<u>Name</u>	<u>Description</u>	<u>Notes</u>
<u>CAT I</u>	<u>MACH 1+</u>	<u>Supersonic</u>	<u>Any airspace that can support Supersonic Flight.</u>	
<u>CAT I</u>	<u>AAR</u>	<u>Air-to-Air Refueling</u>	<u>Any airspace that can support AAR.</u>	
<u>CAT II</u>	<u>TACTS</u>	<u>Tactical Air Combat Training System</u>	<u>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."</u>	<u>TACTS usually includes ACM, NDBS, EW, NDWS, ARM, capabilities. Implies RSTD Airspace.</u>
<u>CAT II</u>	<u>EW</u>	<u>Electronic Warfare</u>	<u>Threat Emitters providing a dynamic red/or gray force threat environment to enhance threat recognition, self-protection, and defense-suppression techniques.</u>	
<u>CAT II</u>	<u>Hi Fi EW</u>	<u>High Fidelity EW</u>	<u>Hi Fidelity (live) Emitters. Live actual SAM systems with operators. Can provide feedback via tape debrief.</u>	<u>Often a desired substitute for EW, may be cost prohibitive.</u>
<u>CAT II</u>	<u>ACM</u>	<u>Air Combat Maneuvering</u>	<u>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.</u>	
<u>CAT II</u>	<u>ARM</u>	<u>Anti-Radiation Missile</u>	<u>Supports training to ARM delivery with simulated missile fly-out and kill indications.</u>	
<u>CAT II</u>	<u>CEDS</u>	<u>Countermeasures Employments Detection System</u>	<u>Supports training to countermeasures by linking to the ALE via TACTS systems for EW training. Normally included in a TACTS EW range.</u>	
<u>CAT II</u>	<u>ATIS</u>	<u>Avenger TACTS Interface</u>	<u>Allows the LAAD Avenger team to plug into TACTS and evaluate control/scoring.</u>	
<u>CAT II</u>	<u>LSTSS</u>	<u>Large Scale Target Sensor System</u>	<u>A remote control scoring system capable of tracking LASER designator spots.</u>	
<u>CAT II</u>	<u>IWTS</u>	<u>Imaging Weapons Training System</u>	<u>Virtual simulation to provide pilot uplink imagery of weapon seeker image through TOF to actual target.</u>	<u>Supports SLAM-ER.</u>
<u>CAT II</u>	<u>URBN WPNS</u>	<u>Urban Weapons Impact Range</u>	<u>Urban CAS range capable of JCAS, LT INERT, and LSR.</u>	

<u>Category</u>	<u>Abbreviation</u>	<u>Name</u>	<u>Description</u>	<u>Notes</u>
<u>CAT II</u>	<u>URBN TRG</u>	<u>Urban Training</u>	<u>Urban area with overlying Restricted or MOA training airspace. Does not imply authorized weapons release or LASER use.</u>	<u>Example is a town, such as Yuma, under the Dome MOA.</u>
<u>CAT II</u>	<u>RKD RNG</u>	<u>Raked Range</u>	<u>Concentric circle range, with WISS. LSR and RLSR a desired capability but must be specified. Night lighting capability implied.</u>	
<u>CAT II</u>	<u>LSR</u>	<u>LASER Safe Range</u>	<u>Supports airborne LASER firing.</u>	
<u>CAT II</u>	<u>RLSR</u>	<u>Remote LASER Capable</u>	<u>A remote-operated ground LASER may designate a target.</u>	<u>Should be standard on a RKD RNG</u>
<u>CAT II</u>	<u>WISS</u>	<u>Weapons Impact Scoring Set</u>	<u>Scores bombing to designated targets. Scores can be relayed via voice or fax.</u>	<u>Should be standard on a RKD RNG</u>
<u>CAT II</u>	<u>NDBS</u>	<u>No Drop Bomb Scoring</u>	<u>Scores simulated bombing to designated targets. Scores can be relayed via tape debrief.</u>	<u>Should be standard on TACTS</u>
<u>CAT II</u>	<u>STRAFE</u>	<u>Strafe Pit/Target</u>	<u>A scored Strafing Pit or Target.</u>	<u>Often located near a RKD RNG</u>
<u>CAT II</u>	<u>TGT</u>	<u>Target</u>	<u>Any point- target that is authorized for releasing INERT weapons on.</u>	<u>May include an unscored Raked Range</u>
<u>CAT II</u>	<u>IR TGT</u>	<u>IR-Significant Target</u>	<u>IR-Significant target.</u>	
<u>CAT II</u>	<u>RDR TGT</u>	<u>RADAR-Significant Target</u>	<u>RADAR-Significant target.</u>	
<u>CAT II</u>	<u>LINK</u>	<u>LINK 16</u>	<u>LINK 16 available.</u>	
<u>CAT III</u>	<u>HE</u>	<u>HE Impact Area</u>	<u>Supports live HE ordnance. Implies EXP.</u>	
<u>CAT III</u>	<u>JCAS</u>	<u>JCAS TTPs</u>	<u>Supports all three types of CAS in the range. Allows JTAC personnel on range. Implies LSR and either INERT or HE.</u>	
<u>CAT III</u>	<u>LT INERT</u>	<u>Light Inert</u>	<u>Light Inert impact area.</u>	<u>MK-76/LGTR/BDU-48/Gun/Rockets</u>
<u>CAT III</u>	<u>HVY INERT</u>	<u>Heavy Inert</u>	<u>Heavy Inert impact area.</u>	<u>500 lb and above</u>
<u>CAT III</u>	<u>JDAM</u>	<u>JDAM Impact Area/Target</u>	<u>Supports JDAM release.</u>	
<u>CAT III</u>	<u>JSOW</u>	<u>JSOW Impact Area/Target</u>	<u>Supports JSOW release.</u>	
<u>CAT III</u>	<u>LGB</u>	<u>LGB Impact Area/Target</u>	<u>Supports LGB (HE or HVY INERT) release and LASER firing.</u>	
<u>CAT III</u>	<u>AA MISSILE</u>	<u>AA Missile Firing Range</u>	<u>Supports AA missile firing.</u>	<u>AIM-9/AIM-7/AIM-120</u>
<u>CAT III</u>	<u>AS MISSILE</u>	<u>A/S Missile Firing Range</u>	<u>Supports AS missile firing.</u>	<u>LMAV/LGB/Hellfire/TOW</u>

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

NAVMC 3500.50B
26 Jun 12

THIS PAGE BLANK

APPENDIX A
VMFA

Core METL

MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)
MCT 3.2.3.1.1 Conduct Close Air Support (CAS)
MCT 3.2.3.1.2.1 Conduct Air Interdiction (AI)
MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)
MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)
MCT 3.2.3.2 Conduct Offensive Anti-air Warfare (OAAW)
MCT 3.2.3.2.1 Conduct Suppression of Enemy Air Defenses (SEAD)
MCT 6.1.1.8 Conduct Active Air Defense (AAD)

Core Plus

MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites (CQ)
MCT 2.2.5.2.2 Conduct Multi-sensor Imagery Reconnaissance (MIR)
MCT 3.2.5.4 Conduct Forward Air Control (Airborne) [FAC(A)]
MCT 3.2.7.5 Attack Enemy Maritime Targets (AMT)
MCT 6.1.1.11 Conduct Aerial Escort (AESC)

MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)

Conditions:

C 1.3.2.1 Light

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 16 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.1 Conduct Close Air Support (CAS)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 10 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.2.1 Conduct Air Interdiction (AI)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 10 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 8 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.2 Conduct Offensive Anti-Air Warfare (OAAW)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.2.1 Conduct Suppression of Enemy Air Defense (SEAD)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 4 pilots MET capable IAW T&R requirements

Output Standards

- 16 sorties daily sustained during contingency/combat operations

MCT 6.1.1.8 Conduct Active Air Defense (AAD)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

Core Plus

MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites (CQ)

Conditions:

C 1.3.2.1 Light

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 16 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 2.2.5.2.2 Conduct Multi-sensor Imagery Reconnaissance (MIR)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 pilots MET capable T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

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

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 2 pilots MET capable IAW T&R requirements

Output Standards

- 4 sorties daily sustained during contingency/combat operations

MCT 3.2.7.5 Attack Enemy Maritime Targets (AMT)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 10 pilots MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 6.1.1.11 Conduct Aerial Escort (AESC)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 pilots
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 pilots MET capable IAW T&R requirements

Output Standards

- 16 sorties daily sustained during contingency/combat operations

NAVMC 3500.50B
26 Jun 12

THIS PAGE BLANK

APPENDIX B

VMFA (AW)

Core METL

MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)
MCT 3.2.3.1.1 Conduct Close Air Support (CAS)
MCT 3.2.3.1.2.1 Conduct Air Interdiction (AI)
MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)
MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)
MCT 3.2.3.2 Conduct Offensive Anti-air Warfare (OAAW)
MCT 3.2.3.2.1 Conduct Suppression of Enemy Air Defenses (SEAD)
MCT 3.2.5.4 Conduct Forward Air Control (Airborne) [FAC(A)]
MCT 5.3.2.7.3 Conduct Tactical Air Coordination (Airborne) [TAC(A)]
MCT 6.1.1.8 Conduct Active Air Defense (AAD)

Core Plus

MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites (CQ)
MCT 2.2.5.2.2 Conduct Multi-sensor Imagery Reconnaissance (MIR)
MCT 3.2.7.5 Attack Enemy Maritime Targets (AMT)
MCT 6.1.1.11 Conduct Aerial Escort (AESC)

MCT 1.3.3.3.2 Conduct Aviation Operations From Expeditionary Shore-Based Sites (EXP)

Conditions:

C 1.3.2.1 Light

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 12 aircrew MET capable T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.1 Conduct Close Air Support (CAS)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 12 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.2.1 Conduct Air Interdiction (AI)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 10 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.2.2 Conduct Armed Reconnaissance (AR)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 12 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.1.2.3 Conduct Strike Coordination and Reconnaissance (SCAR)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 10 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.2.1 Conduct Suppression of Enemy Air Defense (SEAD)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 6 aircrew MET capable IAW T&R requirements

Output Standards

- 12 sorties daily sustained during contingency/combat operations

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

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 6 aircrew MET capable IAW T&R requirements

Output Standards

- 12 sorties daily sustained during contingency/combat operations

MCT 6.1.1.8 Conduct Active Air Defense (AAD)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 10 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.3.2 Conduct Offensive Anti-Air Warfare (OAAW)

Conditions:

C 2.7.2 Air Superiority

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

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 aircrew MET capable IAW T&R requirements

Output Standards

- 8 sorties daily sustained during contingency/combat operations

MCT 5.3.2.7.3 Conduct Tactical Air Coordination (Airborne) [TAC(A)]

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 4 aircrew MET capable IAW T&R requirements

Output Standards

- 8 sorties daily sustained during contingency/combat operations

Core Plus

MCT 1.3.3.3.1 Conduct Aviation Operations From Expeditionary Sea-Based Sites (CQ)

Conditions:

C 1.3.2.1 Light

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - o And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 0 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 2.2.5.2.2 Conduct Multi-sensor Imagery Reconnaissance (MIR)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)
- OR
- Upon establishment, 100 percent RFT entitlement IAW T/M/S standard.
- Operational support equipment fully supports MCT

Training

- 8 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 3.2.7.5 Attack Enemy Maritime Targets (AMT)

Conditions:

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 aircrew MET capable IAW T&R requirements

Output Standards

- 20 sorties daily sustained during contingency/combat operations

MCT 6.1.1.11 Conduct Aerial Escort (AESC)

Conditions:

C.1.3.1.3.11 Ceiling

Height of lowest cloud cover above sea level.

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

C 1.3.2 Visibility

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

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

C 2.7.2 Air Superiority

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

Standards:

Personnel

- 17 aircrew formed
- 90% of squadron T/O personnel MOS qualified and deployable
 - And Level 2 (L2) IAW ALERTS.
- 100% critical MOS fill

Equipment

- 70% Full Mission Capable (FMC) aircraft of PAA (8 aircraft)

OR

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

- Operational support equipment fully supports MCT

Training

- 8 aircrew MET capable IAW T&R requirements

Output Standards

- 16 sorties daily sustained during contingency/combat operations

CHAPTER 2

FA-18 PILOT/WSO

	<u>PARAGRAPH</u>	<u>PAGE</u>
FA-18 PILOT / WSO INDIVIDUAL TRAINING AND READINESS REQUIREMENTS.....	2.0	2-3
FA-18 PILOT / WSO TRAINING PROGRESSION MODEL.....	2.1	2-3
INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS.....	2.2	2-4
INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS.....	2.3	2-7
QUALIFICATIONS AND DESIGNATIONS.....	2.4	2-12
FA-18 PILOT / WSO PROGRAMS OF INSTRUCTION.....	2.5	2-15
GROUND/ACADEMIC TRAINING.....	2.6	2-15
SYLLABUS NOTES.....	2.7	2-18
CORE SKILL INTRODUCTION FRS ACADEMIC PHASE.....	2.8	2-21
CORE SKILL INTRODUCTION PHASE.....	2.9	2-21
CORE SKILL PHASE.....	2.10	2-21
MISSION SKILL PHASE.....	2.11	2-40
CORE PLUS SKILLS PHASE.....	2.12	2-67
INSTRUCTOR TRAINING PHASE.....	2.13	2-88
REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE.....	2.14	2-91
MOS SYLLABUS AND SUPPORT REQUIREMENTS MATRICES.....	2.15	2-132
SYLLABUS EVALUATION FORMS.....	2.16	2-194
SIMULATOR MISSION ESSENTIAL SUBSYSTEMS MATRIX (MESM).....	2.17	2-194

NAVMC 3500.50B
26 Jun 12

THIS PAGE BLANK

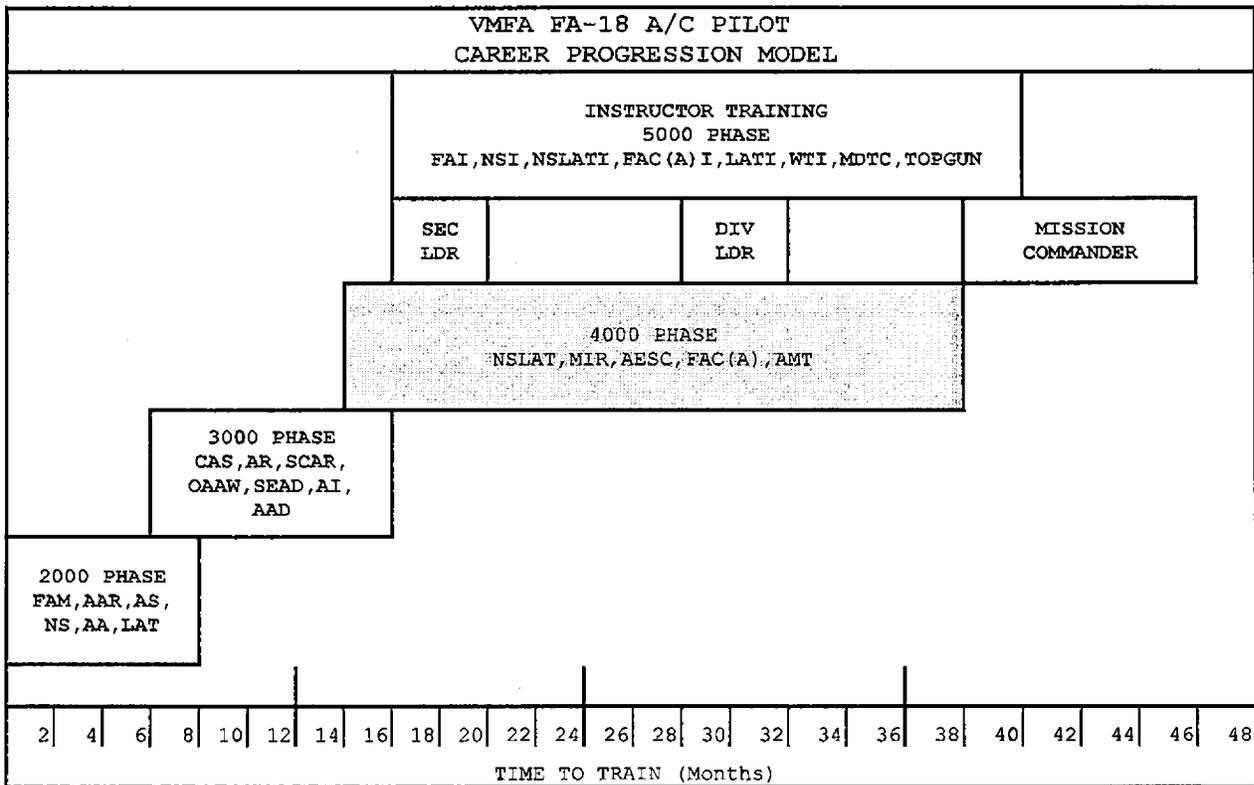
CHAPTER 2

FA-18 PILOT/WSO

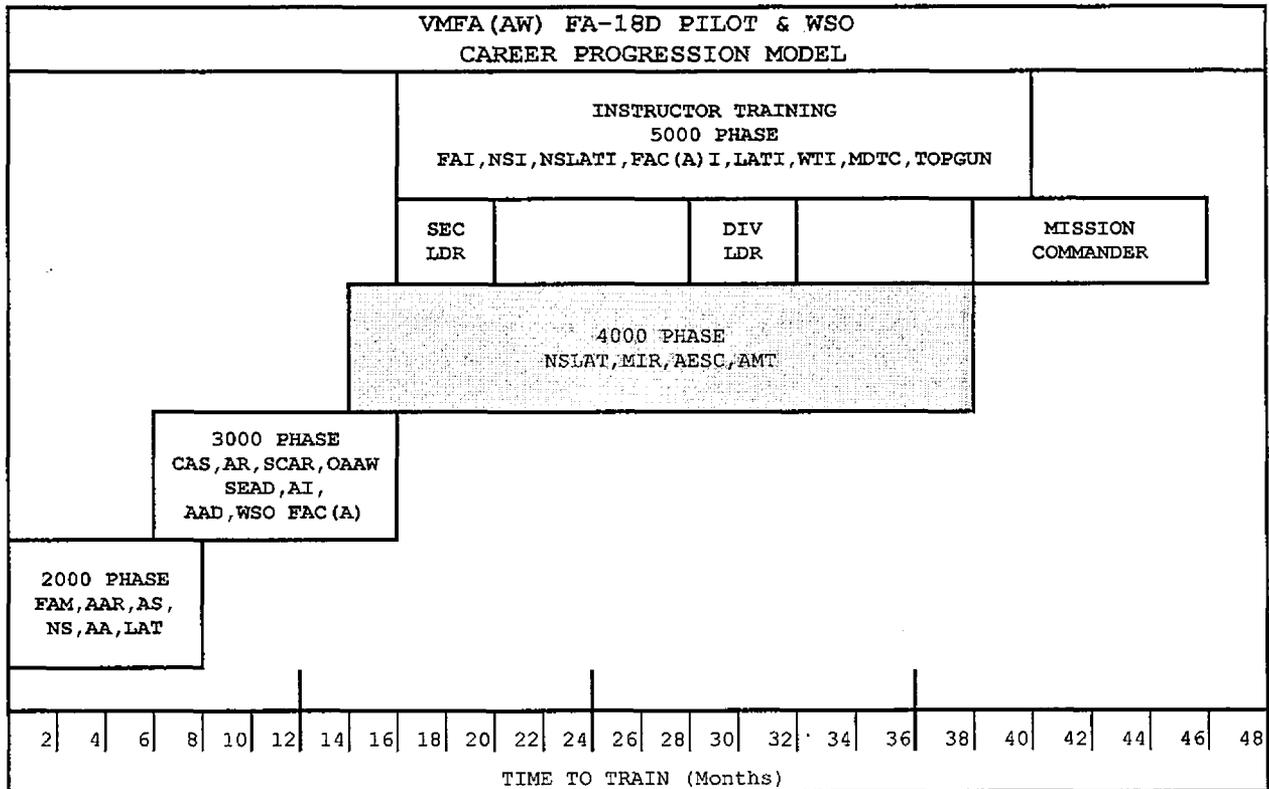
2.0 FA-18 PILOT/WSO INDIVIDUAL TRAINING AND READINESS REQUIREMENTS.
This T&R syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities. Unless otherwise specified, all information in this chapter applies to FA-18A-D pilots and WSOs.

2.1 FA-18 PILOT/WSO TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average aircrew. Units should use the model as a point of departure to generate individual training plans.

2.1.1 FA-18A/C Pilot Career Progression Model



2.1.2 FA-18D Pilot & WSO Career Progression Model



2.2 INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A CSP crew consists of individuals representing each crew position who have achieved and currently maintain 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 below paragraphs.

2.2.1 Events Required to Attain and Maintain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 2000 phase T&R events listed for that Core Skill. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

FA-18 A/C ATTAIN AND MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
FAM	A2001	FAM		FAM	
	A2002				
	S2101R		S2101R		S2101R
	2102R		2102R		2102R
AAR	2201R	AAR	2201R	AAR	
	2202R		2202R		2202R

FA-18 A/C ATTAIN AND MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
AS	A2003	AS		AS	
	A2004				
	A2005				
	A2006				
	A2007				
	A2008				
	A2009				
	A2010				
	A2011				
	A2012				
	A2013				
	A2014				
	A2015				
	A2016				
	A2017				
	S2301				
	S2302R		S2302R		
	2303R		2303R		2303R
	2304R		2304R		2304R
	S2305R		S2305R		S2305R
2306R	2306R	2306R			
S2307					
S2308					
S2309R	S2309R	S2309R			
2310					
NS	A2018	NS		NS	
	S2401				
	2402R		2402R		2402R
	2403				
	2404				
2405					
AA	A2019	AA		AA	
	A2020				
	A2021				
	A2022				
	A2023				
	A2024				
	A2025				
	A2026				
	A2027				
	A2028				
	A2029				
	2501R		2501R		2501R
	2502R		2502R		2502R
	2503R		2503R		2503R
	2504R		2504R		2504R
	S2505				
S2506					
S2507R	S2507R				
2508R	2508R	2508R			
2509					
LAT	A2030	LAT		LAT	
	A2031				
	A2032				
	A2033				
	S2601R		S2601R		
	2602				
2603R	2603R	2603R			

FA-18 A/C ATTAIN AND MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
ACFM	8200	ACFM		ACFM	
	8201				
	8202				
	8210				
	8230				
	8231				
	8240				
	8241				
	8242				
	8250				

FA-18D ATTAIN AND MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
FAM	A2001	FAM		FAM	
	A2002				
	S2101R		S2101R		S2101R
	2102R		2102R		2102R
AAR	2201R	AAR	2201R	AAR	
	2202R		2202R		2202R
AS	A2003	AS		AS	
	A2004				
	A2005				
	A2006				
	A2007				
	A2008				
	A2009				
	A2010				
	A2011				
	A2012				
	A2013				
	A2014				
	A2015				
	A2016				
	A2017				
	S2301				
	S2302R		S2302R		
	2303R		2303R		2303R
	2304R		2304R		2304R
S2305R	S2305R	S2305R			
2306R	2306R	2306R			
S2307					
S2308					
S2309R	S2309R	S2309R			
2310					
NS	A2018	NS		NS	
	S2401				
	2402R		2402R		2402R
	2403				
	2404				
	2405				

FA-18D ATTAIN AND MAINTAIN MATRIX					
CORE SKILLS (2000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
AA	A2019	AA		AA	
	A2020				
	A2021				
	A2022				
	A2023				
	A2024				
	A2025				
	A2026				
	A2027				
	A2028				
	A2029				
	2501R		2501R		2501R
	2502R		2502R		2502R
	2503R		2503R		2503R
	2504R		2504R		2504R
	S2505				
	S2506				
S2507R	S2507R				
2508R	2508R	2508R			
2509					
LAT	A2030	LAT		LAT	
	A2031				
	A2032				
	A2033				
	S2601R		S2601R		
	2602				
2603R	2603R	2603R			
ACPM	8200	ACPM		ACPM	
	8201				
	8202				
	8210				
	8230				
	8231				
	8240				
	8241				
	8242				
	8250				

2.3 INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS. A MSP crew consists of individuals representing each crew position who have achieved and currently maintain 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.

2.3.1 Events Required to Attain and Maintain Individual MSP. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phase T&R events listed for that Mission Skill. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill.

FA-18 A/C MISSION SKILLS (3000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
CAS	A3001	CAS		CAS	
	A3002				
	A3003				
	A3004				
	A3005				
	S3101				
	S3102R		S3102R		S3102R
	3103R		3103R		3103R
	3104R		3104R		3104R
	3105R		3105R		3105R
3106R	3106R	3106R			
AR	A3047	AR		AR	
	A3048				
	A3049				
	S3201R		S3201R		S3201R
	3202R		3202R		3202R
3203R	3203R	3203R			
SCAR	S3301R	SCAR	S3301R	SCAR	S3301R
	3302R		3302R		3302R
AAD	A3021	AAD		AAD	
	S3401R		S3401R		
	3402				
	3403R		3403R		3403R
	3404R		3404R		3404R
3405R	3405R	3405R			
SEAD	A3010	SEAD		SEAD	
	A3011				
	A3012				
	A3013				
	A3014				
	A3015				
	A3016				
	S3501R		S3501R		S3501R
S3502R	S3502R	S3502R			
3503R	3503R	3503R			
OAAW	A3006	OAAW		OAAW	
	A3007				
	A3008				
	A3009				
	S3601				
	3602R		3602R		3602R
S3603R	S3603R	S3603R			
3604R	3604R	3604R			
AI	A3017	AI		AI	
	A3018				
	A3019				
	A3020				
	S3701R		S3701R		S3701R
	3702R		3702R		3702R
	3703R		3703R		3703R
3704R	3704R	3704R			
3705R	3705R	3705R			
EXP	3800R	EXP	3800R	EXP	3800R

ACPM	8300	ACPM		ACPM	
	8310				
	8311				
	8320				
	8321-8326				
	8340				
	8350				
	8351				

FA-18D MISSION SKILLS (3000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
CAS	A3001	CAS		CAS	
	A3002				
	A3003				
	A3004				
	A3005				
	S3101				
	S3102R		S3102R		S3102R
	3103R		3103R		3103R
	3104R		3104R		3104R
	3105R		3105R		3105R
3106R	3106R	3106R			
AR	A3047	AR		AR	
	A3048				
	A3049				
	S3201R		S3201R		S3201R
	3202R		3202R		3202R
3203R	3203R	3203R			
SCAR	S3301R	SCAR	S3301R	SCAR	S3301R
	3302R		3302R		3302R
AAD	A3021	AAD		AAD	
	S3401R		S3401R		
	3402				
	3403R		3403R		3403R
	3404R		3404R		3404R
3405R	3405R	3405R			
SEAD	A3010	SEAD		SEAD	
	A3011				
	A3012				
	A3013				
	A3014				
	A3015				
	A3016				
	S3501R		S3501R		S3501R
S3502R	S3502R	S3502R			
3503R	3503R	3503R			
OAAW	A3006	OAAW		OAAW	
	A3007				
	A3008				
	A3009				
	S3601				
	3602R		3602R		3602R
	S3603R		S3603R		S3603R
3604R	3604R	3604R			

FA-18D MISSION SKILLS (3000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
AI	A3017	AI		AI	
	A3018				
	A3019				
	A3020				
	S3701R		S3701R		S3701R
	3702R		3702R		3702R
	3703R		3703R		3703R
	3704R		3704R		3704R
	3705R		3705R		705R
EXP	3800R	EXP	3800R	EXP	3800R
FAC (A)	A3022	FAC (A)		FAC (A)	
	A3023				
	A3024				
	A3025				
	A3026				
	A3027				
	A3028				
	A3029				
	A3030				
	A3031				
	A3032				
	A3033				
	A3034				
	A3035				
	A3036				
	A3037				
	A3038				
	A3039				
	A3040				
	A3041				
	A3042				
	A3043				
	A3044				
	A3045				
	S3801R		S3801R		S3801R
	S3802R		S3802R		S3802R
	3803				
	3804R		3804R		3804R
	3805				
	3806				
S3807R	S3807R	S3807R			
3808R	3808R	3808R			
S3809R	S3809R	S3809R			
S3810R	S3810R	S3810R			
3811					
3812R	3812R	3812R			
TAC (A)	A3046	TAC (A)		TAC (A)	
	3901R		3901R		3901R
ACPM	8300	ACPM		ACPM	
	8310				
	8311				
	8320				
	8321-8326				
	8340				
	8350				
	8351				

2.3.2 Events Required to Attain and Maintain 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, an individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill.

FA-18 A/C CORE PLUS (4000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
FLCP/CQ	S4101R	FCLP/CQ	S4101R	FCLP/CQ	4103R
	4102R		4102R		
	4103R		4103R		
	4104R		4104R		
	4105R		4105R		
MIR	A4001	MIR		MIR	
	4201R		4201R		4201R
AESC	A4002	AESC		AESC	
	A4003				
	A4004				
	S4301R		S4301R		S4301R
	4302R		4302R		4302R
AMT	4303				
	S4401	AMT	S4402R	AMT	S4402R
	S4402R		4403R		4403R
	4403R		4404R		4404R
4404R					
AAD	A4005	AAD		AAD	
	4501R		4501R		4501R
LFE	4502R		4502R		4502R
	4601R	LFE	4601R	LFE	4602R
4602R	4602R		4602R		
NSLAT	A4006	NSLAT		NSLAT	
	S4701				
	4702				
	4703R		4703R		4703R
FAC (A)	A3022	FAC (A)		FAC (A)	
	A3023				
	A3024				
	A3025				
	A3026				
	A3027				
	A3028				
	A3029				
	A3030				
	A3031				
	A3032				
	A3033				
	A3034				
	A3035				
	A3036				
	A3037				
A3038					
A3039					
A3040					
A3041					
A3042					
A3043					

FA-18 A/C CORE PLUS (4000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
	A3044				
	A3045				
	4801R		4801R		
	4802R		4802R		4802R
	4803				
	4804R		4804R		4804R
	4805				
	4806				
	S4807R		S4807R		S4807R
	4808R		4808R		4808R
	S4809R		S4809R		S4809R
	S4810R		S4810R		S4810R
	4811				
	4812R		4812R		4812R
	4814				
	4815				
	4816				

FA-18D CORE PLUS (4000 PHASE)					
ATTAIN PROFICIENCY				MAINTAIN PROFICIENCY	
BASIC POI		REFRESHER POI		MAINTAIN POI	
SKILL	EVENT #	SKILL	EVENT #	SKILL	EVENT #
	S4101R		S4101R		
	4102R		4102R		
FLCP/CQ	4103R	FLCP/CQ	4103R	FLCP/CQ	4103R
	4104R		4104R		
	4105R		4105R		4105R
	A4001				
MIR	4201	MIR		MIR	
	4202R		4202R		4202R
	A4002				
	A4003				
	A4004				
AESC	S4301R	AESC	S4301R	AESC	S4301R
	4302R		4302R		4302R
	4303				
	S4401				
	S4402R		S4402R		S4402R
AMT	4403R	AMT	4403R	AMT	4403R
	4404R		4404R		4404R
	A4005				
AAD	4501R	AAD	4501R	AAD	4501R
	4502R		4502R		4502R
	4601R		4601R		
LFE	4602R	LFE	4602R	LFE	4602R
	S4701				
NSLAT	4702	NSLAT		NSLAT	
	4703R		4703R		4703R
	4813				
	4814				
FAC (A)	4815	FAC (A)		FAC (A)	
	4816				

2.4 QUALIFICATIONS AND DESIGNATIONS

2.4.1 Qualification. Qualification is a status assigned to aircrew based on demonstration of proficiency in a specific skill. Specific criteria to achieve a qualification is delineated in this T&R manual. Upon successful

completion of qualification criteria, commanding officers may issue an appropriate qualification letter for inclusion in the NATOPS jacket and APR. Pilots do not lose a qualification as a function of re-fly factor for individual events. Loss of proficiency (delinquent re-fly factor) for all associated qualification events (events with measurable re-fly factor; '*' re-fly factor events excluded) constitutes loss of that qualification. Re-qualification requires demonstration of proficiency. Re-qualification shall be achieved by successfully re-completing all R-coded events associated with the respective qualification listed in the FA-18A-D training tables (unless waived per paragraph 216 of the Aviation T&R Program Manual).

2.4.2 Designation. Designation is a status assigned to an individual based on leadership ability. A designation is a command specific, one-time occurrence and remains in effect until removed for cause. Specific designation requirements are delineated in the following tables. Commanders shall issue a designation letter to the individual upon the occasion of original designation, with appropriate copies for inclusion in the NATOPS jacket and APR.

2.4.3 Qualifications And Designations Tables. The tables below delineate the T&R events required to be completed to attain initial qualifications, to re-qualify, and to attain designations. All stage lectures, briefs, squadron training, and prerequisites shall be complete prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the NATOPS and APR jackets.

2.4.3.1 FA-18A/C Qualifications and Designations

QUALIFICATION AND DESIGNATION REQUIREMENTS VMFA FA-18A/C	
QUALIFICATION	REQUIREMENTS
NATOPS (6101)	IAW OPNAV 3710 (6101, 6801, 6802, 6803)
INSTRUMENT (6102)	IAW OPNAV 3710 (6804, 6805, 6102)
DAY CQ QUAL (6201)	S4101, 4102, 4104, 6201
NIGHT CQ QUAL (6202)	S4101, 4103, 4105, 6202
LAT QUAL (6203)	S2601, 2602, 2603, 6203
NSLAT QUAL (6204)	4701, 4702, 4703, 6204
LSO QUAL (6205)	IAW LSO SCHOOL CURRICULUM, 6205
PMCF QUAL (6206)	S6110, 6206
FAC(A) QUAL (6207)	S4801, S4802, 4803, 4804, 4805, 4806, S4807, 4808, S4809, S4810, 4811, 4812, 6207
NS QUAL (6209)	S2401, 2402, 2403, 2404, 2505, 6209
ACM QUAL (6210)	2501, 2502, 2503, 2504, S2505, S2506, S2507, 2508, 2509, 6210
DESIGNATION	REQUIREMENTS
SECTION LEAD (6319)	6301, 6302, S6303, 6304, S6305, 6306, S6307, 6308, L6309, L6310, 6311, 6312, S6313, 6314, S6315, 6316, 6317, S6318, 6319
DIVISION LEAD (6407)	S6401, 6402, S6403, 6404, S6405, 6406, 6407
MISSION COMMANDER (6503)	6501, 6502, 6503
LATI (5104)	S5101, 5102, 5103, 5104
NSLATI (5204)	S5201, 5202, S5203, 5204
FAC(A)I (5304)	S5301, 5302, 5303, 5304
FAI (5411)	S5401, 5402, L5403, 5404, 5405, 5406, 5407, 5408, 5409,

QUALIFICATION AND DESIGNATION REQUIREMENTS VMFA FA-18A/C	
	S5410, S5411
FLSE (5602)	L5601, L5602
NSI (5705)	S5701, 5702, L5703, S5704, 5705
WTI (6601)	IAW MAWTS-1 COURSE CATALOG
MDTC (6602)	IAW MAWTS-1 COURSE CATALOG
TOPGUN (6603)	IAW NSAWC N7 COURSE CATALOG

2.4.3.2 FA-18D Qualifications and Designations

QUALIFICATION AND DESIGNATION REQUIREMENTS VMFA (AW) FA-18D	
QUALIFICATION	REQUIREMENTS
NATOPS (6101)	IAW OPNAV 3710 (6101, 6801, 6802, 6803)
INSTRUMENT (6102)	IAW OPNAV 3710 (6804, 6805, 6102)
DAY CQ QUAL (6201)	S4101, 4102, 4104, 6201
NIGHT CQ QUAL (6202)	S4101, 4103, 4105, 6202
LAT QUAL (6203)	S2601, 2602, 2603, 6203
NSLAT QUAL (6204)	4701, 4702, 4703, 6204
LSO QUAL (6205)	IAW LSO SCHOOL CURRICULUM, 6205
PMCF QUAL (6206)	S6110, 6206
FAC(A) QUAL (6207)	S3801, S3802, 3803, 3804, 3805, 3806, S3807, 3808, S3809, S3810, 3811, 3812, 6207
TAC(A) QUAL (6208)	3901, 6208
NS QUAL (6209)	S2401, 2402, 2403, 2404, 2505, 6209
ACM QUAL (6210)	2501, 2502, 2503, 2504, S2505, S2506, S2507, 2508, 2509, 6210
DESIGNATION	REQUIREMENTS
SECTION LEAD (6319)	6301, 6302, S6303, 6304, S6305, 6306, S6307, 6308, L6309, L6310, 6311, 6312, S6313, 6314, S6315, 6316, 6317, S6318, 6319
DIVISION LEAD (6407)	6401, 6402, S6403, 6404, S6405, 6406, 6407
MISSION COMMANDER (6503)	6501, 6502, 6503
LATI (5104)	S5101, 5102, 5103, 5104
NSLATI (5204)	S5201, 5202, 5203, 5204
FAC(A)I (5304)	S5301, 5302, 5303, 5304
FAI (5411)	L5401, L5402, S5403, 5404, 5405, 5406, 5407, 5408, 5409, 5410, 5411
TAC(A)I (5501)	5501
FLSE (5602)	L5601, L5602
NSI (5705)	S5701, 5702, L5703, S5704, 5705
WTI (6601)	IAW MAWTS-1 COURSE CATALOG
MDTC (6602)	IAW MAWTS-1 COURSE CATALOG
TOPGUN (6603)	IAW NSAWC N7 COURSE CATALOG

2.5 FA-18 PILOT/WSO PROGRAMS OF INSTRUCTION

2.5.1 Basic POI (CAT I/II)

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-33	1000 Phase Training (CAT I/II)	FRS
34-58	2000 Phase Training	Tactical Squadron
59-82	3000 Phase Training	Tactical Squadron
83-88	4000 Phase Training	Tactical Squadron

2.5.2 Refresher POI (CAT III). (731 days or greater since last FA-18 flight.)

<u>WEEKS</u>	<u>COURSE/PHASE</u>	<u>ACTIVITY</u>
1-22	1000 Phase Training (CAT III)	FRS
23-46	2000 Phase Training	Tactical Squadron
47-70	3000 Phase Training	Tactical Squadron
71-76	4000 Phase Training	Tactical Squadron

2.6 GROUND/ACADEMIC TRAINING. Academic instruction falls into three categories in the training progression. The FA-18 Course Catalog outlines the first two: recommended self-paced reading and local unit chalk talks, both sponsored by the unit training officer or designated instructor. The table below outlines the third requirement: lectures and briefs, all of which are provided by MAWTS-1 or TOPGUN to facilitate Training and Readiness 2000-4000 phase events. All 2000 phase lectures should be accomplished during the 2000 phase; 3000 phase lectures during the 3000 phase and so forth. Note the required Aviation Career Progression Model (ACPM) courses as 8000 phase events, yet they are also required in the prescribed sequence of training listed below and reflected in MSHARP. The academic lecture requirements matrix is below:

<u>FA-18 ACADEMIC LECTURE REQUIREMENTS MATRIX</u>				
<u>STAGE</u>	<u>EVENT</u>	<u>DESCRIPTION</u>	<u>SOURCE</u>	<u>PROF. INTERVAL</u>
<u>CORE SKILLS (2000 PHASE EVENTS)</u>				
FAM	2001	JMPS MISSION PLANNING	MAWTS-1	*
FAM	2002	PERFORMANCE ENHANCEMENT	TOPGUN	*
AS	2003	SURFACE-TO-AIR COUNTERTACTICS	MAWTS-1	*
AS	2004	EW SUITE	MAWTS-1	*
AS	2005	NON-RADAR SAMS AND AAA	MAWTS-1	*
AS	2006	RF SAMS	MAWTS-1	*
AS	2007	SAM MISCONCEPTIONS BY KURT WALDRON	MAWTS-1	*
AS	2008	BOMBS, FINS AND FUZES	MAWTS-1	*
AS	2009	WASP PART I	MAWTS-1	*
AS	2010	WASP PART II	MAWTS-1	*
AS	2011	AIR-TO-GROUND GUNNERY	MAWTS-1	*
AS	2012	TARGETING PODS (LITENING / ATFLIR)	MAWTS-1	*
AS	2013	LASER GUIDED BOMBS (PAVEWAY II/DMLGB)	MAWTS-1	*

AS	2014	MAVERICK EMPLOYMENT	MAWTS-1	*
AS	2015	CLUSTER MUNITIONS	MAWTS-1	*
AS	2016	GPS WEAPONS: GPS THEORY	MAWTS-1	*
AS	2017	GPS WEAPONS: JDAM / LJDAM	MAWTS-1	*
NS	2018	NIGHT SYSTEMS TACTICAL CONSIDERATIONS	MAWTS-1	*
AA	2019	COMBAT GUNNERY	TOPGUN	*
AA	2020	AIM-9	TOPGUN	*
AA	2021	AIM-120	TOPGUN	*
AA	2022	1V1 AIR COMBAT	TOPGUN	*
AA	2023	SECTION ENGAGED MANEUVERING	MAWTS-1	*
AA	2024	FA-18 AIR-TO-AIR EMPLOYMENT	TOPGUN	*
AA	2025	RADAR THEORY	TOPGUN	*
AA	2026	APG-65/73	TOPGUN	*
AA	2027	COMBAT SYSTEMS (MIDS)	MAWTS-1	*
AA	2028	THREAT AIRCRAFT	TOPGUN	*
AA	2029	THREAT AIR-TO-AIR MISSILES	TOPGUN	*
LAT	2030	LAT PART I: PHILOSOPHY AND CONCEPTS	MAWTS-1	*
LAT	2031	LAT PART II: RISK ASSESSMENT	MAWTS-1	*
LAT	2032	LAT PART III: BASIC AND SECTION MANEUVERING	MAWTS-1	*
LAT	2033	LAT PART IV: ADVANCED MANEUVERING	MAWTS-1	*
MISSION SKILLS (3000 PHASE EVENTS)				
CAS	3001	FIRE SUPPORT COORDINATION MEASURES	MAWTS-1	*
CAS	3002	JOINT CLOSE AIR SUPPORT DOCTRINE	MAWTS-1	*
CAS	3003	CLOSE AIR SUPPORT	MAWTS-1	*
CAS	3004	URBAN CAS	MAWTS-1	*
CAS	3005	DCS / VMF	MAWTS-1	*
AR/SCAR	3047	AR / SCAR	MAWTS-1	*
AR/SCAR	3048	JMEMS	MAWTS-1	*
AR/SCAR	3049	GPS WEAPONS: TARGET COORDINATES	MAWTS-1	*
OAAW	3006	FIGHTER-ATTACK MISSIONS	MAWTS-1	*
OAAW	3007	DEFENSIVE COUNTER MEASURES	TOPGUN	*
OAAW	3008	COMMAND AND CONTROL	TOPGUN	*
OAAW	3009	THREAT PILOT AND TACTICS	TOPGUN	*
SEAD	3010	HARM HARDWARE AND SOFTWARE	MAWTS-1	*
SEAD	3011	HARM MODES OF OPERATIONS	MAWTS-1	*
SEAD	3012	HARM TAILORING	MAWTS-1	*
SEAD	3013	SEAD PLANNING	MAWTS-1	*
SEAD	3014	THREAT IADS	TOPGUN	*
SEAD	3015	GPS WEAPONS: JSOW	MAWTS-1	*
SEAD	3016	TALD	MAWTS-1	*
AI	3017	AIR-TO-GROUND EMPLOYMENT	MAWTS-1	*
AI	3018	STRIKE MISSION PLANNING	MAWTS-1	*
AI	3019	LASER GUIDED BOMBS (PAVE III LGB)	MAWTS-1	*
AI	3020	GPS WEAPONS: SLAM-ER	TOPGUN	*
AAD	3021	AIR-TO-AIR MISSION PLANNING	TOPGUN	*
FAC(A)	3022	JCAS - JFAC(A) OVERVIEW	JFAC(A)	*
FAC(A)	3023	JOINT COMMAND AND CONTROL STRUCTURE	JFAC(A)	*

FAC (A)	3024	FIRE SUPPORT COORDINATION MEASURES	JFAC (A)	*
FAC (A)	3025	JTAC EQUIPMENT	JFAC (A)	*
FAC (A)	3026	INTRO TO AVIATION ORDNANCE	JFAC (A)	*
FAC (A)	3027	A/C / SENSOR CAPABILITIES	JFAC (A)	*
FAC (A)	3028	INTRO TO INDIRECT FIRE ASSETS	JFAC (A)	*
FAC (A)	3029	CALL FOR FIRE	JFAC (A)	*
FAC (A)	3030	FAC(A) PLANNING AND PREP	JFAC (A)	*
FAC (A)	3031	JOINT TACTICAL AIRSTRIKE REQUEST	JFAC (A)	*
FAC (A)	3032	CONTROLLING CAS AS A FAC(A)	JFAC (A)	*
FAC (A)	3033	INTRO TO FIXED WING CAS TACTICS	JFAC (A)	*
FAC (A)	3034	ATTACK HELO EMPLOYMENT	JFAC (A)	*
FAC (A)	3035	FAC(A) NIGHT CONSIDERATIONS	JFAC (A)	*
FAC (A)	3036	URBAN FAC(A) CONSIDERATIONS	JFAC (A)	*
FAC (A)	3037	SEAD / EW INTEGRATION	JFAC (A)	*
FAC (A)	3038	FRATRICIDE LESSONS LEARNED	JFAC (A)	*
FAC (A)	3039	TLE COMMUNICATION AND STANDARIZATION	JFAC (A)	*
FAC (A)	3040	MACCS PART I	MAWTS-1	*
FAC (A)	3041	MACCS PART II	MAWTS-1	*
FAC (A)	3042	TARGETING AND FIRE SUPPORT PLANNING	MAWTS-1	*
FAC (A)	3043	GENERAL EMPLOYMENT OF FAC(A), TAC(A), SCAR	MAWTS-1	*
FAC (A)	3044	FA-18 FAC(A) EMPLOYMENT	MAWTS-1	*
FAC (A)	3045	FA-18 FAC(A) & TAC(A) TCC AND CRM	MAWTS-1	*
TAC (A)	3046	FA-18D TAC(A) EMPLOYMENT	MAWTS-1	*
CORE PLUS SKILLS/MISSION SKILLS (4000 PHASE EVENTS)				
MIR	4001	TAC RECCE EMPLOYMENT	MAWTS-1	*
AESC	4002	CONVOY ESCORT	MAWTS-1	*
AESC	4003	ASSAULT SUPPORT ESCORT	MAWTS-1	*
AESC	4004	SUPPORTED UNIT CAPABILITIES	MAWTS-1	*
AAD	4005	ROTARY WING THREAT	MAWTS-1	*
NS LAT	4006	NIGHT LAT CONSIDERATIONS	MAWTS-1	*
AVIATION CAREER PROGRESSION MODEL (ACPM: 8000 PHASE EVENTS)				
COMPLETE WITH CORE SKILL 2000 PHASE	8200	MACCS AGENCIES, FUNCTIONS, AND CONTROL - 8200	MAWTS-1	*
	8201	MWCS BRIEF - 8201	MAWTS-1	*
	8202	ACA AND AIRSPACE	MAWTS-1	*
	8210	AVIATION GROUND SUPPORT	MAWTS-1	*
	8230	ACE BATTLE STAFF	MAWTS-1	*
	8231	BATTLE COMMAND DISPLAY	MAWTS-1	*
	8240	SIX FUNCTIONS OF MARINE AVIATION	MAWTS-1	*
	8241	JTAR/ASR INTRO AND PRACT APPLICATION	MAWTS-1	*
	8242	SITE COMMAND PRIMER	MAWTS-1	*
	8250	THEATER AIR GROUND SYSTEM	MAWTS-1	*
COMPLETE WITH MISSION SKILL 3000 PHASE	8300	AIR DEFENSE	MAWTS-1	*
	8310	FORWARD ARMING REFUELING POINT (FARP) OPS	MAWTS-1	*
	8311	USMC TACTICAL FUEL SYSTEMS	MAWTS-1	*
	8320	JOINT STRUCTURE AND JOINT AIR OPERATIONS	MAWTS-1	*
	8321-8326	JOINT AIR PLANNING & JOINT TASKING	MAWTS-1	*

	8340	INTEGRATING FIRES & AIRSPACE W/IN THE MAGTF	MAWTS-1	*
	8350	PHASING CONTROL ASHORE	MAWTS-1	*
	8351	TACRON ORGANIZATIONS AND FUNCTIONS	MAWTS-1	*
COMPLETE WITH SL/DL DESIG.	8630	TACTICAL AIR COMMAND CENTER (TACC)	MAWTS-1	*
	8660	JOINT OPS INTRO	MAWTS-1	*
	8640	JOINT DATA NETWORK	MAWTS-1	*
	8641	MAGTF THEATER & NAT'L ISR EMPLOYMENT	MAWTS-1	*
	8620	ESG/CSG INTEGRATION	MAWTS-1	*

To ensure the highest quality of training and readiness, squadron commanding officers will ensure that the T&R stage academic syllabus is conducted in accordance with the MAWTS-1 Course Catalog. This squadron academic training should be conducted once a week as a minimum. To add to the quality and scope of lectures given, the commanding officer should ensure that appropriately qualified individuals are sent to the schools listed below as a minimum.

<u>COURSE</u>	<u>ACTIVITY</u>
Weapons and Tactics Instructor (WTI)	MAWTS-1 MCAS Yuma
Marine Division Tactics Course (MDTC)	MAWTS-1
Navy Fighter Weapons School (TOPGUN)	NSAWC NAS Fallon
HARM University	NAWC China Lake
SLAM(ER) School	NAS Point Mugu
SLATS	NSAWC NAS Fallon
Warfighter School	Raytheon Tucson

2.7 SYLLABUS NOTES

2.7.1 All events, to include simulators, shall begin with a comprehensive brief with emphasis on admin procedures (from the USMC FA-18 ADMIN SOP), CRM, tactical procedures from applicable tactical publications, performance standards, and aircrew expectations.

2.7.2 All events, to include simulators, shall conclude with a comprehensive debrief with emphasis on aircrew performance utilizing all evaluation techniques available (e.g., TCTS, BDS, tapes, participating aircrews, and AIC personnel).

2.7.3 An ATF is required for any initial event completed by a Basic, Transition, Conversion of Refresher pilot, or as recommended by the squadron standardization board. In addition, ATFs are required for all flight leadership and instructor syllabus events.

2.7.4 The T&R manual is the Marine Corps aircrew training document. It establishes the training requirements and standards for Marine aircrew. When operational commanders assign FA-18 squadrons to prolonged commitments where specific T&R training is not available (e.g., deployed aboard CV), it is expected that degradation in some mission areas will occur. Commanding officers are authorized and encouraged to employ the FA-18 in specific missions relating to their current situation and avoid those mission areas that are not relevant. It is not intended for squadrons to train to specific mission areas and avoid mission areas that the FA-18 is capable of conducting but 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 employing the T&R manual as written.

2.7.5 T&R Phases

2.7.5.1 The 2000 phase is considered to be Core Skill phase training. Completion of the 2000 phase should provide the FA-18 aircrew with the skills required to execute FA-18 missions that directly support the unit METL.

2.7.5.2 The 3000 phase is considered to be Mission Skill phase training. Completion of the 3000 phase ensures FA-18 aircrew are trained to execute missions that support the unit METL.

2.7.5.3 The 4000 phase is considered to have a lower probability of execution or theater specific training and is referred to as Core Plus Skills. Although core plus training events may provide valuable training opportunities, they are not measured as part of the unit reporting unless directed by higher.

2.7.5.4 The 5000 phase contains instructor workup and certification syllabus events, as well as FLSE events.

2.7.5.5 The 6000 phase contains requirements, qualification, and designation syllabus events.

2.7.5.6 The 3000 phase, Mission Skills, along with the number of flight leaders, are considered information required for readiness reporting.

2.7.5.7 The events within a stage should be flown in order. Aircrew should complete the prerequisites prior to beginning that stage. The commanding officer may waive this requirement based on aircrew experience and operational necessity but waivers should be avoided to the greatest extent possible.

2.7.6 Simulators. Flight simulators are required to enhance flight training and airborne proficiency. Simulators shall be flown in the prescribed order of training when squadrons are co-located with mission capable simulators. Where simulators are not available, commanders may authorize simulator events be either deferred to a later date or flown in the aircraft as required. Flight leadership, instructor, and FLSE designations shall not be granted until all events, including simulators, are completed. For these designations, simulator events must be executed in a capable device as prescribed or flown in the aircraft.

2.7.7 Proficiency Accountability. In order to complete a T&R code, aircrew must satisfactorily complete event requirements per assigned Performance Standards. Logging multiple training codes on a single sortie shall be avoided except for the following mission areas:

2.7.7.1 FAC(A), CAS, AR, SCAR, AI - Required ordnance for these events may be changed based on NCEA availability, range restrictions, or other operational constraints. 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 delivered. For example, aircrew are scheduled for CAS-3103 (Day GP CAS) with the required ordnance (4 Mk-82/83, 250 20mm). The training officer may schedule additional training codes of AS-2303 (Dive deliveries) and AS-2304 (Pops and strafe) in anticipation of conducting attacks that will test those skill sets. Even though all requirements for sortie completion may not be met for those two codes, the aircrew may log the additional codes, as long as the Performance Standards are met (e.g., valid delivery, within required CEP, etc). Exceptions should be made for sorties during which multiple unique

training events can be completely accomplished. For example, 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. If multiple syllabus events are to be accomplished during a single flight evolution, appropriate planning, briefing, and debriefing time must be allotted to ensure that requisite training objectives can be met. Multiple codes shall also be logged for 5000 and 6000 phase tracking events.

2.7.8 Requirements coding. Aircraft/Simulators: Some of the syllabus events in the T&R have 1+ or 2+ devices required. 1+ device required implies that the flight may be flown as a single ship or greater. 2+ devices required implies that the flight may be flown as a section or greater. 4(2) simulators required implies that the events may be conducted as a section simulator for commands lacking a division simulation capability. Night Systems (NS): refers to the option of conducting the sortie at night and aided with night vision goggles (NVG). A dedicated night sortie, for example, AAR 2202 (night tanking) will have a (NS) after it meaning that the sortie could be conducted aided or un-aided. An asteric(*) following the type of evaluator required to evaluate (e.g., FAI*) implies that the listed designation or other specific designations are required to evaluate the event. The stage (e.g., AA-2500 stage) description and/or individual T&R event description will provide guidance for evaluator requirements.

2.7.9 Sortie Requirements. Sortie requirements state the minimum number of passes, engagements, or maneuvers required to demonstrate proficiency. T&R event requirements are written to allow completion on one sortie. Squadrons who cannot complete all stated requirements in one sortie (e.g., CV squadrons or squadrons limited by range access and regulations) 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 defined by unit SOP. If an aircrew's currency expires (e.g., a warm up flight is required), or the event requirements cannot be completed on the next scheduled sortie, the event shall be re-flown in its entirety.

2.7.10 Performance Standards. Performance standards are listed for each T&R event description. These are training standards for individual aircrew performance and should be utilized by the evaluator as a guideline to determine the satisfactory completion of each event. If the aircrew did not successfully attain the performance standards, the training code shall not be logged as a completed flight.

2.7.11 T&R Chaining. Event chaining allows for the completion of more complex or advanced events using the same skill to update proficiency status of events. Only events in a sequence entailing demonstration of equivalent skills shall be chained. Refer to the Aviation T&R Program Manual Chapter 2 for detailed guidance on conditional chaining. For the purposes of this T&R, any flight event will chain FAM-2102, and any event flown with the aid of NVGs will chain NS-2402. Simulators will not chain flights.

2.7.12 FA-18 Tactical T&R Refresher. The FA-18 Tactical T&R Refresher syllabus shall be completed in tactical squadrons. Aircrew should fly all R coded events. However, the Refresher aircrew need not fly every event within a stage to be re-qualified in that stage. The commanding officer may tailor the Refresher syllabus to fit the experience level of the aircrew per the Aviation T&R Program Manual. When all of the R coded events within a stage are successfully completed, all remaining events in that stage that are proficient or delinquent are updated. This assumes that the Refresher aircrew had completed all events in the stage during his previous tour. If the Refresher aircrew did not previously complete events in a stage of training, those events must be completed in addition to R coded events.

Experienced aircrew (completed at least one fleet tour in an operational unit) who have not flown for an extended period of time, but not long enough to require FRS Refresher training, shall be assigned to the Refresher POI. When an individual assigned to the Basic POI has attained individual CSP in all Core Skills, that individual shall be re-assigned to the Refresher POI.

2.7.13 FA-18 FRS Training

2.7.13.1 FA-18 FRS training is provided at one of three designated FRSs, VMFAT-101, VFA-106 or VFA-125.

2.7.13.2 Pilot FRS training standards is the FRS approved FA-18A/C/D pilot syllabi. WSO FRS training is provided only at VMFAT-101. WSO training standards is the VMFAT-101 sanctioned FA-18D WSO syllabi. The FRS Pilot training syllabi is not updated in conjunction with this manual and is not included herein.

2.7.13.3 Basic/Transition/Conversion (CAT I/II) aircrew will be assigned to fly the entire FRS Basic (CAT I) training syllabus at a designated FRS training squadron.

2.7.13.4 FRS Refresher syllabi

a. Pilots who have not flown the FA-18 in 366 days or greater but less than 485 days will complete a Safe-for-Solo (CAT V) syllabus at a designated FRS training squadron.

b. Aircrew who have not flown the FA-18 in 486 days or greater but less than 730 days will complete a Modified FRS Refresher (CAT IV) syllabus at a designated FRS training squadron.

c. Aircrew who have not flown the FA-18 in 731 days or greater will complete the comprehensive FRS Refresher syllabus (CAT III) at a designated FRS training squadron.

2.8 CORE SKILL INTRODUCTION FRS ACADEMIC PHASE

Not Applicable.

2.9 CORE SKILL INTRODUCTION PHASE

Not Applicable.

2.10 CORE SKILL PHASE

2.10.1 General. This phase contains basic Core Skill training essential to wartime employment of the unit platform/system. This phase should provide aircrew with the skills required to complete 3000 phase missions. This phase should be completed prior to beginning the 3000 phase events if practicable.

2.10.2 Familiarization (FAM)

2.10.2.1 Purpose. To maintain proficiency and familiarity with flight characteristics, limitations and operating procedures.

2.10.2.3 General. This stage provides an arrival inventory of aircrew proficiency and allows aircrew to meet currency requirements for the FA-18. Squadron shall use these events for:

- a. Squadron introduction and area familiarization.

- b. Back in the saddle.
- c. Periodic emergency procedures training.

2.10.3 Ground/Academic Training. Aircrew must be current per NATOPS flight manual and USMC FA-18 ADMIN SOP. Aircrew shall review the USMC FA-18 ADMIN SOP, TACSOP, local addendums and local range manuals. Aircrew shall complete all FAM academic codes prior to completion of this phase of training. In addition to all academic codes applicable to this phase of training, the following administrative and academic tasks will be accomplished prior to completing the 2000 phase T&R codes.

EVENT	DATE	INSTRUCTOR
INSTRUMENT/LOCAL AREA FAM		
LOCAL DEPARTURE PROCEDURES		
LOCAL DIVERTS		
BINGO PROFILE		
TACAN APPROACH		
COURSE RULES		
WITHIN FIRST 10 FLIGHTS		
10 SECOND GO		
SECTION GO		
RADAR TRAIL DEPT		
NORDO APP - WING		
SECTION PAR		
ROLL & GO		
OVERHEAD		
WITHIN THE FIRST 20 FLIGHTS		
SECTION LANDING		
LEAD NORDO SECT		
NIGHT NORDO WING		
FLT LD SEP - FINAL		
SECTION HUNG ORD		
SIM SINGLE ENG APPR TO WAVEOFF		
WITHIN THE FIRST 30 FLIGHTS		
LEAD NIGHT NORDO		
OVERHEAD NIGHT		
DIV HERD GO		
DIV STREAM GO		
DIV RDR TRAIL DEPT AS -4		

SFAM-2101 1.0 90 R,M 1 TOFT S (NS)

Goal. Demonstrate proficiency in executing ground and airborne emergency procedures.

Requirement. Successfully execute the procedures for one ground emergency and two airborne emergencies.

Performance Standards

Execute the correct NATOPS immediate action and troubleshooting procedures.
Make appropriate flight leadership decisions.

FAM-2102 1.3 30 R,M 1+ FA-18A/C/D A

Goal. Introduce local course rules, review USMC FA-18 ADMIN SOP, and review advanced handling characteristics of the FA-18. Practice radar intercept and stern conversion mechanics against a single adversary.

Requirement. Practice standardized ground, departure, and arrival procedures IAW local course rules. Review advanced handling characteristics and familiarize with FA-18 performance envelope. Conduct G-awareness maneuver, high AOA maneuvering (≥ 35 alpha), pirouette control logic, max performance, and sustained performance turns at 15K'. Aircraft must be in a symmetric configuration and CG must be within limits for high AOA flight. With a minimum of 30 NM separation, the fighter conducts a minimum of three intercepts, at least one to a stern conversion. The adversary will commence one intercept from 10K'-25K' at any airspeed, one intercept from >30 K' at any airspeed, and one intercept from 1-5K' ft at less than 250 KTS. Maneuvering $\pm 45^\circ$ and 5K'.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.

Demonstrate proficiency and knowledge in local area procedures and course rules.

Demonstrate proficiency in local arrival procedures, including one simulated instrument approach.

Demonstrate proficiency in maintaining aircraft control throughout FA-18 envelope.

Maintain proper formation and visual mutual support.

Demonstrate proficiency in basic radar mechanics.

Arrive at a valid rear quarter weapons envelope with 0 to +100 KTS V_c .

Take valid shots.

Prerequisite. SFAM-2101.

Ordnance. CATM-9X.

Range Requirements. AA.

2.10.4 Air-to-Air Refueling (AAR)

2.10.4.1 Purpose. To gain and maintain proficiency and familiarity with AAR operations.

2.10.4.2 General. Operations shall be conducted in accordance with the Air Refueling NATOPS Manual. Squadrons may conduct AAR as a part of other ferry or tactical missions.

2.10.4.3 Ground /Academic Training. Squadrons shall complete the AAR stage briefs before conducting any AAR flight per the NATOPS Flight Manual, Air-to-Air Refueling Manual and local SOPs.

AAR-2201 1.3 365 R 1+ FA-18A/C/D A

Goal. Become proficient in day aerial refueling.

Requirement. Perform all AAR procedures to include tanker rendezvous, observation position, astern position, refueling procedures, and tanker departure. Six contacts required for completion. If proficient, one contact required for completion.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.
Adhere to Air-to-Air Refueling Manual.
Execute safe rendezvous procedures.
Use proper communications procedures.
From a stabilized position, successfully engage the basket expeditiously.
Respond quickly and safely to all communications and communication out signals from the tanker aircraft.

Prerequisite. FAM-2102.

Range Requirements. AAR.

External Syllabus Support. One compatible tactical or strategic tanker.

AAR-2202 1.3 365 R,M 1+ FA-18A/C/D A (NS)

Goal. Become proficient in night aerial refueling.

Requirement. Perform all AAR procedures to include: tanker rendezvous, observation position, astern position, refueling procedures, and tanker departure. Six contacts required for completion. If proficient, one contact required for completion.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.
Adhere to Air-to-Air Refueling Manual.
Execute safe rendezvous procedures.
Use proper communications procedures.
From a stabilized position, successfully engage the basket expeditiously.
Respond quickly and safely to all communications and communication out signals from the tanker aircraft.

Prerequisite. AAR-2201.

Range Requirements. AAR.

External Syllabus Support. One compatible tactical or strategic tanker.

2.10.5 Air-to-Surface (AS)

2.10.5.1 Purpose. To develop proficiency in air-to-surface ordnance delivery and surface to air counter tactics (SACT).

2.10.5.2 General

a. Emphasize SACT, target acquisition, designation techniques, delivery modes, attack parameters and air-to-ground validation.

b. AS-2303 and AS-2304 should be flown on a raked range with Weapon Impact Scoring Set (WISS) capability.

c. The initial SAS-2305 must be instructed by an FAI, WTI, MDTC grad or SFTI designated pilot or WSO.

d. Aircrew need to train to and understand the differences between USMC TACSOP weapons delivery validation and TOPGUN weapons delivery validation. To facilitate this training, certain AS sorties will require delivery validation be done by the USMC TACSOP or TOPGUN valid delivery parameters.

e. Aircraft should be configured with an operable VTR/CVRS, ALQ-126B/165, ALR-67, TPOD, LST, CATM-9X, KY-58, LINK-16, chaff and flare.

2.10.5.3 Ground/Academic Training. Aircrew shall complete all AS academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SAS-2301 1.5 * 1+ TOFT S (NS)

Goal. Practice high, medium, and low angle dive/bunt attacks with GP bombs, cluster munitions (CBUs), rockets, and gun using system and visual designations to computed deliveries. Emphasize switchology, stores management and displays, designation techniques, attack parameters (Z Diagrams), and valid deliveries.

Requirement. Conduct three high, three medium, three low angle, and three strafe attacks on multiple targets using Auto and CCIP. Half of the deliveries will commence with the target designated prior to dive/bunt, and half will use visual designations during the attack.

Performance Standards

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Recognize errors in delivery techniques and makes corrections. Adhere to tactical abort parameters.

SAS-2302 1.5 * R 2 TOFT S (NS)

Goal. Practice low-level navigation ingress, pop attacks using the computed delivery modes as a single ship and section. Emphasize attack parameters, delivery modes, designation techniques and valid deliveries.

Requirement. Conduct low-level navigation ingress to a raked range prior to conducting pop attacks. Conduct pop attacks on a raked range using Auto and CCIP. Minimum of three single ship pop attacks and three section pop attacks are required for completion. Brief carriage and release restrictions and frag avoidance requirements for notional Mk-83.

Performance Standards

Adhere to WASP delivery parameters and TOPGUN valid delivery criteria.
Maintain briefed formation, visual mutual support, and achieve briefed attack separation via timing.
Adhere to tactical abort parameters.

Prerequisite. AS-2301.

AS-2303 1.3 180 R,M 2+ FA-18A/C/D A (NS)

Goal. Practice medium and high angle visual ordnance delivery skills using system and visual designations to computed delivery. Emphasize designation techniques, attack parameters and delivery on a raked range.

Requirement. Conduct medium and high angle ordnance delivery on a raked range using Auto and CCIP. Six medium angle and six high angle deliveries required for completion. Half of each type delivery will utilize system designation prior to attack and half will use visual designations during attack.

Performance Standards

Adhere to WASP delivery parameters and TOPGUN valid delivery criteria.
Recognize errors in delivery techniques and makes corrections.
Adhere to tactical abort parameters.

Prerequisite. FAM-2102, SAS-2301.

Ordnance. 12 MK-76, 40 Chaff, 20 Flare.

Range Requirements. RSTD, RKD RNG, STRAFE, LT INERT, EXP.

AS-2304 1.3 180 R,M 2 FA-18A/C/D A (NS)

Goal. Practice medium and low angle visual ordnance delivery/strafing skills using system and visual designations to computed delivery. Emphasize designation techniques, attack parameters and delivery on a raked range.

Requirement. Conduct medium and low angle ordnance deliveries and strafing on a raked range using Auto and CCIP. Three runs medium angle bombing, three runs low angle bombing, and three runs strafing are required for completion. Half of all runs will utilize system designation prior to attack and half will use visual designations during attack.

Performance Standards

Adhere to WASP delivery parameters and TACSOP valid delivery criteria. Adhere to tactical abort parameters, when applicable.

Prerequisite. SAS-2302.

Ordnance. 6 MK-76, 500 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, RKD RNG, STRAFE, LT INERT, EXP.

SAS-2305 1.0 180 R,M 2+ TOFT S (NS)

Goal. Practice medium and high altitude TTPs to survive in a surface-to-air threat environment. Emphasize correctly assessing the relative threat level and performing the appropriate preemptive or reactive maneuvers.

Requirement. Evaluated by an FAI, WTI, MDTC grad, or SFTI designated pilot or WSO. Conduct a simulated two-ship air interdiction mission in a medium to high threat surface-to-air environment. Conduct preemptive and reactive maneuvers to defeat the simulated IADS. Consult current tactical publications for appropriate maneuvers.

Performance Standards

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters and safe escape maneuvers. Correctly assess the threat based upon the briefed scenario and aircraft system cueing.

Correctly perform briefed TTPs while maintaining situational awareness and mutual support.

Prerequisite. SAS-2301.

AS-2306 1.3 540 R,M 2 FA-18A/C/D A (NS)

Goal. Practice medium and high altitude TTPs to survive in a surface-to-air threat environment. Emphasize correctly assessing the relative threat level and performing the appropriate preemptive or reactive maneuvers.

Requirement. Conduct a two-ship air interdiction mission in a medium to high threat surface-to-air environment. Conduct preemptive and reactive maneuvers to defeat the simulated IADS. Consult current tactical publications for appropriate maneuvers.

Performance Standards

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters and safe escape maneuvers. Correctly assess the threat based upon the briefed scenario and aircraft system cueing.

Correctly perform briefed TTPs while maintaining situational awareness and mutual support.

Prerequisite. SAS-2305.

Ordnance. 40 Chaff, 20 Flare. TCTS Pod if using TCTS instrumented range.

Range Requirements. MOA, RSTD, TCTS, EW, EXP, COMPLEX.

External Syllabus Support. EW/TCTS.

SAS-2307 1.0 * 1+ TOFT S (NS)

Goal. Practice simulated employment of laser guided weapons to include the Laser Maverick, LGB and DMLGB. Emphasize weapons capabilities and limitations, mission planning factors, stores management and cockpit displays, employment techniques and air-to-ground validation.

Requirement. Plan and conduct multiple LMAV, LGB and DMLGB deliveries. A minimum of four LGB and four LMAV deliveries are required for completion. Deliveries will be via self-lasing or an offboard laser designator.

Performance Standards

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters and safe escape maneuvers. Execute proper procedures for weapon release and guidance.

SAS-2308 1.0 * 1+ TOFT S (NS)

Goal. Practice simulated employment of JDAM and LJDAM munitions. Emphasize weapons capabilities and limitations, mission planning factors, stores management, cockpit displays, employment techniques and air-to-ground validation.

Requirement. Plan and conduct multiple JDAM deliveries. A minimum of two PP, two TOO (one POS ABS, one POS REL) deliveries are required for completion. In addition, complete two LJDAM deliveries on moving targets.

Performance Standards

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters and safe escape maneuvers. Execute proper procedures for weapon programming and release.

Prerequisite. SAS-2307.

SAS-2309 1.5 365 R,M 2+ TOFT S (NS)

Goal. Practice section buddy lase/buddy bomb tactics. Emphasize LGB planning, laser deconfliction, DPI acquisition, laser marksmanship, weapon support, and section target area tactics.

Requirement. Conduct LGB deliveries using buddy lase/buddy bomb tactics. Conduct three target attacks utilizing buddy lase tactics and three target attacks utilizing buddy bomb tactics for completion.

Performance Standards

Acquire/designate target with TPOD.

Maintain proper geometry for weapons support until impact (buddy lase).

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters and safe escape maneuvers.

Prerequisite. SAS-2307.

AS-2310 1.3 * 2+ FA-18A/C/D A (NS)

Goal. Introduce medium/high altitude section LGB and IAM deliveries.

Requirement. Conduct section LGB and IAM attacks using onboard sensors. Six runs using the appropriate air-to-ground timeline and TPOD deliveries required for completion. Conduct two target attacks utilizing buddy lase tactics, two target attacks utilizing buddy bomb tactics and two target attacks utilizing section simultaneous IAM tactics for completion. Emphasize mutual support, target acquisition, and target area tactics.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.

Acquire/designate target with TPOD.

Maintain proper geometry for weapons support until impact.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters and safe escape maneuvers.

Prerequisite. FAM-2102, SAS-2309.

Ordnance. 2+ LGTR, Captive JDAM, 40 Chaff, 20 Flare.

Range Requirements. RSTD, RKD RNG, TGT, LSR, LT INERT.

2.10.6 Night Systems (NS)

2.10.6.1 Purpose. To develop proficiency using Night Vision Devices (NVDs).

2.10.6.2 General

a. For aircrew to attain first-time proficiency in the NS stage, experienced oversight is required to develop fundamental NVD skills. Each sortie in the NS stage requires a specifically designated evaluator to lead, instruct, and evaluate the event. Until aircrew are complete with the entire NS syllabus, each NS event will be flown with the listed type of instructor. The NS-2402, 2403, and 2404 shall be evaluated by either a pilot or WSO holding the one of the following instructor certifications: NSI, NSLAT(I) or a previously designated a NSI(H). Designated and current NSI(Low)s shall be automatically re-designated NSLATIs. WSO NSIs will be paired with a designated division leader pilot or higher and the WSO NSI will brief, lead and debrief the event. NS-2401 and NS-2405 shall be evaluated by a section leader pilot or higher. Reference each event description for the requisite oversight. No other T&R events requiring NVD usage may be executed by aircrew until they have completed all events in the NS stage.

b. WSOs that have successfully completed the FRS Night Attack (NATK) syllabus are only required to fly NS-2402 and NS-2405. Upon successful completion of NS-2402 and NS-2405 these WSO aircrew shall be given credit for attaining proficiency in the remaining events in the NS syllabus.

c. At the discretion of the commanding officer, aircrew complete and proficient with the NS stage may fly any night or night optional event in the T&R with the aid of NVDs. During HLL conditions (lux of 0.0022 or

greater) aircrew are limited to a minimum altitude of 500' AGL for all night sorties. During LLL conditions, aircrew are limited to a minimum altitude of 1K' AGL. In any light level, no lower than local SOPs or T/M/S capabilities (e.g., non-NVG compatible FA-18s are restricted to 1K' AGL regardless of lux).

d. Consult T&R Program Manual for applicable light level and currency restrictions for NS sorties.

e. Upon completion of the NS stage, aircrew may be designated NS qualified by their commanding officer.

2.10.6.3 Ground/Academic Training. Aircrew shall complete all NS academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SNS-2401 1.0 * 2 TOFT S NS

Goal. Practice donning and removing NVDs, formation flight, radar intercepts, and high altitude ordnance delivery using NVDs.

Requirement. Evaluated by a section leader pilot or section leader equivalent WSO or higher. Perform formation flight and radar intercepts with the aid of NVDs. Perform medium and high altitude ordnance deliveries and radar intercepts. Two break-up and rendezvous, two radar intercepts, and four ordnance deliveries using high and medium angle dives are required for completion.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.

Demonstrate an understanding of visual illusions associated with NVD usage.

Maintain briefed formations.

Conduct safe rendezvous.

Conduct radar intercept to arrive within a valid LAR.

Take valid shots.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters.

Prerequisite. FAM-2102.

NS-2402 1.3 180 R,M 2 FA-18A/C/D A NS

Goal. Introduce formation flying and intercept procedures with the aid of NVDs.

Requirement. Evaluated by an NSI, NSLATI or a previously designated NSI(H). WSO NSIs will be paired with a designated division leader pilot or higher. Fly goggle tac wing formation enroute to the area. Practice goggle cruise/tac wing/spread/trail formations above 5K' AGL. Introduce various combinations of light options and range cues. Perform four break up and rendezvous. Conduct one forward quarter radar intercept to an AIM-120 LAR and one stern intercept to an AIM-9 LAR.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP and USMC FA-18 TACSOP.
Maintain visual mutual support.
Maintain briefed formations.
Conduct safe rendezvous.
Conduct radar intercept to arrive within valid LAR.
Take valid shots.

Prerequisite. FAM-2102, SNS-2401.

Ordnance. CATM-9X.

Range Requirements. AA.

NS-2403 1.3 * 2 FA-18A/C/D vs. 2 Adversaries A NS

Goal. Conduct section attacks against medium altitude, non-maneuvering forward quarter capable adversaries using NVDs. Emphasize section intercept procedures using NVDs, maintaining proper formation, sorting, BVR weapons employment, and standardized communications. Demonstrate the effect of expendables on NVDs.

Requirement. Evaluated by an NSI, NSLATI or a previously designated NSI(H). WSO NSIs will be paired with a designated division leader pilot or higher. With a minimum of 50 NM separation, the fighters commence the intercept at medium altitude. The adversaries commence the intercept from 10K'-30K', any airspeed, non-maneuvering. Fighter weapons control status is tight with PHID criteria set by flight lead according to theater of operation. Three runs required for completion. One intercept will be a VID to an ICAO escort. Expendables should be used by the adversaries and fighters on at least one run.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.
Maintain visual mutual support.
Perform proper radar mechanics.
Adhere to briefed air-to-air timeline.
Take valid shots.

Prerequisite. NS-2402, AA-2507

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, MACH 1+, EXP.

External Syllabus Support. Two adversaries. AIC.

NS-2404 1.3 * 2 FA-18A/C/D A NS

Goal. Introduce medium and low angle dive deliveries, and low angle pop attack deliveries utilizing NVDs.

Requirement. Evaluated by an NSI, NSLATI or a previously designated NSI(H). WSO NSIs will be paired with a designated division leader pilot or higher. Conduct three medium angle dive deliveries, three medium angle bunt strafe deliveries and three individual low angle pop attacks on a raked range using

NVDs. Minimum recovery altitude should be 5K' AGL for medium altitude deliveries and 1K' AGL for strafe deliveries and low angle pop attacks. Minimum ingress altitude shall be 500' AGL (>.0022 lux required) for pop attacks. Nine deliveries are required for completion.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.

Know and understand visual illusions associated with NVD usage.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters.

Prerequisite. AS-2303, AS-2304, NS-2402.

Ordnance. 12 MK-76, 250 RDS 20MM, 40 Chaff, 20 Flare.

Range Requirements. RSTD, RKD RNG, WISS, EXP.

NS-2405 1.3 * 2 FA-18A/C/D A NS

Goal. Introduce section medium/high altitude section PGM/Inertially Aided Munition (IAM) deliveries.

Requirement. Evaluated by section leader pilot or higher.

Conduct section IAM attacks using NVDs and onboard sensors.

Conduct runs using the appropriate air-to-ground timeline and TPOD deliveries required for completion. Two simulated JDAM

deliveries and four LGW deliveries are required for

completion. Emphasize mutual support, target acquisition, and target area tactics.

Performance Standards

Adhere to USMC FA-18 ADMIN SOP.

Acquire and designate briefed target with sensors.

Maintain mutual support and proper visual lookout with NVD scan adhering to mission crosscheck times.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters.

Prerequisite. AS-2310, NS-2404.

Ordnance. 2+ LGTR, 40 Chaff, 20 Flare.

Range Requirements. RSTD, RKD RNG, TGT, LSR, LT INERT, EXP.

2.10.7 Air-to-Air (AA)

2.10.7.1 Purpose

a. To increase aircrew proficiency in employing the FA-18 in all aspects of the air-to-air arena.

b. Knowledge of air-to-air aircraft systems, weapons, and performance characteristics should be emphasized throughout this phase.

c. For individual employment, LARs and shot validity for air-to-air weapons will be stressed on every mission.

d. For multi-plane evolutions, mission objectives, timeline awareness, mutual support, sensor usage, standardized comm, weapons employment, AIC integration, short range radar mechanics, defensive reaction, targeting and flow decisions will be stressed on every mission. AIC and LINK 16 should be utilized to the maximum extent possible. If co-located with AIC controllers, a face-to-face brief and debrief should be conducted for all engagements that begin from beyond visual range. A TCTS range should be utilized to the maximum extent possible. If units are not co-located with an appropriate TCTS facility, every effort should be made to ensure aircrew have the ability to fly on and debrief in a TCTS facility prior to completing the AA-2500 stage.

2.10.7.2 General

a. For aircrew to attain first-time proficiency in the AA stage, experienced oversight is required to develop fundamental skills. Each sortie in the AA stage requires a specifically designated evaluator to lead, instruct, and evaluate the event. Until aircrew are complete with the entire ACM qualification syllabus, repeated AA 2500-level events will be flown with the listed instructor. The SAA-2505, 2506, 2507 shall be evaluated by a section leader or higher (FA-18D section leader equivalent WSOs may only evaluate the simulator events). AA-2501, 2502, 2504 and 2509 require a division leader pilot or higher to evaluate the event. AA-2503 and 2508 require an FAI, WTI, SFTI, MDTC graduate or previously designated ACTI to evaluate. An FAI, WTI, SFTI, MDTC grad, or ACTI WSO shall be paired with a designated division lead pilot (or higher) in order to evaluate the AA-2503 and AA-2508. Reference each event description for the requisite oversight. No other T&R events requiring air-to-air employment may be executed by aircrew until they have completed each event in their respective ACM qualification syllabus (pilot/WSO). Commanding officers may waive this requirement so long as the proper oversight is present in the maneuvering section (e.g. the element lead is an FAI, WTI, SFTI or MDTC grad pilot). Events where aircrew will operate primarily as single-ships will not be flown by non-ACM qualified aircrew (e.g. Fighter Tactics).

b. WSOs are required to fly the entire AA stage, however WSOs will be considered ACM qualified once complete with the AA-2501, 2502, and 2503. WSOs will still fly the remaining AA stage events with the listed instructor oversight, but may be scheduled to fly in higher level air-to-air T&R events once ACM qualified and only with an ACM qualified pilot.

c. Aircraft should be configured with an operable CVRS, ALR-67, CATM-9X, and chaff/flare. For multi-plane evolutions, in addition to the above listed configuration, JHMCS, CATM-7/120, KY-58, ALQ-126B/165, CIT, LINK-16, and TCTS pod should be utilized.

d. Upon completion of the AA stage, pilots may be designated ACM qualified by their commanding officer. Upon completion of the AA-2501, 2502, 2503, WSOs may be designated ACM qualified by their commanding officer.

2.10.7.3 Ground/Academic Training. Aircrew shall complete all AA academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

AA-2501 1.3 180 R,M 2 FA-18A/C/D A

Goal. Execute a level SSD and the mechanics of offensive perch BFM. Emphasize energy management and assessment, turn circle theory, deck awareness, and weapons employment recognition.

Requirement. Evaluated by a division leader pilot or higher. One level SSD and three offensive perch sets (9K', 6K' and 3K') are required for completion.

Performance Standards

Maintain offensive position.
Employ follow-on weapons.
Separate prior to becoming neutral.
Take valid shots.

Prerequisite. FAM-2102.

Ordnance. CATM-9X, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP.

AA-2502 1.3 180 R,M 2 FA-18A/C/D A

Goal. Execute an oblique SSD and the mechanics of defensive perch BFM. Emphasize energy management and assessment, turn circle theory, deck awareness and weapons employment recognition.

Requirement. Evaluated by a division leader pilot or higher. One oblique SSD and three defensive perch sets (9K', 6K' and 3K') are required for completion.

Performance Standards

Defeat initial weapons employment.
Maneuver to deny follow-on WEZ.
Neutralize attacker.
Separate or kill attacker.
Take valid shots.

Prerequisite. AA-2501.

Ordnance. CATM-9X, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP.

AA-2503 1.3 90 R,M 2 FA-18A/C/D A

Goal. Execute a flat scissors (optional), rolling scissors, and HABFM from a neutral start. Emphasize energy management and assessment, lift vector placement, game plan development, offensive and defensive transition recognition, weapons employment, deck awareness and expendable usage.

Requirement. Evaluated by an FAI, WTI, SFTI, MDTC graduate, or ACTI pilot. FAI, WTI, SFTI, MDTC grad, or ACTI WSOs shall be paired with a division leader pilot. One flat scissors (optional), rolling scissors, and one neutral engagement from a known start required for completion. The altitude for the high aspect engagements should be varied to demonstrate the impact of altitude on fighter performance and game plan.

Performance Standards

Deny opponent weapon employment opportunities.
Achieve first weapons employment opportunity.

Gain a positional advantage.
Employ follow-on weapons.
Transition to offensive or defensive BFM.
Separate or kill attacker.
Take valid shots.

Prerequisite. AA-2502.

Ordnance. CATM-9X, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP.

AA-2504 1.3 365 R,M 1 FA-18A/C/D vs. 1 Dissimilar Adversary A

Goal. Practice BFM skills versus a dissimilar adversary.

Requirement. Briefed and evaluated by a division leader pilot or higher. Three high aspect (butterfly and/or abeam sets) are required for completion. The altitude for the high aspect engagements should be varied to demonstrate the impact of altitude on fighter performance and game plan.

Performance Standards

Deny opponent weapon employment opportunities.
Achieve first weapons employment opportunity.
Gain a positional advantage.
Employ follow-on weapons.
Transition to offensive or defensive BFM.
Separate or kill attacker.
Take valid shots.

Prerequisite. AA-2503.

Ordnance. CATM-9X, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP.

External Syllabus Support. One dissimilar adversary.

SAA-2505 1.0 * 1 TOFT S

Goal. Gain familiarity with air-to-air systems and displays, HOTAS and combat systems to include LINK-16, AzEl, RDR ATK, CIT, PIDS, ALR-67, ALE-39/47, LPOD and JHMCS. Demonstrate the effects of EA on the APG-65/73 RADAR and TTPs to combat the effectiveness of threat EA.

Requirement: Evaluated by a section leader or section leader equivalent WSO or higher. Conduct this event as a part-task trainer. Two intercepts with EA are required for completion.

Performance Standards

Understand and demonstrate sufficient knowledge of air-to-air combat systems and displays.
Execute appropriate counter EA TTPs.

Prerequisite. FAM-2102.

Ordnance. AIM-9X, AIM-7/120, 40 Chaff/20 Flare (simulated).

SAA-2506 1.0 * 1 TOFT S

Goal. Conduct single-ship intercepts against a known number of SAR-1 capable adversaries. Emphasize intercept procedures (2D/3D), timeline awareness, meld/sort mechanics, maneuvering target mechanics, RWR awareness (notch mech), weapons employment, merge mechanics, SRR mechanics, and standardized comm.

Requirement. Evaluated by a section leader or section leader equivalent WSO or higher. Conduct this event as a part-task trainer with a minimum of 50 NM separation. The fighter will execute NTD tactics, flow required mindset, against a SAR-1 threat declared hostile. Conduct intercepts against a single group (non-maneuvering), single group (maneuver post-meld), two groups in range (greater than OFR) and two groups in range (less than OFR but greater than DFR). Four intercepts are required for completion.

Performance Standards

Execute proper intercept geometry (2D/3D), timeline awareness, meld/sort mechanics, maneuvering target mechanics, RWR awareness, weapons employment, merge mechanics, SRR mechanics, standardized comm, notch mech and merge clean-up. Take valid shots.

Prerequisite. SAA-2505.

Ordnance. AIM-9X, AIM-7/120, 40 Chaff/20 Flare (simulated).

SAA-2507 1.0 * R 2 TOFT S

Goal. Conduct section intercepts against a known number of SAR-1 capable adversaries. Emphasize intercept procedures (2D/3D), timeline awareness, meld/sort mechanics, maneuvering target mechanics, RWR awareness (notch mech), weapons employment, merge mechanics, SRR mechanics, mutual support and standardized comm. Conduct a section reactive VID against a group without PHID.

Requirement. Evaluated by a section leader or section leader equivalent WSO (the evaluator may either fly as the lead or run the event from the console) or higher. If the evaluator chooses to fly as the lead, an additional section lead or higher is required to run the event from the console in order to provide AIC and/or manage threat presentations. With a minimum of 50 NM separation, the fighters will execute NTD tactics, with a flow required mindset, against a SAR-1 threat. Conduct intercepts against groups with and without PHID. One intercept with PHID solved pre-meld (AIC declared). One intercept with PHID solved post-meld (via on-board sensors). Three intercepts with PHID not-solved; one of which must result in a "Friendlies" ID at the merge. Five intercepts are required for completion.

Performance Standards

Execute proper intercept geometry (2D/3D), timeline awareness, meld/sort mechanics, maneuvering target mechanics, RWR awareness, weapons employment, merge mechanics, SRR mechanics,

standardized comm., notch mech, merge clean-up and VID mech.
Maintain mutual support.
Take valid shots.

Prerequisite. AA-2506.

Ordinance. AIM-9X, AIM-7/120, 40 Chaff, 20 Flare (simulated).

AA-2508 1.3 180 R,M 2 FA-18A/C/D vs. 2 (Dissimilar) Adversaries A

Goal. Practice section engaged maneuvering against SAR-1/IR-3 capable dissimilar (preferred) adversaries in either a point defense scenario (e.g., tap-n-cap) or from visual sets (dissimilar bandits only). If adversaries are not dissimilar, engagements are limited to a maximum of one adversary.

Requirement. Evaluated by an FAI, WTI, SFTI, MDTC graduate, or ACTI pilot. FAI, WTI, SFTI, MDTC grad, or ACTI WSOs shall be paired with a division leader pilot. One forward quarter, one beam entry and one stern entry are required for completion. One staggerback required for completion. No kills should occur prior to the initial merge for each engagement. PHID must be solved via VID at the merge.

Performance Standards

Detect via SRR, RWR, and visual lookout.

Execute proper VID mech.

Execute proper notch mech.

Execute proper merge clean-up.

Effective section engaged maneuvering and communication.

Take valid shots.

Prerequisite. SAA-2507.

Ordinance. CATM-9X, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, TCTS.

External Syllabus Support. Two (dissimilar) adversaries.

AA-2509 1.3 * 2 FA-18A/C/D vs. 2+ (Dissimilar) Adversaries A

Goal. Conduct section intercepts against a known number of SAR-1 capable adversaries. Emphasize intercept procedures (2D/3D), timeline awareness, meld/sort mechanics, maneuvering target mechanics, RWR awareness (notch mech), weapons employment, merge mechanics, SRR mechanics, mutual support and standardized comm. Conduct a section reactive VID against a group without PHID.

Requirement. Evaluated by a division leader pilot or higher. With a minimum of 50 NM separation, the fighters will execute NTD tactics, flow required mindset, against a SAR-1 threat (maneuvering and non-maneuvering). Conduct intercepts against groups with and without PHID. One intercept with PHID not-solved required for completion. Three intercepts are required for completion.

Performance Standards

Execute proper intercept geometry (2D/3D), timeline awareness, meld/sort mechanics, maneuvering target mechanics, RWR awareness, weapons employment, merge mechanics, SRR mechanics, standardized comm., notch mech, merge clean-up and VID mech. Maintain mutual support.
Take valid shots.

Prerequisite. AA-2504, SAA-2507.

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, MACH 1+, TCTS.

External Syllabus Support. AIC, Two or more (dissimilar) adversaries.

2.10.8 Low Altitude Tactics (LAT)

2.10.8.1 Purpose. To develop proficiency in FA-18 low altitude tactics.

2.10.8.2 General

a. Emphasize LAT procedures, communications, and maneuver techniques per the LATI Program Guide. Upon completion of the LAT stage, aircrew should be able to perform low altitude navigation, tactical ingress into a defended target at low altitude, and execute defensive maneuvers against surface-to-air or air-to-air threats.

b. LAT-2600 stage events shall be flown on an approved LAT course.

c. SLAT-2601 requires a LATI at the simulator console. LAT-2602 and 2603 require a LATI chase when the aircrew is not LAT qualified.

d. Currency and altitude restrictions as stated in the T&R Program Manual apply.

e. Aircraft should be configured with an operable VTR/CVRS, ALR-67, CATM-9X, TPOD, KY-58, and chaff/flare.

f. Upon completion of this stage, aircrew may be designated LAT qualified by their commanding officer.

2.10.8.3 Ground/Academic Training. Aircrew shall complete all LAT academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SLAT-2601 1.0 * R 1+ TOFT S

Goal. Practice two dimensional and three dimensional LAT and threat reactions. Emphasize LAT procedures, communications, and maneuver techniques.

Requirement. Evaluated by a LATI. Perform the 50% rule, check/hard/break turns, speed rush base line, vertical jinks, straight ahead oblique jinks, turning oblique jinks, reverse oblique jinks, and threat reactions.

Performance Standards

Recite all LAT rules from memory without error.
Quickly respond to commands from the chase aircraft.
Perform maneuvers as briefed.
Remain above briefed minimum altitude.
Adhere to dive recovery rules.

Prerequisite. AS-2304, AS-2306.

LAT-2602 1.3 * 2 FA-18A/C/D A

Goal. Develop proficiency in single ship conventional LAT.
Emphasize LAT procedures, communications, and maneuver techniques.

Requirement. Evaluated by a LATI. As a single ship, complete a circuit performing a descent to comfort level, straight and level, ridgeline crossings, speed rush base line, and check/hard/break turns. Complete a second circuit performing the 50% rule, vertical jinks, straight ahead oblique jinks, turning oblique jinks, and reverse oblique jinks. Complete a third circuit performing the 50% rule, guns jink, level S, and SAM weave.

Performance Standards

Quickly respond to commands from the chase aircraft.
Perform maneuvers as briefed.
Remain above briefed minimum altitude.
Adhere to dive recovery rules.
Execute the appropriate threat reaction.

Prerequisite. SLAT-2601.

Ordnance. CATM-9X, 40 Chaff, 20 Flare.

Range Requirements. LAT.

LAT-2603 1.3 365 R,M 2 FA-18A/C/D A

Goal. Develop proficiency in section conventional LAT and low altitude intercepts. Emphasize LAT procedures, communications, and maneuver techniques.

Requirement. Evaluated by a LATI. Complete one circuit performing a section descent to comfort level, straight and level, ridgeline crossings, and section called/uncalled turns. Complete a second circuit performing section threat reactions to a section target attack. Complete a third circuit performing low altitude intercept with the fighter at 300-500' AGL and the adversary at 2K'-4K' AGL.

Performance Standards

Use standardized communication.
Perform maneuvers in accordance with LAT rules and brief.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Execute the appropriate threat reaction.
Take valid shots.

Prerequisite. LAT-2602.

Ordnance. CATM-9X, 40 Chaff, 20 Flare.

Range Requirements. LAT, TGT, EXP.

2.11 MISSION SKILL PHASE

2.11.1 General. This phase trains FA-18 A/C/D aircrew in CAS, OAAW, AAD, AR, SCAR, AI, and SEAD, and FA-18D aircrew in FAC(A) and TAC(A). Completion of the 3000 phase syllabus is a prerequisite to start the section leader work-up syllabus. WSOs must complete the 3000 phase and AS events of the section leader syllabus prior to beginning FAC(A) work-up. SCAS-3101 shall be evaluated by an FAI, WTI or a FAC(A)I designated aircrew to ensure the foundation for proper CAS procedures are established early on.

2.11.2 Close Air Support (CAS)

2.11.2.1 Purpose. To develop proficiency in the tactical employment of the FA-18 in Type 1, 2 and 3 CAS during day and night in a low to medium threat environment. Additionally, develop proficiency in urban CAS techniques.

2.11.2.2 General. CAS-3101 and CAS-3104 will be evaluated by an FAI, WTI or FAC(A)I qualified pilot or WSO. WSO instructors will be paired with a designated section leader pilot or higher. The commanding officer may authorize inert ordnance in lieu of live ordnance when necessary. Aircraft should be configured with operable VTR/CVRS, ALR-67, CATM-9X, TPOD, LST, KY-58, DCS/VMF, Link-16, and chaff/flare when possible. At the completion of this stage aircrew should be able to:

a. Demonstrate proficiency in the execution of CAS under Type 1, 2 and 3 terminal attack control, day and night, at medium and low altitude.

b. Demonstrate proficiency executing CAS in an urban environment.

c. Deliver unguided, laser guided, forward firing, and inertial aided munitions on tactical targets both day and night in the CAS environment.

d. Employ ordnance using reactive weaponeering principles.

e. The aircrew should be familiar with the use of the following external agencies and how to integrate them in the CAS stage:

1 MACCS integration.

2 Supporting arms.

3 Joint Terminal Attack Controller (JTAC)/FAC(A).

2.11.2.3 Ground/Academic Training. Aircrew shall complete all CAS academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SCAS-3101 1.0 * 2 TOFT S

Goal. Conduct GP CAS execution using Type 1, 2 and Type 3 terminal attack control.

Requirement. Evaluated by an FAI, WTI or FAC(A)I qualified pilot or WSO. Conduct six attacks under Type 1, 2 and 3 terminal attack control. Conduct three attacks under Type 1 terminal attack control (two medium/high altitude dive deliveries, one pop attack), two attacks utilizing Type 2 terminal attack control (one bomb on target, one bomb on coordinate), and one attack utilizing Type 3 terminal attack control. Emphasize systems management, targeting pod employment, target area tactics, timing, delivery mechanics, target correlation (if required), bomb on target (BOT) and bomb on coordinate (BOC), PGM employment, reactive weaponeering, threat countertactics, and JCAS comm.

Performance Standards

Comply with JCAS TTPs.
Comply with tactical abort parameters.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Execute appropriate threat counter tactics.
Execute proper JCAS comm.
TOT +/- 15 secs.
Achieve effects on target or weapon impact within CEP.

Prerequisite. AS-2304.

SCAS-3102 1.0 120 R,M 2 TOFT S (NS)

Goal. Conduct PGM/IAM CAS execution using Type 2 and Type 3 terminal attack control. Practice BOC/BOT employment.

Requirement. Conduct five attacks under Type 2 and 3 terminal attack control. With PGMs, one BOT and BOC attack is required. With IAMs, one BOT (absolute), one BOT (relative) and one BOC attack is required for completion. Emphasize systems management, targeting pod employment, target correlation (if required), bomb on target (BOT) and bomb on coordinate (BOC), PGM/IAM employment, target area tactics, timing, reactive weaponeering, threat counter tactics, and JCAS comm. Reemphasize laser marksmanship and target generation mechanization.

Performance Standards

Comply with JCAS TTPs.
Comply with tactical abort parameters.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Execute appropriate threat counter tactics.
Execute proper JCAS comm.
TOT +/- 15 secs.
Achieve effects on target or weapon impact within CEP.

Prerequisite. SCAS-3101, AS-2310.

CAS-3103 1.3 365 R,M 2 FA-18A/C/D A

Goal. Conduct day GP CAS using Type 1 or 2 terminal attack control.

Requirement. Conduct three attacks under Type 1 or 2 terminal attack control (at least one attack must be high threat, pop attack). Emphasize systems management, timing, targeting pod employment, target correlation, target area tactics, reactive weaponeering, JCAS communications, and threat countertactics. TPOD required.

Performance Standards

Comply with JCAS TTPs.

Comply with tactical abort parameters.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Execute appropriate threat counter tactics.

Execute proper JCAS comm.

TOT +/- 15 secs.

Achieve effects on target or weapon impact within CEP.

Prerequisite. SCAS-3101.

Ordnance. 4 Mk-82/83, 250 20mm, 40 Chaff, 20 Flare

Range Requirements. RSTD, TGT, SST, JCAS, TGT-MOVE, TGT-DISP, EXP.

External Syllabus Support. JTAC or FAC(A).

CAS-3104 1.3 180 R,M 2 FA-18A/C/D A

Goal. Conduct day PGM/IAM CAS using Type 2 and 3 terminal attack control with PGMs.

Requirement. Evaluated by an FAI, WTI or FAC(A)I qualified pilot or WSO. WSO instructors will be paired with a designated section leader pilot or higher. Conduct two attacks under Type 2 terminal attack control and one attack under Type 3 terminal attack control. Emphasize systems management, targeting pod employment, target correlation (if required), bomb on target (BOT) and bomb on coordinate (BOC) contracts, PGM/IAM employment, reactive weaponeering, threat counter tactics, and JCAS comm.

Performance Standards

Comply with JCAS TTPs.

Comply with tactical abort parameters.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Execute appropriate threat countertactics.

Execute proper JCAS comm.

TOT +/- 15 secs.

Achieve effects on target or weapon impact within CEP.

Prerequisite. CAS-3102.

Ordnance. 1 GBU-32/38, 2 GBU-12/16, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, SST, EW, JCAS, TGT-DISP, TGT-MOVE, JDAM, EXP.

External Syllabus Support. JTAC or FAC(A).

CAS-3105 1.3 365 R,M 2 FA-18 A/C/D A (NS)

Goal. Conduct urban CAS.

Requirement. Conduct three CAS attacks in an urban environment. Emphasize systems management, targeting pod employment, target PHID/correlation, ROE/CDE considerations, target area geometry, JTAC integration, and weapons employment. This sortie can be completed using an actual urban area with simulated ordnance if an urban target complex is not available.

Performance Standards

Comply with JCAS TTPs.

Comply with tactical abort parameters.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Execute appropriate threat countertactics.

Execute proper JCAS comm.

TOT +/- 15 secs.

Achieve effects on target or weapon impact within CEP.

Prerequisite. CAS-3104.

Ordnance. 1 GBU-32/38 inert, 2 GBU-12/16 inert, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, SST, EW, JCAS, URBN WPNS, TGT-DISP, TGT-MOVE, EXP, JDAM.

External Syllabus Support. JTAC or FAC(A).

CAS-3106 1.3 180 R,M 2 FA-18A/C/D A NS

Goal. Conduct night CAS using Type 1, 2 and 3 terminal attack control.

Requirement. Conduct one attack under Type 1 terminal attack control and two attacks under Type 2 terminal attack control. Conduct one attack under Type 3 terminal attack control. Emphasize systems management; targeting pod employment, target correlation (as required), ROE/CDE considerations, bomb on target (BOT) and bomb on coordinate (BOC), PGM/IAM employment, reactive weaponeering, threat countertactics, and JCAS comm.

Performance Standards

Comply with JCAS TTPs.

Comply with tactical abort parameters.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Execute appropriate threat countertactics.
Execute proper JCAS comm.
TOT +/- 15 secs.
Achieve effects on target or weapon impact within CEP.

Prerequisite. CAS-3104.

Ordnance. 1 GBU-32/38, 1 GBU-12/16, 1 Mk-82/83, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, SST, EW, JCAS, TGT-DISP, TGT-MOVE, JDAM.

External Syllabus Support. JTAC or FAC(A).

2.11.3 Armed Reconnaissance (AR)

2.11.3.1 Purpose. To develop proficiency in conducting Armed Reconnaissance missions.

2.11.3.2 General. Emphasize mission planning, mutual support, target acquisition/recognition/identification, target area tactics, and information flow through the C3 system. The commanding officer may authorize inert ordnance in lieu of live ordnance when necessary. Aircraft should be configured with operable VTR/CVRS, ALR-67, CATM-9X, TPOD, binoculars, LST, KY-58, DCS/VME, MIDS, and chaff/flare.

2.11.3.3 Ground/Academic Training. Aircrew shall complete all AR academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SAR-3201 1.0 180 R,M 2 TOFT S (NS)

Goal. Conduct day med/high altitude unguided and guided ordnance AR simulator. Emphasize mission planning, target precedence, search pattern, mutual support, target area tactics, intra-section target communication, time-to-kill, and information flow through the C3 system.

Requirement. Conduct day med/high altitude unguided AR to locate, plot, and destroy targets of opportunity. Two unguided ordnance attacks, four PGM attacks (two with JDAM and two with LGBs), and two strafe attacks are required for completion. Two target attacks must be on a moving target set.

Performance Standards

Conduct visual and sensor reconnaissance of assigned area and detect targets.

Perform target area tactics appropriate for scenario.

Minimize threat exposure and perform appropriate threat countertactics.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Prerequisite. AS-2304, SAS-2305, AS-2310.

Ordnance. 2 Mk-82/83/84, 2 GBU-12/16 or 2 GBU-38/32, 250 20mm, 40 Chaff/20 Flare (simulated).

AR-3202 1.3 365 R,M 2 FA-18A/C/D A

Goal. Conduct day med/high altitude AR. Emphasize mission planning, target precedence, reactive weaponeering, search pattern, mutual support, sensor employment, intra-section target communication, time-to-kill, target area tactics, and information flow through the C3 system.

Requirement. Conduct day med/high altitude AR to detect and destroy targets of opportunity. Two unguided ordnance attacks, two guided ordnance attacks and two strafe attacks are required for completion.

Performance Standards

Conduct visual and sensor reconnaissance of assigned area and detect targets.

Employ appropriate weapon and tactics for threat and target type.

Minimize threat exposure and perform appropriate threat countertactics.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Prerequisite. SAR-3201.

Ordnance. 2 Mk-82/83, 2 GBU-12/16 or 2 GBU-38/32, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, HE, SST, EW, LSR, TGT-DISP, TGT-MOVE, EXP.

AR-3203 1.3 180 R,M 2 FA-18A/C/D A NS

Goal. Conduct night med/high altitude AR. Emphasize mission planning, target precedence, reactive weaponeering, search pattern, mutual support, sensor employment, intra-section target communication, time-to-kill, target area tactics, and information flow through the C3 system.

Requirement. Conduct night med/high altitude AR to detect and destroy targets of opportunity. Six attacks, at least two guided ordnance (LMAV, LGB or JDAM) attacks and two strafe attacks, are required for completion.

Performance Standards

Conduct visual and sensor reconnaissance of assigned area and detect targets.

Employ appropriate weapon and tactics for threat and target type.

Minimize threat exposure and perform appropriate threat countertactics.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Prerequisite. AR-3202.

Ordnance. 1 LMAV (live or captive), 2 GBU-38/32/31, 2 GBU-12/16, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, HE, SST, EW, LSR, TGT-DISP, TGT-MOVE, EXP.

2.11.4 Strike Coordination and Reconnaissance (SCAR)

2.11.4.1 Purpose. To develop proficiency in conducting Strike Coordination and Reconnaissance missions.

2.11.4.2 General. Emphasize mission planning, mutual support, target acquisition/recognition/identification, target marking/coordinate passage, target area tactics, strike asset coordination and information flow through the C3 system. Aircraft should be configured with operable VTR/CVRS, ALR-67, CATM-9X, TPOD, binoculars, LST, KY-58, DCS/VMF, MIDS, and chaff/flare.

2.11.4.2 Ground/Academic Training. Refer to MAWTS-1 FA-18 Course Catalog.

SSCAR-3301 1.0 180 R,M 4(2) TOFT S (NS)

Goal. Conduct day SCAR in the simulator. Emphasize locating targets in accordance with a target precedence list, notifying AR assets of targets and current threat, target marking/coordinate passage, and proper information flow through the C3 system.

Requirement. Coordination of one section of AR required for completion. SCAR must coordinate a minimum of four attacks (one of which must be against a moving target) and conduct a battlefield handover.

Performance Standards

Effectively locate and pass targets to AR assets.
Prioritize targets in accordance with target precedence list.
Effectively coordinate target attacks.
Effectively pass target and threat information to AR assets and C3.

Prerequisite. AR-3202.

Ordnance. Any combination of simulated ordnance: 2 pods 2.75.0"/5.0" rockets, 2 Mk-82/83/84, 2 GBU-10/12/16, 4 CBU-99B/B, or 2 GBU-10/12/16, 250 20mm, 40 Chaff/20 Flare.

Range Requirements. RSTD, HE, EW, SST, TGT-DISP, TGT-MOVE, LSR.

External Syllabus Support. One section AR assets.

SCAR-3302 1.3 365 R,M 2+ FA-18A/C/D A NS

Goal. Conduct night SCAR. Emphasize locating targets in accordance with a target precedence list, notifying AR assets of targets and current threat, target marking/coordinate passage, and proper information flow through the C3 system.

Requirement. Coordination of one section of AR required for completion. SCAR must coordinate a minimum of four attacks and conduct a battlefield handover.

Performance Standards

Effectively locate and pass targets to AR assets.
Prioritize targets in accordance with target precedence list.
Effectively coordinate target attacks.
Effectively pass target and threat information to AR assets and C3.

Prerequisite. SSCAR-3301.

Ordnance. Any combination of 2 pods 2.75.0"/5.0" rockets, 2 Mk-82/83/84, 2 GBU-12/16, 4 CBU-99B/B, or 2 GBU-10/12/16, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, HE, EW, SST, TGT-DISP, TGT-MOVE, LSR.

External Syllabus Support. One section AR assets.

2.11.5 Active Air Defense (AAD)

2.11.5.1 Purpose. To gain and maintain proficiency in AAD missions.

2.11.5.2 General. Emphasize mission planning, mutual support, knowledge of air-to-air weapons and tactics, timeline awareness, sensor usage, standardized communication, weapons employment, AIC integration, short range radar mechanics and targeting. Aircraft should be configured with operable CVRS, ALQ-126B/165, ALR-67, CATM-9X, TPOD, KY-58, CIT, Link-16, JHMCS, and chaff/flare. AIC and TCTS range should be utilized to the maximum extent possible. If co-located with AIC controllers, a face-to-face brief and debrief should be conducted for all engagements.

2.11.5.3 Ground/Academic Training. Aircrew shall complete all AAD academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SAAD-3401 1.0 * R 4(2) TOFT S

Goal. Conduct a day DCA (Area Defense) mission against an unknown number of SAR-1 capable adversaries using DTD tactics. Emphasize commit criteria, fighter engagement zone management, targeting/sorting, timeline awareness, valid weapons employment, cold operations and standardized communications.

Requirement. Two 20 min vulnerability periods required for completion. One VID required.

Performance Standards

Execute proper radar mechanics.
Target as directed.
Execute proper cold ops.
Maintain visual/fluid mutual support.
Execute proper VID mechanics.
Take valid shots.
Timeline awareness.
Tactical decision making IAW mission objectives.

Prerequisite. AA-2509.

Ordnance. AIM-9X, AIM-7/120, 40 Chaff/20 Flare (simulated).

External Syllabus Support. AIC.

AAD-3402 1.3 * 2+ FA-18A/C/D vs. 2+ (Dissimilar) Adversaries A

Goal. Conduct a day DCA (Area Defense) mission against an unknown number of SAR-1 or SAR-2/AR-1 capable adversaries using DTD tactics. Emphasize commit criteria, fighter engagement zone management, targeting/sorting, timeline awareness, valid weapons employment, cold operations and standardized communications.

Requirement. One 20 min vulnerability period required for completion. One VID required.

Performance Standards

Execute proper radar mechanics.

Execute proper targeting.

Execute proper cold ops.

Maintain visual/fluid mutual support.

Execute proper VID mechanics.

Take valid shots.

Timeline awareness.

Tactical decision making IAW mission objectives.

Prerequisite. SAAD-3401.

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, MACH 1+, TCTS.

External Syllabus Support. AIC, two or more (dissimilar) adversaries.

SAAD-3403 1.0 180 R,M 4(2) TOFT S (NS)

Goal. Conduct a DCA (Area Defense) mission against an unknown number of SAR-2/AR-1 capable adversaries with EA using DTD tactics. Emphasize commit criteria, fighter engagement zone management, targeting/sorting, timeline awareness, valid weapons employment, cold operations and standardized communications.

Requirement. Two 20 min vulnerability periods required for completion. One VID required.

Performance Standards

Execute proper radar mechanics.

Execute proper targeting.

Execute proper cold ops.

Maintain visual/fluid mutual support.

Execute proper VID mechanics.

Take valid shots.

Timeline awareness.

Tactical decision making IAW mission objectives.

Prerequisite. SAAD-3402.

Ordnance. AIM-9X, AIM-7/120, 40 Chaff, 20 Flare (simulated).

External Syllabus Support. AIC.

AAAD-3404 1.3 180 R,M 4 FA-18A/C/D vs. 2+ (Dissimilar)
Adversaries A NS

Goal. Conduct a night division DCA (Area Defense) mission against an unknown number of SAR-2/AR-1 capable adversaries with EA using DTD tactics. Emphasize commit criteria, fighter engagement zone management, targeting/sorting, timeline awareness, valid weapons employment, cold operations and standardized communications.

Requirement. One 20 min vulnerability period required for completion.

Performance Standards

Execute proper radar mechanics.
Execute proper targeting.
Execute proper cold ops.
Maintain visual/fluid mutual support.
Execute proper VID mechanics.
Take valid shots.
Timeline awareness.
Tactical decision making IAW mission objectives.

Prerequisite. SAAD-3403.

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, MACH 1+, TCTS.

External Syllabus Support. AIC, Two or more (dissimilar) adversaries.

SAAD-3405 1.0 180 R,M 4(2) TOFT S (NS)

Goal. Conduct a DCA (Area Defense) mission against an unknown number of SAR-2/AR-1 capable adversaries with EA using Fighter Tactics (FT). Emphasize commit criteria, fighter engagement zone management, targeting/sorting, timeline awareness, valid weapons employment, cold operations and standardized communications.

Requirement. Two 20 min vulnerability periods required for completion. One VID required.

Performance Standards

Execute proper radar mechanics.
Execute proper targeting.
Execute proper cold ops.
Maintain fluid mutual support.
Execute proper VID mechanics.
Take valid shots.
Timeline awareness.
Tactical decision making IAW mission objectives.

Prerequisite. SAAD-3403.

Ordnance. AIM-9X, AIM-7/120, 40 Chaff, 20 Flare (simulated).

External Syllabus Support. AIC.

2.11.6 Suppression of Enemy Air Defenses (SEAD)

2.11.6.1 Purpose. To develop proficiency in SEAD weapons and tactics.

2.11.6.2 General. Emphasize SEAD weapon capabilities and limitations, cockpit management, designation techniques, delivery modes and attack parameters. Aircraft should be configured with operable VTR/CVRS, ALQ-126B/165, ALR-67, TPOD, CATM-9X, KY-58, Link-16, and chaff/flare.

2.11.6.3 Ground/Academic Training. Aircrew shall complete all SEAD academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SSEAD-3501 1.0 365 R,M 1+ TOFT S (NS)

Goal. Practice employment of the Joint Standoff Weapon (JSOW) and Standoff Land Attack Missile-Expanded Response (SLAM-ER). Emphasize weapon capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Plan mission on JMPS and conduct multiple ordnance deliveries. Minimum of three deliveries of each weapon required for completion.

Performance Standards

Effectively mission plan for JSOW and SLAM-ER.

Deliver JSOW with a TOT +/- 15 secs.

Execute proper procedures for marriage checks.

Execute proper procedures for weapon programming and release.

Execute proper procedure for weapon terminal guidance (SMAU).

SSEAD-3502 1.0 365 R,M 1+ TOFT S (NS)

Goal. Practice employment of the AGM-88 HARM. Emphasize weapon capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Plan mission on JMPS. Employ the AGM-88 against a ground based emitter. Three PB shots, three TOO shots, a HARM designation, and a Manually Modified Entry (MME) required for completion.

Performance Standards

Effectively mission plan for HARM.

Deliver PB HARM IAW TACSOP tactics with a TOT +/- 15 secs.

Effectively employ HARM in TOO mode.

SEAD-3503 1.3 365 R,M 1+ FA-18A/C/D A (NS)

Goal. Practice airborne employment of the AGM-88 HARM. Emphasize mission planning, weapon capabilities and limitations, cockpit displays, and employment techniques.

Requirement. Plan mission on JMPS. Conduct two PB HARM shots with TOTs utilizing FA-18 TACSOP tactics. Conduct two TOO HARM shots utilizing FA-18 TACSOP tactics.

Performance Standards

Effectively mission plan for HARM.
Deliver PB HARM IAW TACSOP tactics with a TOT +/- 15 secs.
Effectively employ HARM in TOO mode.

Prerequisite. SSEAD-3502.

Ordnance. 1 CATM-88/AGM-88, 40 Chaff, 20 Flare.

Range Requirements. MOA, TCTS, Hi Fi EW.

2.11.7 Offensive Anti-Air Warfare (OAAW)

2.11.7.1 Purpose. To utilize Core Skills in employing the FA-18 in Offensive Anti-Air Warfare (AAW) missions. Emphasize mission planning, mutual support, knowledge of air-to-air weapons and tactics, sensor usage, standardized communication, weapons employment, timeline awareness, AIC integration, short range radar mechanics, and targeting.

2.11.7.2 General

a. AIC, Link-16, CATM-9X, CATM-7/120, JHMCS, chaff/flare, and TCTS range should be utilized to the maximum extent possible. If co-located with AIC controllers, a face-to-face brief and debrief should be conducted for all engagements.

b. To gain and maintain proficiency in AAW missions.

2.11.7.3 Ground/Academic Training. Aircrew shall complete all OAAW academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SOAAW-3601 1.0 * 4(2) TOFT S (NS)

Goal. Conduct an OCA (Sweep) mission against an unknown number of adversaries with SAR-1/IR-3 missiles. Emphasize section intercept procedures, targeting and sorting, valid weapons employment, timeline awareness, and standardized communication.

Requirement. With a minimum of 50 NM separation, the fighters will execute drag-to-defend tactics. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. Adversaries will be level 3 IAW the TACSOP. Four intercepts required for completion.

Performance Standards

Execute proper radar mechanics.
Target as directed.
Recognize threat tactics.
Take valid shots.
Timeline awareness.

Prerequisite. AA-2509.

OAAW-3602 . 1.3 365 R,M 4 FA-18A/C vs. 2+ (DISS) ADV A (NS)

Goal. Conduct a division OCA (Sweep) in direct support of a strike package, against an unknown number of adversaries with SAR-2 and/or AR-1/IR-3 missiles. Emphasize division intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, timeline awareness, and standardized communications.

Requirement. With a minimum of 60 NM separation, the fighters will conduct a sweep for a defined vul period utilizing drag-to-defend tactics. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. Adversaries will be level 3 or 4 IAW the TACSOP.

Performance Standards

Maintain mutual support.
Execute proper radar mechanics.
Target as directed.
Recognize threat tactics.
Take valid shots.
Timeline awareness.
Tactical decision making IAW mission objectives.

Prerequisite. SOAAW-3601.

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, MACH 1+, TCTS.

External Syllabus Support. Two or more (dissimilar) adversaries.

SOAAW-3603 . 1.0 180 R,M 4(2) TOFT S (NS)

Goal. Conduct an OCA (Screen/Close Escort) mission against an unknown number of dissimilar adversaries with SAR-1/IR-3 missiles. Emphasize section intercept procedures, maintaining proper formation and geometry, targeting and sorting, and standardized communications.

Requirement. With a minimum of 50 NM separation, the fighters will conduct close escort tactics of another element (strikers) and execute notch-to-defend tactics. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. Adversaries will be level 3 or 4 IAW the TACSOP.

Performance Standards

Maintain mutual support.
Execute proper radar mechanics.
Target as directed.
Recognize threat tactics.
Take valid shots.
Timeline awareness.
Tactical decision making IAW mission objectives.

Prerequisite. AA-2509.

OAAW-3604 1.3 365 R,M 2+ FA-18A/C vs. 2+ (DISS) ADV A (NS)

Goal. Conduct a division OCA (Screen/Close Escort) mission against an unknown number of dissimilar adversaries with SAR-2 or AR-1/IR-3 missiles. Emphasize division intercept procedures, maintaining proper formation, targeting and sorting, valid weapons employment, timeline awareness, and standardized communications.

Requirement. With a minimum of 60 NM separation, the fighters will conduct sweep tactics at night and execute drag-to-defend tactics. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. Adversaries will be level 3 or 4 IAW the TACSOP.

Performance Standards

Maintain mutual support.
Execute proper radar mechanics.
Target as directed.
Recognize threat tactics.
Take valid shots.
Timeline awareness.
Tactical decision making IAW mission objectives.

Prerequisite. SOAAW-3603.

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, MACH 1+, TCTS.

External Syllabus Support. Two or more dissimilar adversaries.

2.11.8 Air Interdiction (AI)

2.11.8.1 Purpose. To develop proficiency in conducting AI missions.

2.11.8.2 General. Emphasize mission planning, tactical decision making, mutual support and target acquisition/destruction. Ordnance types may be substituted based on the mission, threat, and tactics and training requirements. The commanding officer may authorize inert ordnance in lieu of live ordnance when necessary. Aircraft should be configured with operable CVRS, ALQ-126B/165, ALR-67, CATM-9X, TPOD, KY-58, CIT, Link-16, JHMCS, and chaff/flare.

2.11.8.3 Ground/Academic Training. Aircrew shall complete all AI academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SAI-3701 1.0 365 R,M 4(2) TOFT S (NS)

Goal. Conduct a section AI mission against a target with integrated air defenses. Emphasize air-to-ground and air-to-air mission planning, tactical decision making, and target acquisition.

Requirement. Plan a strike route. Weaponeer a specific target using two GBU-31 (quantity release) and one GBU-10/12/16. With a minimum of 50 NM separation, the fighters will attack and destroy a specific target, target destruction

required. Fighters will be aggressed both inbound and outbound. Adversaries will operate with a FEZ/MEZ mindset, level 3 or 4, SAR-1/IR-3 missiles. IADs will be constructed at the discretion of the flight lead. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. PHID will be satisfied in ample time to allow BVR weapons employment. Three runs (ingress to a complete egress) are required for completion.

Performance Standards

Recognize and react appropriately to threats.
Adhere to planned air-to-air/air-to-ground timeline and target area tactics.
Deliver weapons on planned DPI.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Take valid shots.

Prerequisite. AS-2310, AA-2507.

AI-3702 1.3 365 R,M 2+ FA-18A/C/D vs. 2 Adversaries A

Goal. Conduct a section, day, low altitude, unguided ordnance AI mission against a target with integrated air defenses. Emphasize air-to-ground and air-to-air mission planning, tactical decision making, timeline awareness, mutual support, target acquisition and target destruction.

Requirement. Plan a strike route. Weaponeer a specific target using unguided ordnance. With a minimum of 50 NM separation, the fighters will attack and destroy a specific target, target destruction required. Fighters will be aggressed both inbound and outbound. Adversaries will operate with a FEZ/MEZ mindset, level 3 or 4, SAR-1/IR-3 missiles. IADs will be constructed at the discretion of the flight lead. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. PHID will be satisfied in ample time to allow BVR weapons employment.

Performance Standards

Recognize and react appropriately to threats.
Adhere to planned air-to-air/air-to-ground timeline and target area tactics.
Deliver weapons on planned DMPI.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Take valid shots.

Prerequisite. AI-3701.

Ordnance. 4 Mk-82/83/84, CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. TGT, AA, EW, SST, TCTS, TGT-DISP, LSR, EXP.

External Syllabus Support. Two adversaries and one tanker (if AAR required).

SAI-3703 1.0 180 R,M 4(2) TOFT S (NS)

Goal. Conduct a division, medium altitude, PGM AI mission against a target with integrated air defenses. Emphasize air-to-ground and air-to-air mission planning, tactical decision making, mutual support, timeline awareness, target acquisition and target destruction.

Requirement. Plan a strike route. Weaponeer a specific target using PGMs. With a minimum of 50 NM separation, the fighters will attack and destroy a specific target, target destruction required. Fighters will be aggressed both inbound and outbound. Adversaries will operate with a FEZ/MEZ mindset, level 3 or 4, SAR-1/IR-3 missiles. IADs will be constructed at the discretion of the flight lead. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. PHID will be satisfied in ample time to allow BVR weapons employment.

Performance Standards

Recognize and react appropriately to threats.

Adhere to planned air-to-air/air-to-ground timeline and target area tactics.

Deliver weapons on planned DPI.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Take valid shots.

Prerequisite. AS-2310, SAA-2507.

Ordnance. 2 GBU-31/32/38 or 2 GBU-10/12/16, CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, AA, EW, TCTS, TGT-DISP, LSR, JDAM.

External Syllabus Support. Two or more adversaries and one tanker (if AAR required).

AI-3704 1.3 365 R,M 4 FA-18A/C/D A

Goal. Conduct a division, medium altitude, LGB AI mission against a target with integrated surface-to-air defenses. This flight will not be aggressed by adversaries IOT emphasize surface-to-air countertactics. Additionally, emphasize air-to-ground planning, tactical decision making, mutual support, target acquisition, and target destruction.

Requirement. Plan a strike route. Weaponeer a specific target using LGBs. With a minimum of 50 NM separation, the fighters will attack and destroy a specific target, target destruction required. IADs will be constructed at the discretion of the flight lead.

Performance Standards

Recognize and react appropriately to threats.

Adhere to planned air-to-air/air-to-ground timeline and target area tactics.

Deliver weapons on planned DPI.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Take valid shots.

Prerequisite. SAI-3703.

Ordnance. 2 GBU-12/16, CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, AA, EW, TCTS, TGT-DISP, LSR, EXP.

External Syllabus Support. 1 tanker (if AAR required).

AI-3705 1.3 180 R,M 4 FA-18A/C/D vs. 2+ Adversaries A NS

Goal. Conduct a division, night, medium altitude, IAM AI mission against a target with integrated air defenses. Emphasize air-to-ground and air-to-air mission planning, tactical decision making, mutual support, timeline awareness, target acquisition, and target destruction.

Requirement. Plan a strike route. Weaponeer a specific target using JDAM. With a minimum of 50 NM separation, the fighters will attack and destroy a specific target, target destruction required. Fighters will be aggressed both inbound and outbound. Adversaries will operate with a FEZ/MEZ mindset, level 3 or 4, SAR-1/IR-3 missiles. IADs will be constructed at the discretion of the flight lead. Fighter weapon control status is tight with PHID criteria set by the flight lead according to theater of operation. PHID will be satisfied in ample time to allow BVR weapons employment.

Performance Standards

Recognize and react appropriately to threats.
Adhere to planned air-to-air/air-to-ground timeline and target area tactics.
Deliver weapons on planned DPI.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Take valid shots.

Prerequisite. AI-3704, ACPM 8300-8351.

Ordnance. 2 GBU-32/38 (live or inert), CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, AA, EW, TCTS, TGT-DISP, LSR, JDAM, EXP.

External Syllabus Support. Two or more adversaries and one tanker (if AAR required).

2.11.9 Expeditionary Shore-Based Operations (EXP)

2.11.9.1 Purpose. Maintain proficiency in operations at airfields away from home field and/or in theater.

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

EXP-3800 0.0 365 R,M 1 FA-18A/C/D A (NS)

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 code shall be logged in conjunction with any other training flight when executed outside of the home field boundaries.

Prerequisite. FAM-2102.

2.11.10 Forward Air Controller (Airborne) (FAC(A)) FA-18D

2.11.10.1 Purpose. To develop proficiency in FAC(A).

2.11.10.2 General

a. The JCAS AP MOA 2004-02 with update of 21 July 2008 (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 or exceed the JFAC(A) MOA requirements for training and controls (12 controls; 8 of these 12 controls must be Type 1, 8 controls must be fixed wing, 4 controls must have CAS assets expend live or training ordnance, and at least 1 must be at night). The JFAC(A) MOA can be found on the SIPRNET at <http://jfaca.mawts1.usmc.smil.mil>. Aircrew conducting FAC(A) operations shall comply with the policies contained in the most recent version of the JFAC(A) MOA.

b. Prior to beginning this stage, FA-18D pilots shall be designated as a section leader by the commanding officer and be AR proficient. WSOs shall be AS, CAS, and AR proficient with the AS, AR/SCAR, and CAS events of the section leader work-up syllabus completed (section leader SL-6302 through SL-6308 complete).

c. Nonqualified aircrew will fly FAC(A)-3801 through FAC(A)-3812 with a MAWTS-1 certified FA-18D FAC(A)I designated by the commanding officer. The FAC(A)I may be in the FAC(A) or escort aircraft. The FAC(A)I may simulate the JTAC if one is not available. The SFAC(A)-3801 and 3802 will be completed with a FAC(A)I at the simulator console.

d. Upon successful completion of FAC(A)-3801 through FAC(A)-3812 and compliance with JFAC(A) MOA certification requirements, the commanding officer may issue a T&R FAC(A) qualification as well as a JFAC(A) MOA FAC(A) certification.

e. A non-qualified FAC(A) aircrew must have a FAC(A)I in the section and may not control CAS aircraft delivering actual ordnance closer than the most conservative of minimum safe distance, 1000 meters, or range regulations. A FAC(A) qualified aircrew (pilot and WSO for FA-18D) may not employ CAS aircraft delivering actual ordnance closer than the most conservative of minimum safe distance or range regulations.

f. In an FA-18D aircraft, separate work-up sorties are preferred for each crew member. If both FA-18D aircrew are undergoing FAC(A) qualification concurrently, they should split the tactical briefing and debriefing responsibilities for each flight.

g. FAC(A)-3810 through FAC(A)-3812 are exercises in integrating the fire support assets previously controlled separately in the FAC(A) syllabus. The intent is to expose prospective FAC(A) aircrew to the unique challenges posed by each asset when integrated with FW CAS. Each sortie should concentrate on the integration procedures for a different asset, culminating in a final FAC(A)-3812 checkride using multiple fire support assets. If FAC(A)-3810 integrates IDF assets, FAC(A)-3811 should integrate RW/UAS CAS and vice versa. If RW/UAS assets are integrated, emphasis should be on combined or sectored (sequential or simultaneous) attacks. If IDF is integrated, emphasis should be on altitude or lateral deconfliction of fires. At a minimum, IDF must be integrated into one of the sorties in the FAC(A)-3810 through FAC(A)-3812, with FAC(A)-3810 being the preferred sortie.

h. Failure to meet JFAC(A) MOA currency requirements or loss of T&R proficiency (delinquent refly factor) for all associated FAC(A) qualification events (per paragraph 500.1.b) constitutes loss of the FAC(A) qualification.

i. Aircrew who have lost the FAC(A) qualification due to failure to meet JFAC(A) MOA currency requirements shall regain the FAC(A) qualification by successfully completing events as delineated in the appropriate T&R syllabus under the supervision of a current and qualified FAC(A) or FAC(A)I. At a minimum, such aircrew must complete the number and category (appropriate night, control type, ordnance, etc.) of controls the individual failed to accomplish during the appropriate six-month currency period (6 controls; 4 of these 6 controls must be Type 1, 2 controls must be fixed wing Type 1, 1 control must have CAS assets expend live or training ordnance, and at least 1 must be at night).

j. Aircrew who have lost the FAC(A) qualification due to exceeding the refly interval in all associated qualification events, or who have been FAC(A) unqualified for 18 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the refresher FAC(A) syllabus under the supervision of a FAC(A)I and conduct a minimum of 6 controls (4 of these 6 controls must be Type 1, 2 controls must be fixed wing Type 1, 1 control must have CAS assets expend live or training ordnance, and at least 1 must be at night).

k. The intent of the T&R refly intervals is to meet the JFAC(A) MOA minimum requirements for currency controls:

JFAC(A) MOA Requirements				
Interval	Total Controls	Type 1	FW Type 1	Ordnance/ Night
180 days	6	4	2	1/1

1. Escort aircraft that are not flown by a FAC(A)I conducting instruction during a FAC(A) workup will log a AESC-4303 (FAC(A) Escort) code. Escort aircraft that are flown by a FAC(A)I conducting instruction during a FAC(A)/FAC(A)I workup will log the appropriate FAC(A) code and log the FAC(A) controls. Escort aircraft will not fulfill the external support requirement of a FW CAS element for any FAC(A) qualification workup sortie.

m. Aircraft should be configured with operable VTR/CVRS, ALR-67, CATM-9X, TPOD, LST, KY-58, DCS/VMF, Link-16, JHMCS, and chaff/flare.

2.11.10.3 Ground/Academic Training. Aircrew shall complete all FAC(A) academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SFAC(A)-3801 1.5 540 R 2+ TOFT S

Goal. Introduce FAC(A) FW Type 1 and 2 control procedures with PGMs/IAMs in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft using level and roll-in delivery profiles. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate laser mark on target and guide one LGW to impact. Provide BHA. Six controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide laser mark using proper J-LASER terminology and successfully guides LGW to impact, if required.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2 control TTPs IAW JCAS using proper terminology.

Prerequisite. SL-6319 (Pilot), SL-6302 thru SL-6308 (WSO).

SFAC(A)-3802 1.5 180 R,M 2+ TOFT S

Goal. Introduce FAC(A) FW Type 1/3 control procedures with GP ordnance in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control three Type 1 and one Type 3 attacks by FW aircraft using low threat tactics and GP ordnance. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate marking rounds on target, with a minimum of one mark via aircraft ordnance. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft and the ability to provide talk-ons. Provide BHA. Six controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide accurate verbal description during talk-on attacks.

When required, mark the target with a CEP less than 300 meters.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendlies, systems, and environment.
Execute FAC(A) Type 1/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-3801.

FAC(A)-3803 1.3 * 1 FA-18D and 1 Escort A

Goal. Introduce FAC(A) FW Type 1 and 2 control procedures with PGMs/IAMs in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft using level and roll-in delivery profiles. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate laser mark on target and guide one LGW to impact. Provide BHA. Four controls required for completion. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated JDAM/LGB deliveries.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide laser mark using proper J-LASER terminology and successfully guides LGW to impact, if required.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-3802.

Ordnance. 2 GBU-12/16, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, JCAS, SST, EXP.

External Syllabus Support. One or two FW CAS elements with live, inert, or captive PGMs and a JTAC. LSTs are desired.

FAC(A)-3804 1.3 180 R,M 1 FA-18D and 1 Escort A (NS)

Goal. Introduce FAC(A) FW Type 1/3 control procedures with GP ordnance in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control three Type 1 and one Type 3 attacks by FW aircraft using low threat tactics and GP ordnance. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate marking rounds on target, with a minimum of one mark via aircraft ordnance. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft and the

ability to provide talk-ons. Provide BHA. Four controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide accurate verbal description during talk-on attacks. When required, mark the target with a CEP less than 300 meters.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendlies, systems, and environment.

Execute FAC(A) Type 1/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-3803.

Ordnance. Two pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. RSTD, JCAS, SST, EXP.

External Syllabus Support. One or two FW CAS elements with live or inert GP ordnance and a JTAC.

FAC(A)-3805 1.3 * 1 FA-18D and 1 Escort A (NS)

Goal. Introduce FAC(A) RW Type 1, 2, and 3 control procedures in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control one Type 1, two Type 2, and two Type 3 attacks by attack helicopters. Use appropriate RW CAS briefing and control procedures. Perform authentication procedures. Deliver marking rounds/talk-on (rockets/guns/TOW) or provide laser designation (Hellfire). If conducted at night, use appropriate tactics for target illumination if necessary. For Type 1 (rockets/guns) controls, emphasis should be on providing corrections, ensuring compliance with limit-of-advance and providing threat lookout for RW assets in the target area. For Type 2 (TOW) controls, emphasis should be on providing a target sort and ensuring no friendlies in the SDZ. Two TOW/Hellfire controls are required for completion. One of the two controls must have the FAC(A) lasing for Hellfire employment. Simulated TOW and captive Hellfire are acceptable.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide accurate verbal description during talk-on attacks.

If required, mark the target with a CEP less than 300 meters.

Provide laser mark using proper J-LASER terminology.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendlies, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-3804.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. RSTD, JCAS, SST, EXP.

External Syllabus Support. One or two RW CAS elements with live/captive Hellfire and a JTAC.

FAC(A)-3806 1.3 * 1 FA-18D and 1 Escort or 1+ TOFT A/S (NS)

Goal. Introduce mortar/artillery airspot.

Requirement. Perform visual/sensor reconnaissance on three 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. One adjust fire (laser grid), one immediate suppression, one SEAD mission, and one high threat SEAD mission required for completion. Emphasis on high-threat airspot is FAC(A) positioning to provide redundant mark and accurate corrections for IDF with simulated weather of overcast at 8K' MSL. Both SEAD missions must include marking and suppression of targets.

Performance Standards

Execute appropriate search, detection, and identification profiles.
Correctly use aircraft systems for target coordinate and 9-line generation.
Employ proper communications 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 JTAC.

Prerequisite. FAM-2102.

Ordnance. 40 Chaff, 20 Flare.

Range Requirements. JCAS, SST, EXP.

External Syllabus Support. IDF asset (mortars or artillery) and a JTAC or FO. IDF asset requires a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds.

SFAC(A)-3807 1.0 365 R,M 2+ TOFT S (NS)

Goal. Introduce FAC(A) Type 1/2/3 control procedures in an urban environment in the simulator.

Requirement. Perform visual/sensor reconnaissance of three separate targets in an urban environment, generating target coordinates with aircraft systems. Plot targets on Gridded Reference Graphic (GRG) and prepare target briefs. Control two Type 1 and two Type 2/3 attacks by aircraft. Use appropriate CAS briefing and control procedures. Deliver or

26 Jun 12

coordinate marks as required. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft, and the ability to provide GRG-based talk-ons. Integrate fires with JTAC via datalink from TPOD to remote station, if so equipped. Four controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate, 9-line and BHA generation.

Provide accurate verbal description during GRG talk-on attacks.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-3805.

Ordinance. 1 AGM-65E (captive or live), 1 GBU-12/16, 250 20mm, 40 Chaff, 20 Flare (simulated).

FAC(A)-3808 1.3 180 R,M 1 FA-18D and 1 Escort A NS

Goal. Introduce FAC(A) Night Systems procedures in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate marking rounds or IR/laser mark on target. At least one Type 1 control must use an IR pointer, if so equipped. At least one Type 1 control must be supported by air-delivered covert illumination (LUU-19). Demonstrate the ability to provide timely, accurate corrections for CAS aircraft. Provide BHA. Four controls required for completion. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated JDAM/LGB deliveries. If LUU-19s are not available, LUU-2s/illum rockets may be substituted.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide IR/laser mark using proper terminology.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-3804.

Ordinance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 4 LUU-19/LUU-2 or 1 pod 2.75" Illum rockets, 40 Chaff, 20 Flares.

Range Requirements. JCAS, SST, EXP.

External Syllabus Support. One or two FW CAS elements and a JTAC.

SFAC(A)-3809 1.0 540 R,M 2+ TOFT S

Goal. Adverse weather, high-threat (restrictive) FAC(A) control procedures.

Requirement. Conduct Type 1 high-threat FAC(A) controls. Emphasize C3 integration, target area flow/integration/timing, sensor management, switchology, and crew resource management. Four Type 1 controls required for completion. SEAD CFF mission must be given for each TOT. FAC(A)I at the simulator console must simulate C3 agencies, TACP, indirect fire assets, and CAS aircraft. Simulated weather is overcast at 8K'.

Performance Standards

Correctly use aircraft systems for target coordinate and 9-line generation.

Ensure proper coordination and approval for IDF and CAS attacks.

Employ proper communications format with the firing unit.

Position FAC(A) aircraft appropriately to provide marking and control while executing FAC(A) profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-3808.

SFAC(A)-3810 1.5 180 R,M 2+ TOFT S NS

Goal. Practice FAC(A) multi-element and supporting arms integration in the simulator.

Requirement. Perform visual/sensor reconnaissance, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Plan and execute at least one integrated attack utilizing three or more elements. For FW/RW/UAS integration, emphasis is on conducting a sector or combined (simultaneous or sequential) attack. For CAS/IDF integration, time, altitude, or lateral deconfliction can be used.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Ensure proper coordination and approval for IDF and CAS attacks.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-3809.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare (simulated).

FAC(A)-3811 1.3 * 1 FA-18D and 1 Escort A (NS)

Goal. Introduce FAC(A) two-element integration procedures in a medium (restrictive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft utilizing medium threat tactics. Deliver or coordinate marks on target. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft. Provide BHA. Four controls required for completion. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated IAM/LGB deliveries.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Ensure proper coordination and approval for IDF, rotary wing, and fixed wing attacks.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-3810.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. JCAS, EXP.

External Syllabus Support. One FW CAS element, one additional fire support asset (RW CAS/UAS CAS/IDF), and a JTAC. If IDF is to be used 10 HE rds, 4 WP rds for marking or suppression required.

FAC(A)-3812 1.3 365 R,M 1 FA-18D and 1 Escort A NS

Goal. Practice FAC(A) multi-element and supporting arms integration.

Requirement. Perform visual/sensor reconnaissance, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Plan and execute at least one integrated attack utilizing three or more elements. For FW/RW/UAS integration, emphasis is on conducting a sectored or combined (simultaneous or sequential) attack. For CAS/IDF integration, time, altitude, or lateral deconfliction can be used. This evaluation sortie should be flown in a MAGTF-level exercise if possible.

Performance Standards

Execute appropriate search, detection, and identification profiles.
Correctly use aircraft systems for target coordinate and 9-line generation.
Ensure proper coordination and approval for IDF and CAS attacks.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.
Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-3811.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. JCAS, EXP.

External Syllabus Support. Minimum of 3 fire support assets (FW CAS/RW CAS/UAS CAS/IDF) and a JTAC. IDF asset requires 10 HE rds, 4 WP rds.

2.11.11 Tactical Air Coordinator (Airborne) TAC(A)

2.11.11.1 Purpose. To develop proficiency in TAC(A).

2.11.11.2 General

a. This phase of training is designed for experienced aircrew.

b. Prior to commencing the TAC(A) syllabus, aircrew must be FAC(A) qualified. Non-qualified aircrew will fly TAC(A)-3901 with a MAWTS-1 certified TAC(A)I designated by the commanding officer. The TAC(A)I may be in the escort aircraft.

c. The commanding officer may designate aircrew as TAC(A) qualified upon successful completion of this phase of training via the TAC(A)-3901.

2.11.11.3 Ground/Academic Training. Aircrew shall complete all TAC(A) academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

TAC(A)-3901 1.3 540 R,M 1+ FA-18D A (NS)

Goal. Practice TAC(A) procedures with multiple terminal controllers.

Requirement. Perform coordination of attack aircraft and multiple terminal controllers. Receive attack briefings from the JTAC/FAC(A) and assign appropriate CAS aircraft. Coordinate target mark and control with the JTAC/FAC(A). Manage assigned airspace and provide command and control system with essential elements of information. Perform authentication procedures (as required).

Performance Standards

Accurately copy immediate JTAR.
Coordinate timely CAS in response to immediate request.

Pass CAS aircraft BHA via the C3 system.

Prerequisite. FAC(A)-3810.

Range Requirements. MOA.

External Syllabus Support. JTAC/FAC(A) and two or more CAS elements.

2.12 CORE PLUS SKILL PHASE

2.12.1 General. This phase contains Core Plus Skills training a community may accomplish. Although Core Plus Skills training events may provide valuable training opportunities, they are not measured as part of unit capability reporting. Skills contained in this phase are associated with low probability of execution and/or theater/basing specific requirements. This phase of training allows additional unit training flexibility.

2.12.2 Field Expeditionary/Carrier Landing Qualification (FCLP/CQ)

2.12.2.1 Purpose. To practice for carrier operations or qualify for SELF operations.

2.12.2.2 General. The FCLP simulator is a prerequisite for the corresponding training flight when qualification is aboard a CV. Each FCLP flight is a training flight for CV qualification. Completion of FCLP-4102 completes the SELF qualification syllabus. Completion of CQ-4104 completes the CV qualification syllabus.

2.12.2.3 Ground Training. IAW LSO NATOPS.

SFCLP/CQ-4101 1.0 * R 1+ TOFT S

Goal. Conduct simulated carrier landings using Case I and Case III procedures. Emphasize pattern procedures, landing technique, deck procedures, and emergency procedures.

Requirement. Perform Case I and two Case III recoveries to multiple carrier landings. Four passes required for completion. Simulator must be monitored by an LSO.

Prerequisite. FAM-2102.

External Syllabus Support. LSO.

FCLP/CQ-4102 1.0 365 R 1+ FA-18A/C/D A

Goal. Practice day FCLP procedures or qualify for day expeditionary landing operations.

Requirement. Conduct FCLPs under the control of an LSO. Six touch and go's required for completion. For EQ, perform four touch and go's, an arrested landing, and a launch from an expeditionary airfield.

Performance Standards

Fly five passes IAW LSO NATOPS criteria.

Respond quickly and safely to all communications and comm out signals from LSO if required.

Prerequisite. FAM-2102, SCQ-4101..

Range Requirement. SELF or airfield with FCLP pattern, carrier box, and fresnel lens.

External Syllabus Support. LSO.

FCLP/CQ-4103 1.0 365 R,M 1+ FA-18A/C/D A N

Goal. Practice night FCLP procedures or qualify for night expeditionary landing operations.

Requirement. Conduct FCLPs under the control of an LSO. Six touch and go's required for completion. For EQ, perform four touch and go's, an arrested landing, and a launch from an expeditionary airfield.

Performance Standards

Fly five passes IAW LSO NATOPS Criteria.

Respond quickly and safely to all communications and comm out signals from LSO if required.

Prerequisite. FAM-2102, FCLP-4102.

Range Requirement. SELF or airfield with FCLP pattern, carrier box, and fresnel lens. For CQ, CV-compatible ACLS or ICLS.

External Syllabus Support. LSO.

FCLP/CQ-4104 1.0 365 R 1+ FA-18A/C/D A

Goal. Qualify for day carrier landing operations.

Requirement. IAW LSO NATOPS.

Performance Standards

IAW LSO NATOPS.

Prerequisite. FAM-2102, FCLP-4102.

External Syllabus Support. LSO.

FCLP/CQ-4105 1.0 365 R,M 1+ FA-18A/C/D A N

Goal. Qualify for night carrier landing operations.

Requirement. IAW LSO NATOPS.

Performance Standards

IAW LSO NATOPS.

Prerequisite. FAM-2102, FCLP-4103, CQ-4104.

External Syllabus Support. LSO.

2.12.3 Multi-sensor Imagery Reconnaissance (MIR)

2.12.3.1 Purpose. Develop proficiency at multi-sensor imagery reconnaissance with a targeting sensor (TPOD) or the Advanced Tactical Airborne Reconnaissance System (ATARS).

2.12.3.2 General

a. Emphasize integrated mission planning, search profiles, sensor employment, and information flow through the C3 system. Both pre-planned collection and targets of opportunity techniques will be executed. Aircraft should also be configured with operable CVRS, ALQ-126B/165, ALR-67, KY-58, CATM-9X, and chaff/flare.

b. ATARS aircraft must be configured with two operable Digital Tape Recorders, ATARS sensors, and APG-73.

2.12.3.3 Academic Training. Refer to MAWTS-1 FA-18 Course Catalog.

MIR-4201	1.3	365	R,M	1+ FA-18A/C	A (NS)
MIR-4201	1.3	*		1+ FA-18D	A (NS)

Goal. Introduce tactics, techniques, and procedures associated with Non-Traditional Intelligence, Surveillance and Reconnaissance (NTISR) missions with an advanced targeting sensor (Gen 3 or later TPOD). Emphasize mission planning, target acquisition, and employment of a TPOD in a permissive environment.

Requirement. Conduct medium altitude NTISR as a section to detect both pre-planned targets and targets of opportunity within an permissive urban environment.

Performance Standards

Conduct NTISR of named areas of interest and detect targets. Properly identify targets within the area of interest. Effectively communicate position and description of target. Effectively manage sensor search to minimize time to detect.

Prerequisite. AR-3201.

Range Requirements. MOA, URBN TRG.

MIR-4202	1.3	365	R,M	1+ FA-18D	A (NS)
----------	-----	-----	-----	-----------	--------

Goal. Introduce Electro-optical (EO), Infrared (IR) and Synthetic Aperture Radar (SAR) imagery collection while employing ATARS. Emphasize mission planning, target acquisition, and employment of EO, IR and SAR sensors while executing a day AR mission.

Requirement. Conduct high and low altitude AR to detect and collect EO/IR/SAR imagery of both pre-planned targets and targets of opportunity. A minimum of one vertical, one high oblique, and one low oblique EO image will be collected. A minimum of two SAR strip maps and two SAR spot maps are required. Complementary IR imagery will be collected simultaneously when applicable.

Performance Standards

Conduct AR of named areas of interest and detect targets.
Collect preplanned imagery using all EO, IR and SAR sensors.
Collect imagery of targets of opportunity with all EO/IR/SAR sensors.

Prerequisite. FAM-2102.

Ordinance. 40 Chaff, 20 Flare.

Range Requirements. RSTD, TGT, EXP.

2.12.4 Aerial Escort (AESC)

2.12.4.1 Purpose. To develop proficiency in conducting convoy and assault support escort missions.

2.12.4.2 General. Emphasize mission planning, tactical decision making, element positioning, threat acquisition, neutralization or destruction. Aircraft should be configured with operable VTR/CVRS, ALR-67, CATM-9X, TPOD, KY-58, and chaff/flare.

2.12.4.3 Ground/Academic Training. Aircrew shall complete all AESC academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SAESC-4301 1.0 540 R,M 2 TOFT S (NS)

Goal. Conduct convoy escort. Emphasize mission planning, target precedence, search pattern, attack parameters, delivery modes, designation techniques, and information flow through the C3 system.

Requirement. Conduct convoy escort along a route to locate and destroy targets of opportunity in a low or medium threat environment.

Performance Standards

Locate and attack targets.
Inform convoy leader of threats.
Maintain mutual support with convoy.
Effectively communicate status of convoy to C3 agencies.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Prerequisite. AR-3203.

Ordinance. CATM-9X, 4 BDU-45/MK-83 inert, 40 Chaff, 20 Flare.

Range Requirements. RSTD, LSR, TGT-DISP, TGT-MOVE, EXP, TGT.

External Syllabus Support. One vehicle convoy. Two rotary wing escort aircraft desired.

AESC-4302 1.3 540 R,M 2 FA-18A/C/D A (NS)

Goal. Conduct assault support escort. Emphasize mission planning, target precedence, search pattern, attack

parameters, delivery modes, designation techniques, and information flow through the C3 system.

Requirement. Conduct assault support along a route to locate and destroy targets of opportunity in a low or medium threat environment.

Performance Standards

Locate and attack targets.
Inform assault support flight of threats.
Maintain mutual support with assault support package.
Effectively communicate status of assault support package to C3 agencies.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Prerequisite. AR-3203.

Ordnance. CATM-9X, 4 BDU-45/MK-83 inert, 40 Chaff, 20 Flare.

Range Requirements. RSTD, LSR, TGT-DISP, TGT-MOVE, EXP, TGT.

External Syllabus Support. One Helicopter/Assault element.

AESC-4303 1.3 * 1 FA-18D A (NS)

Goal. Introduce escort procedures for FAC(A) wingman.

Requirement. Perform wingman duties during a FAC(A) mission. Provide mutual support, threat lookout, and duties assigned by the FAC(A) aircraft. Emphasis on communication relay and backup marks.

Performance Standards

Maintain mutual support and threat lookout throughout mission. Maintain situational awareness to rapidly assist FAC(A) with backup marks and alternate radio communications.

Prerequisite. FAM-2102.

Ordnance. 1 AGM-65E (captive or live), 1 GBU-12/16 or 2 pods 2.75"/5.0" rockets, 40 Chaff, 20 Flare.

Range Requirements. MOA, JCAS, EXP.

External Syllabus Support. Two or more CAS aircraft. Indirect fire and C3 agencies preferred.

2.12.5 Attack Enemy Maritime Targets (AMT)

2.12.5.1 Purpose. To conduct sea control missions.

2.12.5.2 General. These sorties are designed to be flown by a squadron as part of their training program in preparation for deployment as part of a CVW/MAW.

2.12.5.3 Ground/Academic Training. Refer to NSAWC and applicable Strike-Fighter Wing Weapons School courses.

SAMT-4401 1.0 * 1+ TOFT S (NS)

Goal. Conduct simulated mine-laying operations. Emphasize mine line planning, proper stores management, switchology, and mine placement.

Requirement. Perform a minimum of three runs using flight director(FD) mode and one run using AUTO.

Performance Standards

Mine placement IAW mission planning.
Mine delivery IAW specified profile.
Proper use of Flight Director mode.

SAMT-4402 1.0 365 R,M 2 TOFT S/A (NS)

Goal. Practice employment of SLAM-ER/Harpoon munitions. Emphasize weapons capabilities and limitations, mission planning factors, stores management and cockpit displays, and employment techniques.

Requirement. Plan and conduct multiple SLAM-ER and Harpoon deliveries. A minimum of four SLAM-ER and two Harpoon deliveries are required for completion. Each of the SLAM-ER deliveries will be from launch through datalink and terminal guidance.

Performance Standards

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Execute proper procedures for weapon programming and release.
Execute proper procedures for weapon terminal guidance.

AMT-4403 1.3 365 R,M 2 FA-18A/C/D A (NS)

Goal. Conduct a Sea Surface Control (SSC) mission in support of the Anti-Surface Warfare Commander's objectives. Emphasize target acquisition, identification, command and control coordination, and weapons employment, if required.

Requirement. Conduct SSC in the assigned sector to locate, classify, identify, and engage surface contacts.

Performance Standards

Locate assigned targets using all available sensors.
Classify and identify surface contacts based on briefing and mission planning.
Obtain mission recorder data and/or target photographs of assigned targets.
Engage surface contacts with appropriate weapons.
Use clear, concise, correct communication with command and control agencies to maintain information flow.

Prerequisite. AR-3203.

Range Requirement. MOA.

External Syllabus Support Required. Controlling naval surface platform.

AMT-4404 1.3 365 R,M 2 FA-18A/C/D A (NS)

Goal. Conduct a section or division War-at-Sea Exercise (WASEX) strike mission. Emphasize mission planning, target acquisition, tactical decision-making, mutual support, threat reaction, and target destruction.

Requirement. Attack and destroy hostile naval forces. Select appropriate weapons for assigned target/target sets. Execute ingress, ordnance delivery, and egress tactics consistent with the threat.

Performance Standards

Locate assigned targets using all available sensors. Classify and identify surface contacts based on briefing and mission planning.

Maintain pre-briefed formation and mutual support.

Recognize and reacts appropriately to threats.

Engage surface contacts with appropriate weapons.

Use clear, concise, correct communication with command and control agencies to maintain information flow.

Prerequisite. AI-3704, AI-3705(NS).

Range Requirements. MOA.

External Syllabus Support Required. Controlling naval surface platform.

2.12.6 Active Air Defense (AAD)

2.12.6.1 Purpose. To gain and maintain proficiency in AAD missions.

2.12.6.2 General. Emphasize mission planning, mutual support, knowledge of air-to-air weapons and tactics, timeline awareness, sensor usage, standardized communication, weapons employment, AIC integration, short range radar mechanics, and targeting. Aircraft should be configured with operable CVRS, ALQ-126B/165, ALR-67, CATM-9X, TPOD, KY-58, CIT, Link-16, JHMCS, and chaff/flare. AIC and TCTS range should be utilized to the maximum extent possible. If co-located with AIC controllers, a face-to-face brief and debrief should be conducted for all engagements.

2.12.6.3 Ground/Academic Training. Aircrew shall complete all AAD academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

AAD-4501 1.3 365 R,M 4 FA-18A/C/D vs. 4+ (Dissimilar)
Adversaries A (NS)

Goal. Conduct a division DCA (Area Defense) mission against an unknown number of SAR-2/AR-1 capable adversaries with EA using Fighter Tactics (FT). Emphasize commit criteria, fighter engagement zone management, targeting/sorting, timeline awareness, valid weapons employment, cold operations and standardized communications. Link-16 is required for completion.

Requirement. One 20 min vulnerability period required for completion. One VID required.

Performance Standards

Execute proper radar mechanics.
Execute proper targeting.
Execute proper cold ops.
Maintain visual/fluid mutual support.
Execute proper VID mechanics.
Take valid shots.
Timeline awareness.
Tactical decision making IAW mission objectives.

Prerequisite. SAAD-3405.

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, MACH 1+, TCTS, L-16 NETWORK.

External Syllabus Support. AIC, Four or more (dissimilar) adversaries.

AAD-4502 1.3 365 R,M 1+ FA-18A/C/D vs. 1+ RW/Prop A (NS)

Goal. Introduce aircrew to helicopter/prop aircraft attack. Emphasize optimum weapons employment profiles.

Requirement. Conduct visual attacks against helicopters/prop aircraft using appropriate captive air-to-air and simulated air-to-ground ordnance. One attack with a radar missile, one attack with the CATM-9X, one attack with the air-to-air gun, one attack with the air-to-ground gun, and one attack with GP bomb required for completion.

Performance Standards

Maintain offensive position on adversary aircraft.
Valid weapons employment.

Prerequisite. AA-2508.

Ordnance. CATM-9X, CATM-7/120, 40 Chaff, 20 Flare.

Range Requirements. AA, EXP, MACH 1+, TCTS.

External Syllabus Support. One or more helicopters/prop aircraft.

2.12.7 Large Force Exercise (LFE)

2.12.7.1 Purpose. To conduct advanced LFE missions.

2.12.7.2 General. Emphasize mission planning, large force integration both ground and airborne, administrative and tactical decision making, and mission accomplishment. Aircraft should be configured with operable VTR/CVRS, ALR-67, CATM-9X, TCTS pod, TPOD, KY-58, and chaff/flare. Upon the completion of the LFE log the LFE T&R code and the appropriate 3000 phase T&R code.

2.12.7.3 Ground/Academic Training. None.

LFE-4601 1.3 365 R 6+ FA-18A/C/D vs. 4+ Adversaries A

Goal. Participate in a day LFE. Emphasize mission planning, integration, decision making and mission accomplishment.

Requirement. Participate in the planning and execution of a day LFE AI, OCA or DCA mission with a minimum of 10 aircraft.

Performance Standards

Effectively integrate into the LFE package.

Prerequisite. 2000 phase complete.

Ordnance. As required.

Range Requirements. AA, TGT, EXP, MACH 1+, LSR, SST, EW, JDAM, TGT-DISP.

External Syllabus Support. One tanker (if AAR required), four or more adversaries.

LFE-4602 1.3 365 R,M 6+ FA-18A/C/D vs. 4+ Adversaries A NS

Goal. Participate in a night LFE. Emphasize mission planning, integration, decision making and mission accomplishment.

Requirement. Participate in the planning and execution of a night LFE AI, OCA or DCA mission with a minimum of 10 aircraft.

Performance Standards

Effectively integrates into the LFE package.

Prerequisite. 2000 phase complete.

Ordnance. As required.

Range Requirements. AA, TGT, EXP, MACH 1+, LSR, SST, EW, JDAM, TGT-DISP.

External Syllabus Support. One tanker (if AAR required), four or more adversaries.

2.12.8 Night Systems Low Altitude Tactics (NSLAT) FA-18C/D

2.12.8.1 Purpose. To develop proficiency using Night Vision Devices (NVDs) in the low altitude environment.

2.12.8.2 General

a. A MAWTS-1 certified NSLATI pilot flight lead is required to fly with non-NSLAT qualified aircrew for NSLAT-4701 through NSLAT-4703 in FA-18C/D aircraft.

b. At the discretion of the commanding officer, NSLAT qualified aircrew may fly any night or night optional event in the T&R with the aid of NVDs. NSLAT qualified aircrew may fly to a minimum altitude of 1K' AGL in LLL conditions (lux less than 0.0022) and down to 300' AGL in HLL conditions (lux greater than 0.0022).

c. After successful completion of NSLAT-4703, the aircrew is eligible to be designated NSLAT qualified by the commanding officer.

d. Aircrew shall be NS-2405 complete and LAT qualified prior to NSLAT training. Consult T&R Program Manual for LAT and NS training policy.

2.12.8.3 Ground/Academic Training. Aircrew shall complete all NSLAT academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

NSLAT-4701 1.0 * 1+ TOFT S NS

Goal. Practice low altitude ingress, target acquisition and target attacks at night in the LAT environment.

Requirement. Evaluated by NSLATI pilot. Conduct a section low level and section attacks. One low level and four section attacks on a simulated raked range required for completion.

Performance Standards

Know and understand visual illusions associated with NVD usage.

Adhere to WASP delivery parameters and TACSOP valid delivery criteria.

Adhere to tactical abort parameters.

Prerequisite. AS-2306, NS-2405, LAT-2603.

NSLAT-4702 1.3 * 2 FA-18C/D A NS

Goal. Introduce night single ship 2D LAT using NVDs. Emphasize LAT procedures using NVDs, communications, and maneuver techniques.

Requirement. Evaluated by NSLATI pilot. As a single ship, perform descent to CL, straight and level, ridgeline crossings, and check/hard/break turns and Level S. Two circuits required for completion, the first circuit at CL no lower than 500' AGL and the remaining circuits at CL no lower than 300' AGL.

Performance Standards

Know and understand visual illusions associated with NVD usage.

Know and understand mission cross check times.

Prerequisite. NS 2402, LAT-2602, NSLAT-4701.

Range Requirements. LAT.

NSLAT-4703 1.3 365 R,M 2 FA-18C/D A NS

Goal. Introduce night section 2D LAT using NVDs.

Requirement. Evaluated by a NSLATI pilot. As a section, perform a descent to CL, straight and level, turns, ridgeline crossings, night formations, section level S, and section attacks. Two circuits required for completion, the first

circuit at CL no lower than 500' AGL and the remaining circuits at CL no lower than 300' AGL.

Performance Standards

Maintain formation in the LAT environment.
Know guidelines for NVD use outlined in T&R Program Manual.
Execute successful target attack and maintains mutual support.
Adhere to WASP delivery parameters and TACSOP valid delivery criteria.
Adhere to tactical abort parameters.

Prerequisite. NSLAT-4702.

Ordnance. 6 Mk-76, 40 Chaff, 20 Flare.

Range Requirements. LAT, EXP, RAKED RANGE.

2.12.9 Forward Air Controller (Airborne) (FAC(A)) FA-18A/C

2.12.9.1 Purpose. To develop proficiency in FAC(A).

2.12.9.2 General

a. The JCAS AP MOA 2004-02 with update of 21 July 2008 (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 or exceed the JFAC(A) MOA requirements for training and controls (12 controls; 8 of these 12 controls must be Type 1, 8 controls must be fixed wing, 4 controls must have CAS assets expend live or training ordnance, and at least 1 must be at night). The JFAC(A) MOA can be found on the SIPRNET at <http://jfaca.mawts1.usmc.smil.mil>. Aircrew conducting FAC(A) operations shall comply with the policies contained in the most recent version of the JFAC(A) MOA.

b. Prior to beginning this stage, FA-18A/C pilots will be either a division leader with prior ground FAC or FAC(A) experience or a mission commander.

c. FA-18A/C FAC(A) pilots will log 4000-phase codes for their FAC(A) syllabus [e.g., FAC(A)-3804 becomes FAC(A)-4804]. FAC(A) 4813 through FAC(A)-4816 sorties are not required for initial FAC(A) qualification and are FAC(A) Core Plus sorties for both FA-18D and FA-18A/C.

d. Nonqualified aircrew will fly SFAC(A)-4801 through FAC(A)-4812 with a MAWTS-1 certified FA-18A/C FAC(A)I or an FA-18D FAC(A)I crew designated by the commanding officer. The FAC(A)I will be in the escort aircraft. The FAC(A)I may simulate the JTAC if one is not available. The SFAC(A)-4801 and 4802 will be completed with a FAC(A)I at the simulator console.

e. Upon successful completion of SFAC(A)-4801 through FAC(A)-4812 and compliance with JFAC(A) MOA certification requirements, the commanding officer may issue a T&R FAC(A) qualification as well as a JFAC(A) MOA FAC(A) certification.

f. 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 minimum safe distance, 1000 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.

g. FAC(A)-4810 through FAC(A)-4812 are exercises in integrating the fire support assets previously controlled separately in the FAC(A) syllabus. The intent is to expose prospective FAC(A) aircrew to the unique challenges posed by each asset when integrated with FW CAS. Each sortie should concentrate on the integration procedures for a different asset, culminating in a final FAC(A)-4812 checkride using multiple fire support assets. If FAC(A)-4810 integrates IDF assets, FAC(A)-4811 should integrate RW/UAS CAS and vice versa. If RW/UAS assets are integrated, emphasis should be combined or sectored sequential/simultaneous attacks. If IDF is integrated, emphasis should be on altitude or lateral deconfliction of fires. At a minimum, IDF must be integrated into one of the sorties in the FAC(A)-4810 through FAC(A)-4812, with FAC(A)-4810 being the preferred sortie.

h. 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 FA-18A/C under the supervision of a FAC(A)I, in accordance with paragraph (4) above, prior to being FAC(A) qualified in an FA-18A/C squadron. An FA-18D FAC(A)I may attain an FA-18A/C FAC(A)I in accordance with the requirements of the MAWTS-1 Course Catalog.

i. Failure to meet JFAC(A) MOA 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.

j. Aircrew who have lost the FAC(A) qualification due to failure to meet JFAC(A) MOA currency requirements shall regain the FAC(A) qualification by successfully completing events as delineated in the appropriate T&R syllabus under the supervision of a qualified FAC(A) (recommend a current and qualified FAC(A) or FAC(A)I). At a minimum, such aircrew must complete the number and category (appropriate night, control type, ordnance, etc.) of controls the individual failed to accomplish during the appropriate six-month currency period (6 controls; 4 of these 6 controls must be Type 1, 2 controls must be fixed wing Type 1, 1 control must have CAS assets expend live or training ordnance, and at least 1 must be at night).

k. Aircrew who have lost the FAC(A) qualification due to exceeding the refly interval in all associated qualification events, or who have been FAC(A) unqualified for 18 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the Refresher FAC(A) syllabus under the supervision of a FAC(A)I and conduct a minimum of 6 controls (4 of these 6 controls must be Type 1, 2 controls must be fixed wing Type 1, 1 control must have CAS assets expend live or training ordnance, and at least 1 must be at night).

l. 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	Total Controls	Type 1	FW Type 1	Ordnance/ Night
180 days	6	4	2	1/1

m. Escort aircraft that are flown by a FAC(A)I conducting instruction during a FAC(A)/FAC(A)I workup will log the appropriate FAC(A)

code and log the FAC(A) controls. FA-18A/C FAC(A) flights should fly as a section, and the escort for an FA-18A/C FAC(A) shall be 2000 phase complete. Escort aircraft will not fulfill the external support requirement of a FW CAS element for any FAC(A) qualification workup sortie.

n. Aircraft should be configured with operable VTR/CVRS, ALR-67, CATM-9X, TPOD (Litening/ATFLIR), LST, KY-58, DCS/VMF, Link-16, JHMCS, and chaff/flare.

2.12.9.3 Ground/Academic Training. Aircrew shall complete all FAC(A) academic codes prior to completion of this phase of training. Refer to MAWTS-1 FA-18 Course Catalog.

SFAC(A)-4801 1.5 540 R 2+ TOFT S

Goal. Introduce FAC(A) FW Type 1 and 2 control procedures with PGMs/IAMs in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft using level and roll-in delivery profiles. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate laser mark on target and guide one LGW to impact. Provide BHA. Six controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.
Correctly use aircraft systems for target coordinate and 9-line generation.
Provide laser mark using proper J-LASER terminology and successfully guides LGW to impact, if required.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.
Execute FAC(A) Type 1/2 control TTPs IAW JCAS using proper terminology.

Prerequisite. SL-6319.

SFAC(A)-4802 1.5 180 R,M 2+ TOFT S

Goal. Introduce FAC(A) FW Type 1/3 control procedures with GP ordnance in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control three Type 1 and one Type 3 attacks by FW aircraft using low threat tactics and GP ordnance. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate marking rounds on target, with a minimum of one mark via aircraft ordnance. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft and the ability to provide talk-ons. Provide BHA. Six controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.
Correctly use aircraft systems for target coordinate and 9-line generation.
Provide accurate verbal description during talk-on attacks. When required, mark the target with a CEP less than 300 meters.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendlies, systems, and environment.
Execute FAC(A) Type 1/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-4801.

FAC(A)-4803 1.3 * 1 FA-18A/C and 1 Escort A

Goal. Introduce FAC(A) FW Type 1 and 2 control procedures with PGMs/IAMs in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft using level and roll-in delivery profiles. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate laser mark on target and guide one LGW to impact. Provide BHA. Four controls required for completion. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated JDAM/LGB deliveries.

Performance Standards

Execute appropriate search, detection, and identification profiles.
Correctly use aircraft systems for target coordinate and 9-line generation.
Provide laser mark using proper J-LASER terminology and successfully guides LGW to impact, if required.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.
Execute FAC(A) Type 1/2 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-4802.

Ordnance. 2 GBU-12/16, 250 20mm, 40 Chaff, 20 Flare.

Range Requirements. RSTD, JCAS, SST, EXP.

External Syllabus Support. One or two FW CAS elements with live, inert, or captive PGMs and a JTAC. LSTs are desired.

FAC(A)-4804 1.3 180 R,M 1 FA-18A/C and 1 Escort A (NS)

Goal. Introduce FAC(A) FW Type 1/3 control procedures with GP ordnance in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target

coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control three Type 1 and one Type 3 attacks by FW aircraft using low threat tactics and GP ordnance. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate marking rounds on target, with a minimum of one mark via aircraft ordnance. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft and the ability to provide talk-ons. Provide BHA. Four controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide accurate verbal description during talk-on attacks. When required, mark the target with a CEP less than 300 meters.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendlies, systems, and environment.

Execute FAC(A) Type 1/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-4803.

Ordnance. Two pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. RSTD, JCAS, SST, EXP.

External Syllabus Support. One or two FW CAS elements with live or inert GP ordnance and a JTAC.

FAC(A)-4805 1.3 * 1 FA-18A/C and 1 Escort A (NS)

Goal. Introduce FAC(A) RW Type 1, 2, and 3 control procedures in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control one Type 1, two Type 2, and two Type 3 attacks by attack helicopters. Use appropriate RW CAS briefing and control procedures. Perform authentication procedures. Deliver marking rounds/talk-on (rockets/guns/TOW) or provide laser designation (Hellfire). If conducted at night, use appropriate tactics for target illumination if necessary. For Type 1 (rockets/guns) controls, emphasis should be on providing corrections, ensuring compliance with limit-of-advance and providing threat lookout for RW assets in the target area. For Type 2 (TOW) controls, emphasis should be on providing a target sort and ensuring no friendlies in the SDZ. Two TOW/Hellfire controls are required for completion. One of the two controls must have the FAC(A) lasing for Hellfire employment. Simulated TOW and captive Hellfire are acceptable.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.
Provide accurate verbal description during talk-on attacks.
If required, mark the target with a CEP less than 300 meters.
Provide laser mark using proper J-LASER terminology.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendlies, systems, and environment.
Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-4804.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. RSTD, JCAS, SST, EXP.

External Syllabus Support. One or two RW CAS elements with live/captive Hellfire and a JTAC.

FAC(A)-4806 1.3 * 1 FA-18A/C and 1 Escort or 1+ TOFT A/S (NS)

Goal. Introduce mortar/artillery airspot.

Requirement. Perform visual/sensor reconnaissance on three 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. One adjust fire (laser grid), one immediate suppression, one SEAD mission, and one high threat SEAD mission required for completion. Emphasis on high-threat airspot is FAC(A) positioning to provide redundant mark and accurate corrections for IDF with simulated weather of overcast at 8K' MSL. Both SEAD missions must include marking and suppression of targets.

Performance Standards

Execute appropriate search, detection, and identification profiles.
Correctly use aircraft systems for target coordinate and 9-line generation.
Employ proper communications 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 JTAC.

Prerequisite. FAM-2102.

Ordnance. 40 Chaff, 20 Flare.

Range Requirements. JCAS, SST, EXP.

External Syllabus Support. IDF asset (mortars or artillery) and a JTAC or FO. IDF asset requires a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds.

SFAC(A)-4807 1.0 365 R,M 2+ TOFT S (NS)

Goal. Introduce FAC(A) Type 1/2/3 control procedures in an urban environment in the simulator.

Requirement. Perform visual/sensor reconnaissance of three separate targets in an urban environment, generating target coordinates with aircraft systems. Plot targets on Gridded Reference Graphic (GRG) and prepare target briefs. Control two Type 1 and two Type 2/3 attacks by aircraft. Use appropriate CAS briefing and control procedures. Deliver or coordinate marks as required. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft, and the ability to provide GRG-based talk-ons. Integrate fires with JTAC via datalink from TPOD to remote station, if so equipped. Four controls required for completion.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate, 9-line and BHA generation.

Provide accurate verbal description during GRG talk-on attacks.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-4805.

Ordinance. 1 AGM-65E (captive or live), 1 GBU-12/16, 250 20mm, 40 Chaff, 20 Flare (simulated).

FAC(A)-4808 1.3 180 R,M 1 FA-18A/C and 1 Escort A NS

Goal. Introduce FAC(A) Night Systems procedures in a low (permissive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate marking rounds or IR/laser mark on target. At least one Type 1 control must use an IR pointer, if so equipped. At least one Type 1 control must be supported by air-delivered covert illumination (LUU-19). Demonstrate the ability to provide timely, accurate corrections for CAS aircraft. Provide BHA. Four controls required for completion. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated JDAM/LGB deliveries. If LUU-19s are not available, LUU-2s/illum rockets may be substituted.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provide IR/laser mark using proper terminology.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-4804.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 4 LUU-19/LUU-2 or 1 pod 2.75" Illum rockets, 40 Chaff, 20 Flare.

Range Requirements. JCAS, SST, EXP.

External Syllabus Support. One or two FW CAS elements and a JTAC.

SFAC(A)-4809 1.0 540 R,M 2+ TOFT S

Goal. Adverse weather, high-threat (restrictive) FAC(A) control procedures.

Requirement. Conduct Type 1 high-threat FAC(A) controls. Emphasize C3 integration, target area flow/integration/timing, sensor management, switchology, and crew resource management. Four Type 1 controls required for completion. SEAD CFF mission must be given for each TOT. FAC(A)I at the simulator console must simulate C3 agencies, TACP, indirect fire assets, and CAS aircraft. Simulated weather is overcast at 8K'.

Performance Standards

Correctly use aircraft systems for target coordinate and 9-line generation.

Ensure proper coordination and approval for IDF and CAS attacks.

Employ proper communications format with the firing unit.

Position FAC(A) aircraft appropriately to provide marking and control while executing FAC(A) profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-4808.

SFAC(A)-4810 1.5 180 R,M 2+ TOFT S NS

Goal. Practice FAC(A) multi-element and supporting arms integration in the simulator.

Requirement. Perform visual/sensor reconnaissance, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Plan and execute at least one integrated attack utilizing three or more elements. For FW/RW/UAS integration, emphasis is on conducting a sectored or combined (simultaneous or sequential) attack. For CAS/IDF integration, time, altitude, or lateral deconfliction can be used.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Ensure proper coordination and approval for IDF and CAS attacks.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.
Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-4809.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare (simulated).

FAC(A)-4811 1.3 * 1 FA-18A/C and 1 Escort A (NS)

Goal. Introduce FAC(A) two-element integration procedures in a medium (restrictive) threat environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 and two Type 2 attacks by FW aircraft utilizing medium threat tactics. Deliver or coordinate marks on target. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft. Provide BHA. Four controls required for completion. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated IAM/LGB deliveries.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Ensure proper coordination and approval for IDF, rotary wing, and fixed wing attacks.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. SFAC(A)-4810.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. JCAS, EXP.

External Syllabus Support. One FW CAS element, one additional fire support asset (RW CAS/UAS CAS/IDF), and a JTAC. If IDF is to be used 10 HE rds, 4 WP rds for marking or suppression required.

FAC(A)-4812 1.3 365 R,M 1 FA-18A/C and 1 Escort A NS

Goal. Practice FAC(A) multi-element and supporting arms integration.

Requirement. Perform visual/sensor reconnaissance, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Plan and

execute at least one integrated attack utilizing three or more elements. For FW/RW/UAS integration, emphasis is on conducting a sectored or combined (simultaneous or sequential) attack. For CAS/IDF integration, time, altitude, or lateral deconfliction can be used. This evaluation sortie should be flown in a MAGTF-level exercise if possible.

Performance Standards

Execute appropriate search, detection, and identification profiles.
Correctly use aircraft systems for target coordinate and 9-line generation.
Ensure proper coordination and approval for IDF and CAS attacks.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.
Execute FAC(A) Type 1/2/3 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-4811.

Ordnance. 2 GBU-12/16 or 2 pods 2.75"/5.0" RP rockets, 40 Chaff, 20 Flare.

Range Requirements. JCAS, EXP.

External Syllabus Support. Minimum of 3 fire support assets (FW CAS/RW CAS/UAS CAS/IDF) and a JTAC. IDF asset requires 10 HE rds, 4 WP rds.

FAC(A)-4813 1.3 * R (D only) 1 FA-18D and 1 Escort A (NS)

Goal. Introduce FAC(A) adverse weather procedures in an elevated-threat (restrictive) environment.

Requirement. Perform visual/sensor reconnaissance of three separate targets on a tactical range, generating target coordinates with aircraft systems. Plot targets on gridded imagery/chart and prepare target briefs. Control two Type 1 pop-up attacks and two Type 2 standoff attacks by FW CAS aircraft. Deliver or coordinate marking/suppression rounds on target. For IDF integration, emphasis is on altitude or lateral de-confliction of fires effects using standard SEAD templates. Demonstrate the ability to provide timely, accurate corrections for CAS aircraft. Provide BHA. Four controls required for completion. If a range that permits Type 2 control is not available, Type 2 control may be evaluated with simulated JDAM/LGB deliveries. Simulated weather is overcast at 8K'. This flight may be flown at night once it has been successfully completed during the daytime.

Performance Standards

Execute appropriate search, detection, and identification profiles.
If required, mark the target with a CEP less than 300 meters.
Ensure proper coordination and approval for IDF and fixed wing attacks.
Execute FAC(A)/CAS attack profiles appropriate for threat, friendlies, systems, and environment.

Execute FAC(A) Type 1/2 control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-3812(D).

Ordnance. 2 pods 2.75"/5.0" RP rockets or 4 Mk-82/83, 40 Chaff, 20 Flare.

Range Requirements. MOA, JCAS, EXP.

External Syllabus Support. One or two FW CAS elements, one IDF asset and a JTAC. IDF asset requires 10 HE rds, 4 WP rds.

FAC(A)-4814 1.3 * 1 FA-18A/C and 1 Escort A (NS)

Goal. Introduce UAS/UCAV integration.

Requirement. Perform visual/sensor reconnaissance on three tactical targets, generating target coordinates with aircraft systems. Receive one laser spot/target handoff from a UAS/UCAV. Plot targets on gridded imagery/chart and prepare an attack brief. Control two Type 2 and two Type 3 attacks by UAS/UCAV aircraft. Use appropriate CAS briefing and control procedures. Perform authentication procedures. Deliver or coordinate LASER mark on target and guide one LGW to impact. Provide BHA and coordinate with UAS/UCAV to provide BHA. Four controls required for completion. If a range that permits Type 2 Control is not available, Type 2 Control may be evaluated with simulated LGW deliveries.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Correctly use aircraft systems for target coordinate and 9-line generation.

Provides laser mark using proper J-LASER terminology.

Execute FAC(A)/CAS attack profiles appropriate for threat, friendly locations, systems, and environment.

Execute FAC(A) Type 2/3 Control TTPs IAW JCAS using proper terminology.

Prerequisite. FAC(A)-3812(D)/4812(A/C).

Ordnance. 40 Chaff, 20 Flare.

Range Requirements. MOA, JCAS, EXP.

External Syllabus Support. UAS/UCAV asset with LGWs and a JTAC or FO.

FAC(A)-4815 1.3 * 1 FA-18A/C and 1 Escort A/S (NS)

Goal. Introduce Naval Surface Fire Support airspot TTPs.

Requirement. Perform visual/sensor reconnaissance on three 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. One adjust fire (laser if feasible) and two mark or SEAD missions.

Performance Standards

Execute appropriate search, detection, and identification profiles.

Employ proper communications format with the firing unit. Provide timely and accurate corrections to the firing unit. Require four rounds or less to achieve a bracket sufficient for a fire for effect.

Prerequisite. FAC(A)-3812(D)/4812(A/C).

Ordnance. 40 Chaff, 20 Flare.

Range Requirements. MOA, JCAS, EXP.

External Syllabus Support. Naval Surface Fire Support asset and a JTAC, FO, or NGLO. NSFS asset requires a minimum of 10 HE rds, 2 WP rds, and 8 Illum rds.

FAC(A)-4816 1.3 * 1 FA-18A/C and 1 Escort A/S (NS)

Goal. Introduce FAC(A) AC-130 Call For Fire procedures.

Requirement. Perform visual/sensor reconnaissance on three 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. Three missions required for completion.

Performance Standards

Execute appropriate search, detection, and identification 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 with a CEP less than 300 meters. Employ proper communication format with the AC-130.

Prerequisite. FAC(A)-3812(D)/4812(A/C).

Ordnance. 40 Chaff, 20 Flare.

Range Requirements. MOA, JCAS, EXP.

External Syllabus Support. One AC-130/Harvest Hawk and a JTAC.

2.13 INSTRUCTOR TRAINING PHASE

2.13.1 Instructor and Standardization Training. Training shall be conducted in accordance with the MAWTS-1 FA-18 Course Catalog. Work-up events are included in the LATI, NSI, NSLATI and FAI instructor syllabi. The certification events are annotated with a (Cert).

2.13.2 Low Altitude Tactics Instructor (LATI)

2.13.2.1 Purpose. To certify a FA-18 pilot as an instructor capable of safely conducting ground and airborne instruction of the FA-18 LAT flight syllabus.

2.13.2.2 General. Aircrew shall be LAT qualified and current prior to beginning this stage of training. Reference the MAWTS-1 FA-18 Course Catalog for all LATI POI requirements.

<u>SLATI-5101</u>	<u>1.0</u>	<u>*</u>	<u>2 TOFT</u>	<u>S</u>
<u>LATI-5102</u>	<u>1.3</u>	<u>*</u>	<u>2 FA-18A/C/D</u>	<u>A</u>
<u>LATI-5103</u>	<u>1.3</u>	<u>*</u>	<u>2 FA-18A/C/D</u>	<u>A</u>
<u>LATI-5104</u>	<u>1.3</u>	<u>*</u>	<u>R 2 FA-18A/C/D</u>	<u>A (Cert)</u>

2.13.3 Night System Low Altitude Tactics Instructor (NSLATI)

2.13.3.1 Purpose. To certify a FA-18 pilot as an instructor capable of safely conducting ground and airborne instruction of the FA-18 night systems LAT flight syllabus.

2.13.3.2 General. Aircrew shall be designated as a LATI and current prior to beginning this stage of training. Reference the MAWTS-1 FA-18 Course Catalog for all NSLATI POI requirements.

<u>SNSLATI-5201</u>	<u>1.0</u>	<u>*</u>	<u>2 TOFT</u>	<u>S</u>	<u>NS</u>
<u>NSLATI-5202</u>	<u>1.3</u>	<u>*</u>	<u>2 FA-18A/C/D</u>	<u>A</u>	<u>NS</u>
<u>SNSLATI-5203</u>	<u>1.0</u>	<u>*</u>	<u>2 TOFT</u>	<u>S</u>	<u>NS (CERT)</u>
<u>NSLATI-5204</u>	<u>1.3</u>	<u>*</u>	<u>R 2 FA-18A/C/D</u>	<u>A</u>	<u>NS (Cert)</u>

2.13.4 Forward Air Controller (Airborne) Instructor (FAC(A)I)

2.13.4.1 Purpose. To certify FA-18 aircrew as a FAC(A)I capable of conducting ground and airborne instruction of the FAC(A) mission and capable of safely controlling CAS in close proximity to friendly troops. Emphasize demonstration of ability to coordinate simultaneous FW and RW CAS, artillery, or NSFS, while working for a TACP and operating with a MACCS.

2.13.4.2 General. Reference the MAWTS-1 FA-18 Course Catalog for all FAC(A)I requirements.

<u>SFAC(A)I-5301</u>	<u>1.5</u>	<u>*</u>	<u>2 FA-18A/C/D</u>	<u>S</u>	<u>(NS)</u>
<u>FAC(A)I-5302</u>	<u>1.3</u>	<u>*</u>	<u>2 FA-18A/C/D</u>	<u>A</u>	<u>(NS)</u>
<u>FAC(A)I-5303</u>	<u>1.3</u>	<u>*</u>	<u>2 FA-18A/C/D</u>	<u>A</u>	<u>(NS)</u>
<u>FAC(A)I-5304</u>	<u>1.3</u>	<u>*</u>	<u>R 2 FA-18A/C/D</u>	<u>A</u>	<u>NS</u>

2.13.5 Fighter Attack Instructor (FAI)

2.13.5.1 Purpose. To certify a FA-18 pilot or WSO as an instructor capable of safely conducting specific air-to-air and air-to-ground Core Skills and Mission Skills resident in the 2000 and 3000 phases.

2.13.5.2 General. Reference the MAWTS-1 FA-18 course catalog for all FAI requirements.

<u>SFAI-5401</u>	<u>1.0</u>	<u>*</u>	<u>2 TOFT</u>
<u>SFAI-5402</u>	<u>1.0</u>	<u>*</u>	<u>R 2 TOFT (Cert)</u>
<u>LFAI-5403</u>		<u>*</u>	<u>BRIEFING LAB (1.0) (CERT)</u>
<u>FAI-5404</u>	<u>1.1</u>	<u>*</u>	<u>2 FA-18A/C/D A</u>
<u>FAI-5405</u>	<u>1.1</u>	<u>*</u>	<u>2 FA-18A/C/D A</u>
<u>FAI-5406</u>	<u>1.1</u>	<u>*</u>	<u>2 FA-18A/C/D A (Cert)</u>
<u>FAI-5407</u>	<u>1.2</u>	<u>*</u>	<u>2 FA-18A/C/D A</u>
<u>FAI-5408</u>	<u>1.2</u>	<u>*</u>	<u>2 FA-18A/C/D A</u>
<u>FAI-5409</u>	<u>1.2</u>	<u>*</u>	<u>R 2 FA-18A/C/D A (Cert)</u>
<u>SFAI-5410</u>	<u>1.0</u>	<u>*</u>	<u>2 TOFT S</u>
<u>SFAI-5411</u>	<u>1.0</u>	<u>*</u>	<u>R 2 TOFT S (CERT)</u>

2.13.6 Flight Lead Standardization Evaluator (FLSE)

2.13.6.1 Purpose. To certify FA-18 aircrew capable of safely and tactically evaluating specific FA-18 events throughout the section and division flight leadership syllabi. Aircrew must be nominated by Squadron COs and will be designated by the MAG CO. Once designated an FLSE, aircrew shall evaluate FLSE events only in squadrons other than the one assigned. FLSE aircrew assigned as MAG/Wing staff may evaluate events in any unit approved by the MAG CO.

2.13.6.2 General. Prior to beginning the FLSE-5600 stage, aircrew shall be at least one of the following: a Weapons and Tactics Instructor (WTI), Marine Division Tactics Course (MDTC) graduate, Strike Fighter Tactics Instructor (SFTI) or a designated Mission Commander. This requirement is only waivable by the cognizant Wing Commanding General. After completing both FLSE events in the 5600 stage, aircrew may be nominated by Squadron COs, then designated FLSEs by the MAG CO. FLSE pilots or WSOs can evaluate any FLSE event in the section leader and division leader syllabi. FLSEs will retain their designations at the direction of the MAG CO, however any FLSE that leaves an FA-18 squadron for greater than 12 months shall complete the FLSE briefing labs prior to being eligible for nomination as an FLSE. MAWTS-1 and TOPGUN instructors returning to the fleet immediately following their instructor tour are eligible to be designated as FLSEs with no requirement to conduct the briefing labs. The following events will be conducted with a currently designated FLSE or MAWTS-1 instructor.

<u>LFLSE-5601</u>		<u>*</u>	<u>R A/A BRIEFING LAB (1.5)</u>
<u>LFLSE-5602</u>		<u>*</u>	<u>R CAS BRIEFING LAB (1.5)</u>

2.13.7 Night System Instructor (NSI)

2.13.7.1 Purpose. To certify a FA-18 pilot as an instructor capable of safely conducting ground and airborne instruction of the FA-18 night systems flight syllabus.

2.13.7.2 General. Aircrew shall be properly designated and current prior to beginning this stage of training. Reference the MAWTS-1 FA-18 Course Catalog for all NSI POI requirements.

<u>SNSI-5701</u>	<u>1.0</u>	<u>*</u>	<u>2 TOFT</u>	<u>S</u>	<u>NS</u>
<u>NSI-5702</u>	<u>1.3</u>	<u>*</u>	<u>2 FA-18A/C/D</u>	<u>A</u>	<u>NS</u>
<u>LNSI-5703</u>		<u>*</u>	<u>R</u>	<u>BRIEFING LAB (1.5)</u>	<u>(CERT)</u>
<u>SNSI-5704</u>	<u>1.0</u>	<u>*</u>	<u>2 TOFT</u>	<u>S</u>	<u>NS (Cert)</u>
<u>NSI-5705</u>	<u>1.3</u>	<u>*</u>	<u>R 2 FA-18A/C/D</u>	<u>A</u>	<u>NS (Cert)</u>

2.13.8 Tactical Air Coordinator (Airborne) Instructor (TAC(A)I)

2.13.8.1 Purpose. To certify an FA-18D aircrew as a TAC(A)I capable of conducting ground and airborne instruction of the TAC(A) mission. Emphasize ability to coordinate with the GCE, coordinate mission assignments with the DASC and TACPs, and execute airspace management.

2.13.8.2 General. Reference the MAWTS-1 FA-18 Course Catalog for all TAC(A)I POI requirements.

<u>TAC(A)I-5501</u>	<u>1.3</u>	<u>*</u>	<u>R</u>	<u>1+ FA-18D</u>	<u>A</u>	<u>(NS)</u>
---------------------	------------	----------	----------	------------------	----------	-------------

2.14 REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE

2.14.1. FA-18 NATOPS Evaluation

2.14.1.1 Purpose. To evaluate the aircrew's knowledge of aircraft systems, performance limitations, emergency procedures, and ground/flight operations.

2.14.1.2 General

a. NATOPS Evaluators/Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 Series and other applicable directives, instructions, and orders.

b. 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 aircrew completed the sortie. Prior to the Oral Examination, the NATOPS Evaluator shall review the aircrew's NATOPS jacket. At the discretion of the squadron commanding officer, a letter designating the pilot as NATOPS qualified shall be placed in the NATOPS jacket and APR.

c. Prior to the commencement of the NATOPS evaluation event (NTPS-6101), the NATOPS Open Book, Closed Book, and Oral Examination events (NTPS-6801, 6802, and 6803) shall be completed and graded.

2.14.1.3 NATOPS Training. All requirements delineated in the matrix below shall be completed prior to designation as NATOPS qualified.

SELF PACED READINGS		DATE COMP
USMC FA-18 ADMIN SOP		
FA-18 NATOPS Flight Manual		
OPNAVINST 3710		
NAVAIR 00-80T-112		
REQUIRED Evaluation Events	DATE COMP/GRADED	INSTRUCTOR
FA-18 Open Book Examination		
FA-18 Closed Book Examination		
FA-18 Oral Examination		
FA-18 Evaluation (Simulator/ Aircraft)		

NTPS-6801 1.5 365 R,M Open Book NATOPS Examination

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

Performance Standard

Achieve a minimum grade of qualified on the open book examination.

NTPS-6802 1.0 365 R,M Closed Book NATOPS Examination

Goal. The closed book examination shall be limited to the question bank. The purpose of the open book examination portion of the written examination is to evaluate the aircrew's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard

Achieve a minimum grade of qualified on the closed book examination.

NTPS-6803 0.5 365 R,M Oral NATOPS Examination

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

Performance Standard

Achieve a minimum grade of qualified on the oral examination.

SNTPS-6101 1.0 365 R,M 1+ TOFT/FA-18A/C/D S/A

Goal. Conduct an objective evaluation of the aircrew's knowledge of normal operating procedures (flight and ground), crew resource management, out-of-control flight, aircraft systems, performance criteria, and emergency procedures. The focus is on normal and emergency procedures, not tactical execution. Emphasis shall be placed on the aforementioned items with the addition of USMC Admin SOP, local course rules, local SOP addendum, and admin flight procedures. The NATOPS

evaluation is intended to evaluate compliance with NATOPS procedures. The NATOPS evaluation is the means to measure the aircrew's efficiency in the execution of normal operating procedures and reaction to emergencies and malfunctions. The NATOPS evaluation process should be as much a learning tool and/or experience as it is an evaluation.

Requirement. Demonstrate comprehensive knowledge and understanding of NATOPS, USMC FA-18 ADMIN SOP, and local course rules.

Performance Standard

Executes flight and/or ground operations safely IAW OPNAV 3710, FA-18 NATOPS, NATOPS Instrument Flight Manual, and training rules.

Complies with local course rules.

Adhere to USMC FA-18 ADMIN SOP.

Prerequisite. Successful completion of the open book, closed book, and oral examinations.

2.14.2 FA-18 Instrument Evaluation

2.14.2.1 Purpose. To evaluate the pilot's knowledge of and adherence to NATOPS instrument procedures.

2.14.2.2 General

a. The NATOPS instrument evaluation event shall consist of those items delineated in OPNAVINST 3710.7 series (NATOPS), NAVAIR 00-80T-112 (NATOPS Instrument Flight Manual) and FAR/AIM.

b. The NATOPS instrument evaluator shall utilize the NATOPS model manager-generated NATOPS instrument 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. A letter designating the pilot as NATOPS instrument qualified shall be placed in the NATOPS jacket upon successful completion.

c. Prior to the commencement of the NATOPS instrument evaluation event (INST-6102), Instrument Ground School and the Instrument Examination (NTPS-6804 and 6805) shall be completed and graded, and annual instrument minimums shall be met in accordance with OPNAVINST 3710.7 series.

d. A designated FA-18 instrument check pilot will observe and certify that the PUI is instrument qualified per OPNAVINST 3710.7 series.

2.14.2.3 NATOPS Instrument Training. All requirements delineated in the matrix below shall be completed prior to designation as NATOPS Instrument qualified.