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From: Commandant of the Marine Corps
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Subj: METOC T&R MANUAL

Ref: (a) NAVMC 3500.14

Encl: (1) METOC T&R MANUAL

1. Purpose. To revise standards and regulations regarding the training of METOC personnel per the reference.

2. Information. This revision, which supersedes MCO 3500.66, brings the METOC T&R Manual into compliance with reference (a) T&R syllabus structure requirements. It aligns METOC instructor training syllabi with the MAWTS-1 Course Catalog and instructor program manuals, reduces redundancy, and provides additional flexibility to commanders in training for current and future operations.

3. Recommendations. Recommended changes to this Manual are invited, and may be submitted via the syllabus sponsor and the appropriate chain of command to: Commanding General, Training and Education Command, Aviation Training Branch via e-mail (refer to http://www.tecom.usmc.mil/atb/contacts .htm) or the Defense Message System using the following plain language address: CG TECOM QUANTICO VA ATB.

4. Reserve Applicability. This Manual is applicable to the Marine Corps Total Force.

5. Certification. Reviewed and approved this date.

GEORGE J. FLYNN
By direction

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CHAPTER 1

METEOROLOGICAL AND OCEANOGRAPHIC (METOC) SERVICES T&R SYLLABUS STRUCTURE

100. METOC TRAINING AND READINESS REQUIREMENTS. The METOC Community plays a crucial role in the MAGTF's ability to conduct Maneuver Warfare. The goal of Marine Aviation is to attain the highest possible combat readiness to support Expeditionary Maneuver Warfare while preserving and conserving our Marines and equipment. Embedded within our combat readiness is the ability to rapidly, effectively, and efficiently deploy on short notice and to quickly and effectively plan for crises and/or contingency operations thereby ensuring the MAGTF remains ready for combat when and where the need arises. The T&R Program represents the collaborative effort of METOC Subject Matter Experts (SMEs) who designed training standards to maximize combat capabilities. These standards, intrinsic in the core competency readiness metric, describe and define unit capabilities and requirements necessary to maintain like-unit proficiency in core skills and combat leadership. Training events are based on specific requirements and performance standards that ensure METOC Marines maintain a common base of training and depth of combat capabilities. The T&R comprises a building block approach to ensure trained METOC personnel remain ready, relevant, and fully capable of supporting the Marine Air Ground Task Force (MAGTF) Commander.

101. METOC SERVICES MISSION STATEMENT. Support the MAGTF commander by collecting, assessing and disseminating METOC intelligence relevant to friendly and enemy force strengths and vulnerabilities for the planning and execution of operations necessary to characterize the battle space. This includes atmospheric, space, climatic and oceanographic/hydrological intelligence for use in the production of Tactical Decision Aids (TDA) and METOC effects matrices. This is done day or night under all meteorological conditions during expeditionary, joint or combined operations.

102. CORE METL/CORE SKILLS MATRIX

a. The METOC Core Mission Essential Task List (METL) is a standardized list of tasks that support a tactical and/or operational support role and must be able to be accomplished during combat or contingency operations.

b. The METL/Core Skills matrix provides the link between the unit training program and its METL by graphically depicting Core Skill links between the specific community Mission Essential Tasks (METs).

c. Core METL reflect the level of performance a unit must be capable of sustaining METs during combat or contingency operations.
Table 1-1 outlines METOC abbreviations used herein. Table 1-2 lists core skills with associated METLs.

Table 1-1.--METOC Core Skills.

CORE SKILL	ABBREVIATION
Upper Atmospheric Sensing	UAS
Oceanographic and Hydrological Services	OHS
Meteorological Radar	MDR
Meteorological Satellite	MSAT
Climatological and Astronomical Services	MCS
Applied Meteorological Sciences	AMS
Meteorology Surface Observing	MSO
MAGTF Forecast Support	MFS
METOC Impact Assessment	MIA
Warnings, Watches and Advisories	WWA
METOC Data Analysis	MDA
METOC Product Briefings	MPB
METOC Planning/Coordination	MPC
Administration	ADM

Table 1-2.--Core Skill/METL Matrix.

METOC Core METL/Core Skills Matrix															
Mission Essential Task List		METL/Core Skills Matrix													
		Core Skills													
MCTL	MET	MSO	UAS	OHS	MDR	MSAT	MCS	AMS	MFS	MIA	WWA	MDA	MPB	MPC	ADM
MCTL 1.6.5.8	Analyze and forecast river/flood plain conditions and atmospheric effects on rivers and flood plains.	X		X	X	X		X	X	X	X		X		
MCTL 1.6.6.1	Provide METOC analysis, data in support of a AT Operations	X		X	X	X		X	X	X	X		X		X
MCTL 2.1.1.3	Provide early warning of all hazards in support of mission planning and operations	X		X	X	X		X	X	X	X		X		

Table 1-2.--Core Skill/METL Matrix continued.

METOC Core METL/Core Skills Matrix															
Mission Essential Task List		METL/Core Skills Matrix													
		Core Skills													
MCTL	MET	MSO	UAS	OHS	MDR	MSAT	MCS	AMS	MFS	MIA	WWA	MDA	MPB	MPC	ADM
MCTL 2.1.2.1	Analyze state of atmospheric and oceanic areas and environmental impacts to mission planning and operations	X		X	X	X		X	X	X	X		X		
MCTL 2.1.2.7	Conduct Climate/ METOC Space Weather Analysis, Projections and Preparation of the Battlespace Products	X		X	X	X		X	X	X	X		X	X	
MCTL 2.1.2.8	Coordinate METOC Support for hydrographic surveys of beaches landing sites, ports and ship-to shore operations	X		X	X	X		X	X	X	X		X		
MCTL 3.2.4.5	Determine and mark locations for artillery occupation by ground-based units.	X		X	X	X		X	X	X	X		X	X	
MCTL 4.6.3	Conduct flight weather briefings, take, record disseminate aviation sfc obs, Conduct aviation briefings, Produce Terminal Aerodrome Forecasts.	X		X	X	X		X	X	X	X		X		
MCT 4.6.3.10	Provide accurate METOC data, forecasts, briefs warnings, watches and advisories	X	X		X	X	X	X	X		X	X	X		X
MCTL 6.4.3	Provide METOC plume modeling and other data as required.	X		X	X	X		X	X	X	X		X		

d. Standards defined and described in this section are provided to ensure METOC units maintain a common base of training and depth of capabilities along with a standardization of structure, organization and content of the METOC T&R manual. When resources permit and the commander deems additional training would significantly increase unit warfighting capability, training to a level above these base capabilities is encouraged. It is incumbent upon, and expected of the commander to balance any increase in the depth of core capabilities against the long-term combat readiness of the unit. Core competency serves as the foundation of the T&R program. Core competencies are those core capabilities that are realistically expected to be assigned in combat, which support the METs derived from MCWP 3-35.7 and T/O mission statements.

e. Unit Training Management (UTM) is the application of the Marine Corps Training Principles and the Systems Approach to Training (SAT) to satisfy the training requirements of commanders at all levels in order to accomplish their wartime mission. Guidance concerning unit training management and the process for establishing effective unit training management programs are contained in Marine Core Reference Publication (MCRP) 3-0A, *Unit Training Management Guide (UTM)*, and form the basis for the development of this T&R Manual. Familiarity with MCRP 3-0A will enhance the understanding of SAT used in the T&R development and Marine Corps UTM principles.

103. TABLE OF ORGANIZATION (T/O) INFORMATION. Refer to T/Os 8702, 8703 and 4714 (see Table 1-3) managed by Total Force Structure (TFS), Marine Corps Combat Development Command (MCCDC), for current authorized organizational structure and personnel strength. Information below depicts METOC T/O information as of the date of this manual.

Table 1-3.--METOC T/Os.

T/O for Aviation / Ground
1st & 2nd Intel Battalions Officer - 1 (6802) Enlisted - 25 (6842)
3rd Intel *Battalion* Officer - 1 (6802) Enlisted - 21 (6842)
Marine Wing Support Group (MWSG) Enlisted - 1 (6842)
Marine Wing Support Squadron (MWSS) *Officer – 1 (6802)* Enlisted - *12* (6842)
Regional METOC Production Center (RMC) Officer - 1 (6802) Enlisted - 15 (6842)
Station Detachments (Outlying CONUS Airfields) *Enlisted - 3 (6842)*
OCONUS METOC Office (Kaneohe Bay) Officer - 1 (6802) Enlisted - 14 (6842)
OCONUS METOC Office (Futenma) *Officer - 1 (6802)* *Enlisted - 8 (6842)*
OCONUS METOC Office (Iwakuni) *Officer - 1 (6802)* *Enlisted - 6 (6842)*

a. Core Capability. *P*rovide direct and indirect support to all combat elements of the MAGTF. For clarity, core capabilities of each task organized METOC support unit and detachment are defined.

b. MWSS METOC Section*.* The MWSS METOC Section must be able to sustain continuous meteorological support for all aviation sorties launching from the parent Forward Operating Base (FOB) and two Forward Arming and Refueling Points (FARPs). A core capable MWSS MST Detachment provides first-in and rapid establishment of METOC support to a MAGTF command element other than ACE. The capabilities are limited to surface observational data, data analysis, and forecasting. Support capability is based on 24-hour flight/mission operations and assumes greater than or equal to 70 percent operational meteorological equipment readiness and greater than or equal to 90 percent T/O personnel on-hand. If unit equipment is less than 70 percent or T/O personnel is less than 90 percent, core capability will be degraded by a like percentage. A core capable unit is able to accomplish all tasks designated in the unit METL from a main or expeditionary base*.*

c. Intel Battalion (Intel Bn) METOC Platoon*.* Intel Battalion (Bn) METOC Platoon. The Intel Bn's METOC platoon is capable of establishing and maintaining 24/7 METOC support operations. When directed by the MAGTF commander, the Intel Bn's METOC Platoon will establish and maintain the MAGTF's METOC support center. The MAGTF's METOC support center will coordinate and facilitate the collection, assimilation and dissemination of METOC data and information to and from MAGTF METOC units while simultaneously interfacing with Joint METOC units through applicable command and control nodes. A task-organized METOC Support Team (MST) from the Intel Bn will provide the MAGTF Command Element (CE) a first-in METOC support capability. The first-in core capabilities of the MST will be limited to surface observational data, data analysis, and forecasting until follow-on METOC capabilities flow in. Additionally, the Intel Bn's METOC Platoon will provide the core METOC support capability for the MEB's and MEU(SOC)'s CE as well as provide personnel augmentation to the GCE's and LCE's METOC Chief within the Intelligence Section when requested.

The METOC unit contains the following organic capabilities/equipment:

Table 1-4.--METOC Unit Equipment.

METOC unit organic equipment						
Unit	Satellite	Radar	Lightning	Remote Sensor	Local Sensor	NITES IV
Intel Bn	*0*	*0*	*5*	*0*	*0*	*5*
MWSG	*0*	*0*	*1*	*0*	*0*	*1*
MWSS	*1*	*1*	*1*	*2*	*1*	*1*
RMC	*1*	*1*	*1*	*0*	*1*	*0*
Dets	*0*	*1*	*1*	*0*	*1*	*0*
OCONUS	*0*	*1*	*1*	*0*	*1*	*0*

104. METOC CORE MODEL MINIMUM REQUIREMENTS (CMMR). CMMR is measured in terms of the minimum numbers of Core Skill Proficient (CSP) METOC personnel and minimum numbers of METOC combat leaders per paragraphs a and b below. METOC core competency reflects minimum level of competency a unit must achieve to perform its core capability.

a. Minimum Unit CSP Requirements. As a minimum, in order to be considered core competent, a unit must have METOC personnel who are proficient in each core skill (unit CSP) as indicated in table 1-5. In order for an individual to be considered proficient in a core skill (individual CSP), personnel must attain and maintain proficiency in core skill events, as noted in paragraphs 4a(1) and 4a(2) and delineated in tables 1-6 through 1-10. Proficiency in core plus skills is not required to obtain unit CSP and will not contribute to unit T-level readiness. Below are the METOC community's recommended unit/individual CSP standards:

Table 1-5.--METOC Unit CSP Requirements.

METOC CMMR Unit CSP Requirements															
	MAW/MWSG			INTEL BN			MWSS			OCONUS			RMC		
Core Skill	AMA	JMA	MMA	AMA	JMA	MMA	AMA	JMA	MMA	AMA	JMA	MMA	AMA	JMA	MMA
ADM	5	5	2	4	4	2	4	4	2	3	2	1	6	6	3
MSO	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
UAS	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
OHS	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MDR	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MSAT	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
MCS	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
AMS	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
MFS	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MIA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
WWA	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
MDA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MPB	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
MPC	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

b. A CSP watch consists of individuals representing each position who have achieved and maintain individual CSP. In order to be considered proficient in a core skill, an individual must attain and maintain proficiency in core skill events. Proficiency in Core Plus Skills is not normally required to obtain unit CSP. A unit may elect to, or be required to report a Core Plus Skill. As such, below are unit Core Plus Skill Proficiency Requirements.

Table 1-6.--METOC Unit Core Plus Skill Proficiency Requirements.

METOC Unit Core Plus Skill Proficiency Requirements																				
	Group				Intel Bn				MWSS				OCONUS				RMC			
Core Plus Skill	AMA	JMA	MMA	WTI	AMA	AMA	MMA	WTI	AMA	JMA	MMA	WTI	AMA	JMA	MMA	WTI	AMA	JMA	MMA	WTI
MPB	1	5	1	1	1	1	5	1	1	5	5	1	1	5	5	1	1	5	5	1
MDR	2	5	1	0	2	2	5	0	0	5	5	0	2	5	5	0	2	5	5	0
MPC	0	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	1	1
MIA	0	5	1	1	0	0	5	1	1	5	5	1	0	5	5	1	0	5	5	1

b. Minimum Combat Leadership Requirements. As a minimum, in order to be considered core competent, a unit must possess METOC personnel with the listed combat leadership designations listed in table 1-12.

Table 1-7--Minimum Combat Leadership Requirements.

METOC Unit Combat Leadership Requirements					
DESIGNATION	MWSS	GROUP	INTEL BN	MST	OCONUS
AMA	6	6	10	1	3
JMA	3	4	5	1	2
MMA	2	2	3	0	1
MAI	1	1	1	0	1
WTI	1	1	1	0	1

c. Qualifications and Designations Tables. Tables 1-7 through 1-9 delineate T&R events required to be completed to attain initial qualifications, requalifications and designations. All stage lectures, briefs, squadron training and prerequisites shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in the individual training jackets (MC11140 Rev.7-'93) and kept electronically if available.

(1) Qualification. A qualification is a status assigned to personnel based on demonstrated proficiency in a specific skill. Certification refers to the evaluation process conducted during syllabus event(s) by a designated instructor or authorized personnel. The purpose of certification is ascertaining proficiency of METOC Marine as a prerequisite to qualification or designation. Specific criteria to achieve qualifications are delineated in table 1-13. Upon completion of the qualification criteria, commanding officers may issue a qualification letter for inclusion into the individual training jackets and electronic copies if available. Individuals do not lose a qualification when refreshing events. Loss of proficiency (delinquent refresh events) for all associated qualification events constitutes loss of the qualification. Requalification requires demonstrated proficiency by successfully completing all R-coded events associated with the respective qualification (unless waived per the Aviation T&R Program Manual). See tables 1-9 and 1-10.

(a) MSO - Qualified as a surface meteorological observer.
(b) UAS - Qualified as capable of sensing upper-atmospheric elements.
(c) OHS - Qualified in Oceanography-Hydrological Services.
(d) FSQ – Qualified in Forecast Support.
(e) MFS - Qualified in providing forecast support to the MAGTF.
(f) MDR - Qualified in operation and product interpretation of meteorological radar(s).
(g) OFS - Qualified in oceanography-hydrological forecast support.
(h) MIA - Qualified in the assessment of METOC elements and conditions that relate to mission specific support requirements. *Note: This qualification awards 6852 skill designated MOS.
(i) FSI - Qualified as a formal schools instructor.

(2) Designations. A designation is a status assigned to an individual based on leadership ability. It is a command specific, one-time

occurrence and remains in effect until removed for cause or the individual is transferred to another command. Commanders may issue a designation letter to individuals for inclusion into training jackets (electronic if available) and a Page-11 entry in the Service Record Book (SRB).

(a) AMA - Attain Apprentice METOC Analyst (AMA) designation.
(b) JMA - Attain Journeyman METOC Analyst (JMA) designation.
(c) MMA - Attain Master METOC Analyst (MMA) designation.
(d) MAI - Attain the METOC Analyst Instructor (MAI) designation.
(e) FSI – Attain Formal Schools Instructor (FSI) designation.
(f) WTI – Attain Weapons and Tactics Instructor designation.

d. Core Skill introduction syllabus evaluation forms shall be retained for 2 years. After 2 years, a summary grade sheet showing the individual's event grades shall be kept on a permanent basis.

Table 1-8.—-METOC Qualifications.

QUALIFICATION TRACKING CODE	QUALIFICATION REQUIREMENTS
QTC-600	* 200 Level Phase, 6842 Syllabus
QTC-650	MSO-200 through MSO-203, MDN-623, GME-632, GME-633.
QTC-651	UAS-210 through UAS-213, MDN-623.
QTC-652	OHS-200 through OHS-222, MDN-623.
QTC-653	MSO and UAS Qualification. AMS-225 through AMS-228, AMS-230, MDA-265, and MDA-266.
QTC-654	All 200 level stages of training.
QTC-655	200 and 300 Level MDR Stage .
QTC-656	200 and 300 Level OHS Stage .
QTC-657	MFS Qualification, 300 Level MIA Stage, MPB-341 through MPB-346 and MFS-347.
QTC-658	JMA Designation.

* is for 6802 syllabus

Table 1-9.--METOC Designations.

DESIGNATION TRACKING CODE	DESIGNATION REQUIREMENTS
DTC-601 WTI Designation	* (WTI course completion)
DTC-660 AMA Designation	(QTC-654)
DTC-662 JMA Designation	(QTC-654,DTC-661, Core Skill Advanced Phase)
DTC-663 MMA Designation	(DTC-660,662,664, GySgt or above, 8 years TIS)
DTC-664 MAI Designation	(DTC-662)

105. INSTRUCTOR REQUIREMENTS. As a minimum, a unit should possess the following numbers of personnel with the instructor designations listed in the matrix to support METOC operations (see table 1-10). Instructor designations are outlined in the MAWTS-1 Course Catalog and MCO 3500.12C (WTTP).

Table 1-10.--METOC Instructor.

Instructors						
INSTRUCTOR DESIGNATION	MWSS	INTEL BN	FORMAL SCHOOL	GROUP	OCONUS	RMC
DTC-664 MAI	1	2	0	1	1	1
DTC-601 WTI	1	1	0	1	1	1
FSI-601 KEESLER	0	0	8	0	0	0

106. EVENT TRAINING FOR BASIC METOC PERSONNEL

Table 1-11.--Core Skill Introduction Phase.

STAGE	EVENT	NO. HOURS	CRP
100 Meteorological Reports	1	57	2.4
101 Meteorological Principles	1	77.5	4.0
102 Meteorological Features	1	66.5	3.1
103 Basic Computer Operations	1	9	.2
104 Meteorological Satellites	1	34	0.6
105 Meteorological Chart Analysis	1	71	3.4
106 Macroscale Analysis Techniques	1	56	2.3
107 Synoptic Analysis Techniques	1	152	7.7
108 Mesoscale Analysis Techniques	1	80	4.1
109 Doppler Weather Radar fundamentals and Interpretation	1	37	0.8
110 Macroscale Forecasting	1	56	2.3
111 Synoptic Scale Forecasting	1	109	5.4
112 Mesoscale Forecasting	1	200	10.4

Table 1-11.--Core Skill Introduction Phase continued.

STAGE	EVENT	NO. HOURS	CRP
113 Joint Meteorological and Oceanographic Forecast Unit (JMFU) operations	1	128	7.9
114 Marine Corps METOC occupational field training and career progression	1	3	.2
115 Meteorological Sensors	1	3	.2
116 Surface Weather Observations	1	50	1.0
117 METOC forecast support products	1	102.5	4.0
TOTAL FOR PHASE:	18	1291.5	60.0

Table 1-12.--Core Skill Basic Phase.

STAGE	NO. EVENTS	NO. HOURS	CRP
(MSO) Meteorological Surface Observations	4	34.5	2.0
(UAS) Upper Atmospheric Sensing	4	4.5	0.5
(OHS) Oceanographic/Hydrological Services	3	17.0	0.5
(AMS) Applied MET Science	11	65.5	4.5
(MDR) Meteorological Radar	3	17.0	0.75
(MSAT) Meteorological Satellite	3	8.0	0.75
(MCS) Climatological/Astronomical	2	6.0	0.5
(WWA) Watches, Warnings, Advisories	3	4.5	0.5
(MDA) METOC Data Analysis	8	23.0	2.0
(MPB) METOC Product Briefing	1	3.0	1.0
(MFS) MAGTF Forecast Support	4	32.5	2.0
TOTAL FOR PHASE:			
	46	215.5	15.0

Table 1-13.--Core Skill Advanced Phase.

STAGE	NO. EVENTS	NO. HOURS	CRP
(OHS) Oceanographic/Hydrological Services	5	10.0	2.0
(MDR) Meteorological Radar	2	8.0	3.0
(MSAT) Meteorological Satellite	1	2.0	1.0
(MCS) Climatological/Astronomical	1	12.0	1.0
(MPB) METOC Product Briefing	7	53.5	3.5
(MFS) MAGTF Forecast Support	3	9.5	3.0
(MPC) METOC Planning/Coordination	4	40.0	2.0
(MIA) METOC Impact Assessment	8	21.0	4.5
TOTAL FOR PHASE:	31	156.0	20.0

Table 1-14.--Core Plus Skill Phase.

STAGE	NO. EVENTS	NO. HOURS	CRP
(MPB) METOC Product Briefing	1	66.0	1.0
(MDR) Meteorological Radar	1	6.0	1.0
(MPC) METOC Planning/Coordination	6	101.0	1.5
(MIA) METOC Impact Assessment	4	33.0	1.5
TOTAL FOR PHASE:	12	206.0	5.0

Notes: An event contained within a T&R manual is an individual or collective training standard. The following elements may be dependent on the stage in which they are contained:

1/	2/	3/	4/	5/	6/	8/	9/
SAM-XXX	0.5	180	*,B,Z,R	E	G,M,N	L/S	(N)

Goal. State the terminal-learning objective.

Requirement. List the specific tasks for the event; indicate what the crew/individual must accomplish.

Performance Standard. Describe the measurable level of proficiency for that event.

Prerequisite. Provides a listing of academic training or other T&R events that must be completed before satisfying the task.

External Syllabus Support. A listing or description of the external support requirements that may be required to satisfy the completion of the task. May include range requirements, support aircraft, targets, training devices, or other personnel and equipment.

NOTES:

1/ Stage abbreviation-Training Code.

2/ Projected event duration is furnished as a planning tool.

3/ Refresh time to keep current qualification(s) and or designaition(s).

4/ Denotes the applicable Program of Instruction (**B** Basic POI is understood), **Z** is reserve, **R** is refresher, ***** is not refresher.

5/ An **"E"** indicates an Evaluated event by a qualified instructor.

6 The equipment or activity subcategory is listed **"G"** = Garrison Equipment; **"M"** = METMF(R); **"N"** = NITES IV.

8/ Conditions Code: **"L"** = live Training; **"S"** = simulator training; **"L/S"** = live preferred/simulator optional; **"S/L"** = simulator preferred/live optional.

9/ Event conditions; **"(N)"** = day or night optional conditions.

CHAPTER 2

METEOROLOGICAL AND OCEANOGRAPHIC (METOC) SERVICES OFFICER SYLLABUS (MOS 6802, 6877)

FIGURES

TABLES

TABLES

CHAPTER 2

METEOROLOGICAL AND OCEANOGRAPHIC (METOC) SERVICES (MOS 6802, 6877)

200. METOC OFFICER/6802/6877 INDIVIDUAL T&R REQUIREMENTS. The T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core Skills. The goal of this chapter is to develop individual and unit war fighting capabilities. Realizing this Manual is unclassified; DC AVN and CG MCCDC encourage units to use the full range of current, newly developed and proven tactics. The Core Skill Phase is designed for instructors and trainees to maximize training and minimize syllabus support hours. An instructor shall evaluate all events annotated with an “E” per Aviation T&R Program Manual, chapter 2. Instructors are responsible for assessing performance during a particular event. The METOC Officer shall ensure designation, qualification and requirement codes are entered in the appropriate event, stage or phase tracking software and the individual training jackets.

201. TRAINING PROGRESSION MODEL. The METOC officer training Progression Model (figure 2-1) represents training progression for the average (6802) in terms of core skill, qualification and designation attainment. Units should use the model as a point of departure to generate individual training plans for METOC personnel.

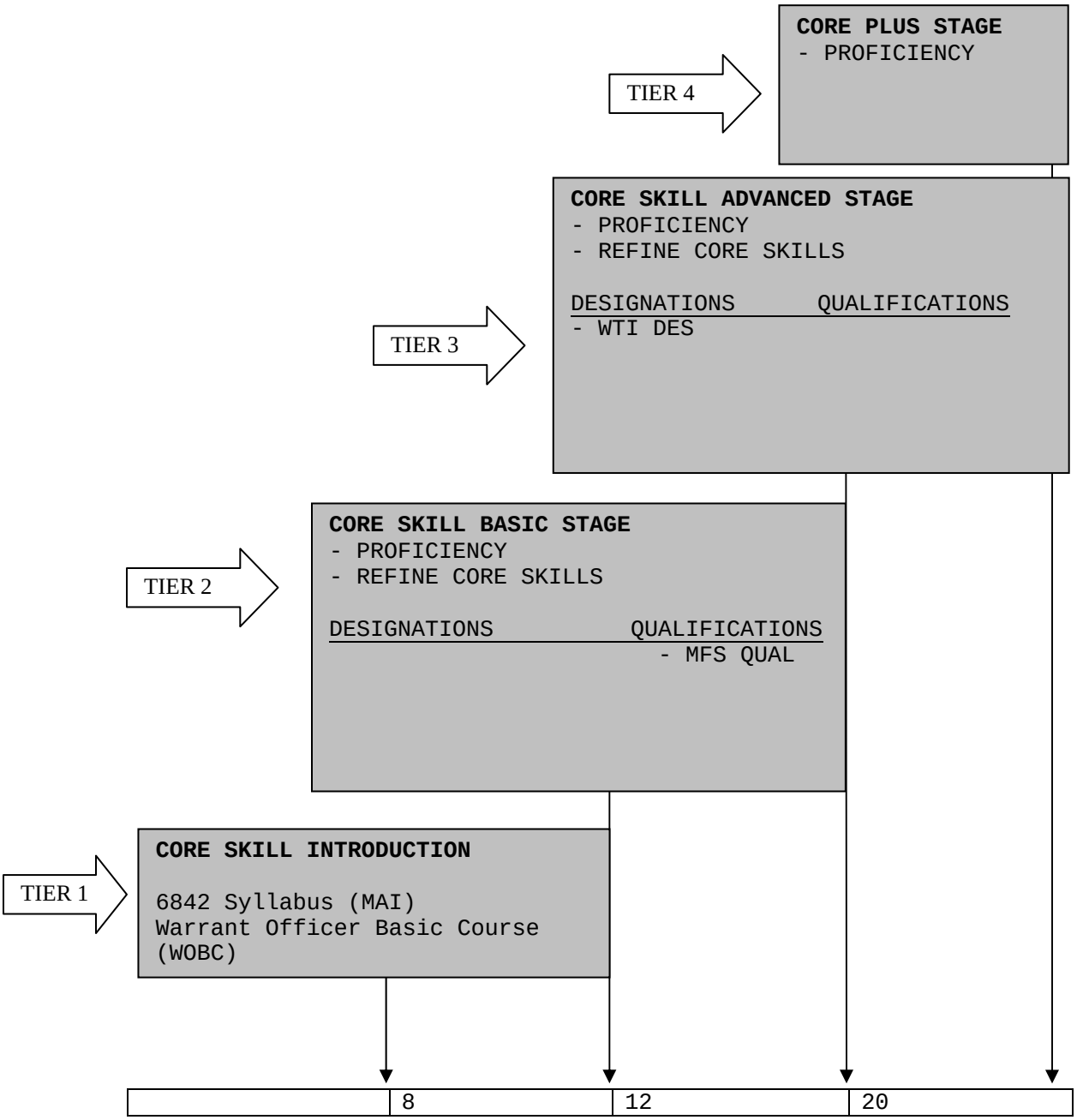

Figure 2-1.--METOC Officer Training Progression Model.

202. INDIVIDUAL CORE SKILL PROFICIENCY(CSP) REQUIREMENTS. A CSP watch consists of individuals representing each watch 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.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 200-300 level T&R events listed for that Core Skill:

Table 2-1.–-Individual CSP Attain.

INDIVIDUAL CSP ATTAIN							
6802	AMS	MPB	MDR	MIA	MFS	MPC	ADM
T&R event Requirements to attain CSP	200 201 202 203 204R	210 211R 212 213R 214 215	220 221R	230R 231R 232 233 234 235 236 237 238	240R 241 242	250 251R 252 253R 254 255 256 257 258 300 301 302 303R 304 305 306 307 308 309R 310 311 312	260R 261R 262 263 264 265 266 267 268 310 311 312 313 314 315R 316 317 318 319
R = Refresher POI event S = Event conducted in simulator							

2. Events Required to Maintain Individual CSP. To maintain CSP in a core skill, an individual must maintain proficiency in all 200-300 level T&R events listed for that core skill:

Table 2-2.--Individual CSP Maintain.

Individual CSP Maintain							
6802	AMS	MPB	MDR	MIA	MFS	MPC	ADM
T&R event requirements to maintain CSP	204R	211R 213R	221R	230R 231R	240R	251R 253R 303R 309R	260R 261R 315R
R = Refresher POI event S = Event conducted in simulator							

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

Table 2-3.--Individual Core Plus Skills Attain.

Individual Core Plus Skills Attain		
6802	ADM	MPC
T&R event Requirements to attain CPSP	400	410 411

R = Refresher POI event S = Event conducted in Simulator		

4. Events Required to Maintain Individual Proficiency in Core Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all of the T&R events listed in the table below for that Core Plus Skill.

Table 2-4.--Individual Core Plus Skills Maintain.

Individual Core Plus Skills Maintain		
6802	ADM	MPC
T&R event requirements to maintain CPSP	400	410 411
R = Refresher POI event S = Event conducted in Simulator		

203. CERTIFICATIONS, QUALIFICATIONS AND DESIGNATIONS

1. Certification. A certification refers to the evaluation process for personnel during a syllabus event(s) by a designated instructor or authorized person for the purpose of ascertaining proficiency in qualification and designation event(s) as a prerequisite to qualification or designation.

2. Qualification. Qualification is a status assigned to personnel based on demonstration of proficiency in a specific skill. Individuals do not lose a qualification as a function of refresh factor for individual events. Specific criteria to achieve a qualification is delineated in table 1-12 and the MAWTS-1 Course Catalog. Upon completion of the qualification criteria, commanding officers may issue a qualification letter for inclusion into the individual training jackets. However, loss of proficiency (delinquent refresh factor) for all associated qualification events (events with measurable refresh factor) constitutes loss of that qualification. Requalification requires demonstrated proficiency by successfully repeating all R-coded events associated with the respective qualification (unless waived). All qualifications are assigned one or more T&R events related to that qualification, known as qualification events. When an individual completes all qualification requirements to include qualification events, the individual may be granted the respective qualification by the commanding officer. The individual proficiency status of these qualification events are used to determine qualification status. An individual’s qualification status may be either “Qualified” or “Not Qualified” for a given qualification.

3. Designations. A designation is a status assigned to an individual based on leadership ability. It is a command specific, one-time occurrence and remains in effect until removed for cause or the individual is transferred to another command. When an individual completes all designation training requirements, the individual may be granted the respective designation by the commanding officer. The designation letter to individuals shall be included into training tracking system, electronic training jacket (if available) and a page entry in the SRB.

a. Instructor Designations. Instructor designations are assigned to personnel based on ability to conduct instruction of a Core Skill. Instructor designations are designed to enhance standardization and safety while training unqualified personnel in specific skills. T&R instructor designation/re-designation requirements should be consistent with, and may reference instructor requirements listed in the MAWTS-1 course catalog, NATOPS, and other applicable directives.

4. Qualification and Designation Tables. The tables below delineate T&R events required to be completed to attain initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, unit training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in Individual Performance Record (IPR). Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that FMF qualification.

Table 2-5.--Individual Qualification Requirements.

	Initial Event Qualification Requirements
Qualification (Tracking code)	Event Requirements
QTC-600 MFS	All 200 level events,6842 syllabus
R = Refresher POI events required for re-qualification	

Table 2-6.--Individual Designation Requirements.

	Individual Designation Requirements
Designation (Tracking code)	Event Requirements
DTC-601 WTI	WTI-500,WTI-501,QTC-600

204. 6802 PROGRAMS OF INSTRUCTION (POI)

1. BASIC (POI)

WEEKS	COURSE/PHASE	ACTIVITY
1-12	Warrant Officer Basic Course	MCCDC
13-65	Core Skill Basic Training	FMF Unit
66-112	Core Skill Advanced Training	FMF Unit
113-119	Weapons and Tactics Instructor	MAWTS-1
120-167	Core Plus Training	FMF Unit

2. POI FOR 6802 REFRESHER TRAINING

WEEKS	COURSE/PHASE	ACTIVITY
1-21	Core Skill Basic Training	FMF Unit
22-45	Core Skill Advanced Training	FMF Unit
46-69	Core Plus Training	FMF Unit

3. POI FOR METOC FORMAL SCHOOLS INSTRUCTOR

WEEKS	COURSE/PHASE	ACTIVITY
1-7	Weapons and Tactics Instructor	MAWTS-1

205. ACADEMIC/GROUND TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity. This manual provides METOC units with the standards of training to obtain and maintain proficiency in the MOS. METOC officers shall coordinate the development of lesson plans to support this syllabus as required.

2. External academic courses of instruction available to complete the syllabus are listed below.

COURSE	ACTIVITY
Warrant Officer Basic Course	MCCDC
Weapons and Tactics Instructor Course	MAWTS-1

206. SYLLABUS NOTES. List notes, policies and guidelines applicable to the T&R syllabus if required.

207. CORE SKILL BASIC PHASE

1. General. This phase of training deals with Core Skills that are specific mission-related task areas that support METOC METL's and consist of like T&R events. The core model requires individual and unit proficiency in 200 level core skills in order to perform all tasks in the unit METL and to execute the unit core capability. This phase includes Core Skill training essential to wartime employment of the unit. Training at this level enhances proficiency from fundamental understanding of Core Skills to proficiency in basic required Core Skills. Individuals should normally complete this phase of training within the first year of assignment to a FMF unit. Assignment of CRP values should fall within the range of 0.30 - 1.00 per event. CRP weighting shall reflect the hierarchical nature of core competencies. Upon completion of the Core Skill Basic Phase, an individual shall be at 75 percent CRP (Core Skill Basic phase = 15 percent CRP).

a. Stages.

(1) AMS

(2) MPB

(3) MDR

(4) MIA

(5) MFS

(6) MPC

(7) ADM

2. Applied Meteorological Sciences (AMS)

a. Purpose. To maintain advanced principles and concepts relating to applied meteorological and oceanographic sciences.

b. General

(1) METOC Officers must be designated as MMA (chapter 1, event DTC-663) prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall be proficient in the application and analysis of meteorological charts and products.

c. Total Training Events. 5 Events, 15.5 Hours

AMS-200	2.0	*	E	G,M,N L	L/S	(N)

Goal. Forecast tropical cyclone development and movement.

Requirement. METOC products (live or canned data) and under conditions for tropical development, analyze for tropical cyclone development, movement, and intensity. Compute a 96-hour prognostic for movement/intensity of the system.

(1) Interpret cyclone warnings and advisories.
(2) Modify computer generated tropical cyclone models and available centrally prepared products based on climatological summaries of cyclone storm tracks, forecasting rules, and local area requirements.
(3) Forecast tropical cyclone development, movement, and intensity using satellite data and other applicable products.
(4) Interpret METOC data parameters.
(5) Prepare a brief to include at a minimum:
    (a) Recommendation to cyclone conditions of readiness.
    (b) Cyclone categories.
    (c) Impacts to cyclone evacuation plan.
    (d) Impacts based on cyclone storm surge forecasts.

Performance Standard. Meet requirements per local METOC SOP. Repetition of tasks shall be carried out until an 80% accuracy level is achieved in content and format.

AMS-201	1.0	*	E	G,M,N L	L/S	(N)

Goal. Produce a limited data forecast.

Requirement. Given three METOC products and a location, write a plain language forecast for a period of 48 hours and verify for accuracy.

Performance Standard. The elements of the forecast shall be verified to an 80% accuracy.

AMS-202	0.5	*	E	G,M,N	L	L/S	(N)

Goal. Forecast severe weather.

Requirement. Given required charts and a designated area of responsibility (AOR), analyze and forecast for the severe weather elements listed and provide meteorological reasoning for each:

(1) Convective phenomena.
(2) Non-convective phenomena.

Performance Standard. Derived forecast must display sound meteorological reasoning.

AMS-203	2.0	*	E	G,M,N	L	L/S	(N)

Goal. Comprehend Global and Regional METOC models.

Requirement: Identify and state the strengths and weaknesses for each numerical model applicable to a given AOR.

Performance Standard. Retrieve a given numerical model and accurately identify its strengths and weaknesses.

AMS-204	10.0	365	R	E	G,M,N	L	L/S	(N)

Goal. Develop synoptic scale forecast using prognosis techniques.

Requirement. Forecast synoptic scale features by completing the listed items:

(1) Initialize model data.
(2) Analyze or re-analyze:
    (a) Surface chart.
    (b) Thickness chart.
    (c) Vorticity.
    (d) Standard Upper Air chart set.
    (e) Satellite imagery.
    (f) Radar imagery.
    (g) Weather depiction charts.
(3) Develop forecasted intensity and location of weather features.
(4) Discuss meteorological reasoning for forecasted elements.

Performance Standard. Identify, depict and provide technical reasoning for meteorological features depicted to an 80% accuracy.

Prerequisite. AMS-200, AMS-201, AMS-202, and AMS-203.

3. METOC PRODUCT BRIEFINGS (MPB)

a. Purpose. To refine dynamic briefing techniques relating to METOC operations.

b. General

(1) METOC Officers must be designated as MMA (chapter 1, event MMA-663) prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall be proficient in the application and analysis of meteorological charts and products to successfully brief METOC conditions to a specific audience.

c. Total Training Events. 6 Events, 84.0 Hours

MPB-210	8.0		*	E	G,M,N	L	(N)

Goal. Conduct METOC training briefs.

Requirement. Develop and brief the specialized/tailored weather briefs listed, but not limited to the following:

(1) Seasonal weather briefs.
(2) Holiday/travel Briefs.
(3) Special events.
(4) METOC capabilities brief.

Performance Standard. Prepare and conduct each listed brief once. Development time for each brief is one week. Content and verification of forecasted elements shall be verified for 80% accuracy.

MPB-211	6.0	365	R	E	G,M,N	L	(N)

Goal. Conduct a pre-deployment brief.

Requirement. Prepare and conduct a mission specific deployment brief. Include the following:

(1) Basic forecasted meteorological parameters.
(2) Surface observation and TAF.
(3) Flight weather products.
(4) Types of severe weather warnings and advisories.
(5) Available and/or applicable METOC software.
(6) NATOPS requirements.
(7) METOC support capabilities.
(8) Climatological impact assessment.
(9) Type of terrain in area of interest and influence to METOC parameters.

Performance Standard. Complete the briefing within 8-hours of receipt of RFI per MCWP 3-35.7.

Prerequisite. AMS-204.

MPB-212	3.0		*	E	G,M,N	L	(N)

Goal. Brief METOC capabilities.

Requirement. Brief current METOC mission support capabilities.

(1) Assess the METOC requirements of the targeted audience.
(2) Prepare the METOC capabilities brief.
(3) Conduct the METOC capabilities brief.

Performance Standard. Brief must contain all information pertaining to the METOC support missions per applicable references.

MPB-213 40.0 365 R E G,M,N L (N)

Goal. Conduct a climatology brief.

Requirement. Prepare and conduct a 3-month climatology brief that includes the listed items:

(1) Overview.
(2) Geography.
(3) Terrain.
(4) Operational interests (if applicable).
(5) Oceanography.
(6) Astronomical.
(7) Seismic activity.
(8) Historical EM conditions.
(9) General climate.
(10) Specific weather elements (if applicable).
  (a) Relative humidity.
  (b) Thunderstorms/precipitation.
  (c) Prevailing winds.
  (d) Sky condition.
  (e) IFR/VFR/Marginal VFR percentages.
  (f) Assessments and recommendations.
(11) Hydrology (as required).

Performance Standard. Generate the brief within 48-hours of receipt of RFI per MCWP 3-35.7.

Prerequisite. AMS-204.

MPB-214 3.0 * E G,M,N L (N)

Goal. Conduct an Aviation Strike Brief.

Requirement. Prepare and conduct an aviation (mission specific) strike weather brief within 3-hours. Include the following information:

(1) Nephanalysis.
(2) Enroute weather.
  (a) Sky condition.
  (b) Weather.
  (c) Visibility/Slant range visibility (NM).
  (d) Sea surface temperature/in-water survival time.
  (e) Winds.
  (f) Temperatures.
  (g) Turbulence.
  (h) Icing.

(i) Contrail formation.
(j) Ditch heading.
(3) Target Area Weather (repeat for each area).
(a) Sky condition.
(b) Weather.
(c) Visibility/slant range visibility (NM).
(d) Surface winds.
(e) Maximum/minimum temperatures.
(f) Cloud tops/ceilings.
(g) Freezing level.
(h) D-Values.
(4) Astronomical Data.
(a) Sunrise/Sunset.
(b) Sun elevation angles/azimuth.
(c) Beginning/ending civil/nautical twilights.
(d) Moonrise/moonset.
(e) Lunar illumination.
(f) Moon angles elevation/azimuth.
(g) Lux values.
(5) 48-hour outlook.
(6) Tactical assessment.
(7) Electro-Optical sensor performance predictions.

Performance Standard. Complete the briefing within 24-hours of receipt of RFI per MCWP 3-35.7.

MPB-215	24.0	*	E	G,M,N	L	(N)

Goal. Conduct an amphibious warfare brief.

Requirement. Prepare and present an amphibious warfare brief that contains the listed items:

(1) Current weather information.
(2) 24-hour weather information.
(3) Aviation parameters.
(4) Surf forecast.
(5) Tactical assessment.
(6) Atmospheric refractive summary.
(7) Astronomical data.
(8) 24-hour radiological/chemical fallout forecast.

Performance Standard. Complete the briefing with 24-hours of receipt of RFI per MCWP 3-35.7.

4. METEOROLOGICAL RADAR (MDR)

a. Purpose. To demonstrate management skills pertaining to MDR equipment and operations.

b. General

(1) METOC Officers must be designated as MMA (chapter 3, event MMA-663) prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall be proficient the operation of all currently fielded meteorological radars.

c. Total Training Events. 2 Events, 12.0 Hours

MDR-220	6.0	*	E	G,M,N	L	(N)

Goal. Manage meteorological radar operations.

Requirement. Complete listed tasks to conduct management of Doppler radar operations:

(1) Establish and coordinate background maps with radar operation center.
(2) Coordinate Doppler radar maintenance.
(3) Identify and implement software and hardware configurations.
(4) Identify and configure radar user functions.
(5) Establish radar regular and limited access adaptation data.
(6) Participate in unit radar committee meetings.
(7) Establish radar alerts and thresholds.
(8) Establish one-time product request procedures.
(9) Establish radar product set lists.
(10) Establish dedicated and non-associated radar product generator (RPG) lists.
(11) Set radar system clock.

Performance Standard. Completion of requirement must not violate local or RDA system integrity.

MDR-221	6.0	365	R	E	G,M,N	L	(N)

Goal. Manage meteorological radar system(s) management.

Requirement. Given a Doppler radar system, applicable operating manuals and understanding the configurations, limitations, and capabilities of Doppler radar systems, display a working knowledge of Doppler radar management functions. Configuration should allow for ingest, analysis, manipulation, and production of derived radar products. Perform, at a minimum, the following tasks:

(1) Ensure configuration is commensurate with desired product generation.
    (a) Pulse repetition frequency.
    (b) Sample rates.
    (c) Gate width.
    (d) Beam width.
    (e) Operating frequency.
    (f) Scanning speeds.
    (g) Scanning elevations.
(2) Archive generated products.
(3) Discuss the Doppler radar product algorithms and the products.
(4) Ensure that Doppler radar products are available through electronic means customers.
(5) Ensure hazards of electromagnetic radiation to fuels (HERF) procedures are implemented and adhered to.

(6) Ensure hazards of electromagnetic radiation to personnel (HERP) procedures are implemented and adhered to.
(7) Ensure hazards of electromagnetic radiation to ordinance (HERO) procedures are implemented and adhered to.

Performance Standard. Complete requirement so as not to adversely affect network communications, radar system software or hardware.

Prerequisite. MDR-220.

5. METOC IMPACT ASSESSMENT (MIA)

a. Purpose. To develop METOC impacts to MAGTF operations.

b. General

(1) METOC Officers must be designated as MMA (chapter 3, event DTC-663) prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall be an expert in the application of METOC impacts to all facets of warfare.

c. Total Training Events. 9 Events, 32.0 Hours

MIA-230	8.0	365	R	E	G,M,N	L	(N)

Goal. Conduct a mission analysis.

Requirement. Conduct a thorough analysis of the mission, including:

(1) Situation.
(2) Mission.
(3) Execution.
(4) Administration and Logistics.
(5) Command and Control.

Performance Standards. Analysis shall be verified for content to 80% accuracy.

MIA-231	3.0	365	R	E	G,M,N	L/S	(N)

Goal. Produce mission specific products.

Requirement. Utilizing Tactical Decision Aids, produce:

(1) Historical environmental prediction condition (HEPC) summary.
(2) Refractive index profile.
(3) Radar coverage diagrams.
(4) Radar propagation loss.
(5) Platform vulnerability.
(6) Probability of detection.
(7) Electronic support measures.
(8) Electronic countermeasures.
(9) Solar lunar products.
(10) Weapons performance.

Performance Standard. Complete briefing within 3-hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-230 and read applicable chapter of MCWP 3-35.7.

MIA-232	3.0	*	E	G,M,N	L	(N)

Goal. Assess METOC impacts to amphibious operations.

Requirement. Utilizing METOC equipment and after conducting a thorough mission analysis, assess and brief the METOC impacts on operations. The assessment shall include the following essential elements of information (EEI):

(1) Bioluminescence.
(2) Sky condition.
(3) Visibility.
(4) Wind.
(5) Temperature.
(6) Precipitation.
(7) Illumination.
(8) Currents.
(9) Tides.
(10) Water temperature.
(11) Sea state.
(12) Surf conditions.
(13) Hazardous weather.
(14) Ice conditions.
(15) Bathymetry.
(16) Wind chill.
(17) WBGTI.
(18) Submersion survival time.

Performance Standard. Complete the briefing within 3-hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-231 and read applicable portion of MCWP 3-35.7.

MIA-233	3.0	*	E	G,M,N	L	(N)

Goal. Assess METOC impacts on aviation operations.

Requirement. Utilizing METOC equipment and after conducting a thorough mission analysis, assess and brief the METOC impacts on operations. The assessment shall include the following EEI:

(1) Sea surface temperature.
(2) Sky condition.
(3) Visibility (surface/slant).
(4) Winds (surface and aloft).
(5) Temperature.
(6) Precipitation.

(7) Hazardous weather.
(8) Turbulence.
(9) Icing.
(10) Hail.
(11) Astronomical data.
(12) Humidity (relative and absolute).
(13) Pressure.
(14) Ditch headings.
(15) Wind chill.
(16) WBGTI.
(17) Submersion survival time.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-231 and read applicable portion of MCWP 3-35.7.

MIA-234	3.0	*	E	G,M,N	L	(N)

Goal. Assess METOC impacts on ground operations.

Requirement. Utilizing METOC equipment and after conducting a thorough mission analysis, assess and brief the METOC impacts on operations. The assessment shall include the following EEI:

(1) River stage and currents.
(2) Sky condition.
(3) Visibility.
(4) Wind.
(5) Temperature.
(6) Precipitation.
(7) Snow/ice depth and coverage.
(8) Freeze and thaw depth.
(9) Hazardous weather.
(10) Astronomical data.
(11) Sea/shore conditions (tides, currents, surf, and water temperature).
(12) Vertical wind profile.
(13) Wind chill.
(14) WBGTI.
(15) Submersion survival time.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-231 and read applicable portion of MCWP 3-35.7.

MIA-235	3.0	*	E	G,M,N	L	(N)

Goal. Assess METOC impacts on intelligence operations.

Requirement. Utilizing METOC equipment and after conducting a thorough mission analysis, assess and brief the METOC impacts on operations. The assessment shall include the following EEI:

(1) Hazardous weather.
(2) Sky condition.
(3) Visibility.
(4) Wind.
(5) Temperature.
(6) Precipitation.
(7) Snow depth and coverage.
(8) Astronomical data.
(9) EM propagation.
(10) Wind chill.
(11) WBGTI.
(12) Submersion survival time.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-231 and read applicable portion of MCWP 3-35.7.

MIA-236	3.0	*	E	G,M,N	L	(N)

Goal. Assess METOC impacts on communication operations.

Requirement. Assess and brief the METOC impacts on operations. The assessment shall include the following EEI:

(1) Space weather.
(2) Wind.
(3) Temperature profile.
(4) Precipitation.
(5) Snow depth and coverage.
(6) EM propagation.
(7) Hazardous weather.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-231 and read applicable portion of MCWP 3-35.7.

MIA-237	3.0	*	E	G,M,N	L	(N)

Goal. Assess METOC impacts on Chemical, Biological, Radiological and Nuclear (CBRN) defensive operations.

Requirement. Assess and brief the METOC impacts on operations. The assessment shall include the following EEI:

(1) Hazardous weather.
(2) Sky condition.
(3) Humidity.

(4) Wind.
(5) Temperature.
(6) Atmospheric stability.
(7) Precipitation.
(8) EM propagation.
(9) Wind chill.
(10) WBGTI.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-231 and read applicable portion of MCWP 3-35.7.

MIA-238	3.0	*	E	G,M,N	L	(N)

Goal. Assess METOC impacts on logistical operations.

Requirement. Assess and brief METOC impacts on operations. The assessment shall include the following EEI:

(1) Bathymetry.
(2) Sky condition.
(3) Visibility.
(4) Wind.
(5) Temperature.
(6) Precipitation.
(7) Snow depth and coverage.
(8) Astronomical data.
(9) EM propagation.
(10) Hazardous weather.
(11) Currents.
(12) Tides.
(13) Water temperature.
(14) Sea state.
(15) Surf conditions.
(16) Ice conditions.
(17) Wind chill.
(18) WBGTI.
(19) Submersion survival time.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are 80% accurate per applicable references.

Prerequisite. MIA-231 and read applicable portion of MCWP 3-35.7.

6. MAGTF FORECAST SUPPORT (MFS)

a. Purpose. To master advanced METOC principles and concepts relating to METOC operations.

b. Academic Training. Academic training will be conducted prior to and concurrently with required events. An academic training event, once completed, can be credited for follow on training events.

c. Total Training Events. 3 Events, 24.0 Hours

MFS-240	6.0	365	R	E	G,M,N	L	(N)

Goal. Produce mission specific meteorological products that support MAGTF operations.

Requirement. Produce locally prepared products listed and discuss the content thereof:

(1) Chemical downwind message.
(2) Blast forecast.
(3) Drop zone forecast.
(4) Sound propagation forecast.

Performance Standard. Forecasts shall be verified to an 80% accuracy. Products must be in accordance with applicable orders.

Prerequisite. AMS-204, MDR-221, MPB-211, MPB-212, MPB-213 and MIA-231.

MFS-241	12.0	*		E	G,M,N	L	(N)

Goal. Generate a climatology brief.

Requirement. Research and prepare a three-month climatology brief for a specified location. Include the following:

(1) Overview.
(2) Geography.
(3) Terrain.
(4) Oceanography.
(5) Astronomical.
(6) Seismic activity.
(7) Specific weather elements, if applicable:
    (a) Relative humidity.
    (b) Temperature.
    (c) Thunderstorms/precipitation.
    (d) Prevailing winds.
    (e) Sky condition.
    (f) IFR/VFR/Marginal VFR percentages.
    (g) Ice thickness and flow.
    (h) Volcanic activity.

Performance Standard. Presentation shall be completed within 12 hours. It is recommended that the designated location or AOR for the climatology presentation be located in a foreign and/or unfamiliar country.

MFS-242	6.0	*		E	G,M,N	L	(N)

Goal. Demonstrate mastery of oceanographic and littoral warfare products.

Requirement. Produce and/or assess the following oceanographic/littoral warfare products:

(1) Sea Surface Temperature Charts.
(2) Current and Tidal Charts.
(3) Modified Surf Index.
(4) Beach Survey Charts.
(5) Specialized Analyzed Image Littoral (SAIL).
(6) Specialized Tactical Oceanographic Information Chart (STOIC).
(7) Rapid Environmental Assessment Chart Tactical (REACT).
(8) Riverine Survey Charts.

Performance Standard. State how the above listed charts pertain the MAGTF support to 80% accuracy.

7. METOC PLANNING AND COORDINATION (MPC)

a. Purpose. Demonstrate expertise in the METOC Officer's ability to attain and maintain planning and coordination for mission specific support.

b. General

(1) METOC Officers must be designated as MMA (chapter 3, event DTC-663) prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall be adept at planning and coordinating all facets of METOC support to the MAGTF.

c. Total Training Events. 9 Events, 241.0 Hours

MPC-250	6.0		*	E	G,M,N	L	(N)

Goal. Introduce METOC logistics and external support requirements.

Requirement. Exhibit knowledge of listed logistical and external support programs and requirements:

(1) Hazardous materials (HAZMAT).
(2) Marine Aviation Logistics Unit (MALS) support structure.
(3) Mobile facility lift and transportation requirements.
(4) Time Phased Force Deployment Data (TPFDD).
(5) Equipment Density Lists (EDL).

Performance Standard. Without error, identify and discuss logistical and external support in accordance with orders and regulations governing the logistical support programs.

MPC-251	16.0	365	R	E	G,M,N	L	(N)

Goal. Embark the MetMF(R).

Requirement. Embark the MetMF(R) to and from a designated area. Perform the following:

(1) Supervise pack up of the MetMF(R).
(2) Supervise lift.
(3) Transport classified materials.
(4) Unpack the MetMF(R) at the designated area.

(5) Establish METOC support.

Performance Standard. Within 16 hours, embark the MetMF(R) and perform operational checks.

MPC-252	48.0	*	E	G,M,N	L	(N)

Goal. Perform system management functions of applicable subsystems inherent to the MetMF(R).

Requirement. Complete listed tasks to configure and manage the components of the METMF(R) ensuring continuous data ingest and dissemination:

(1) Processing Subsystem (PCS).
- (a) Establish and maintain integrity of operating systems.
- (b) Establish and configure components of the network.
- (c) Install authorized software upgrades and patches.
- (d) Optimize the effective flow of meteorological data throughout communication paths.
- (e) Establish network naming conventions and paths of received data.
- (f) Maintain meteorological system interface with network and web dissemination and storage.
- (g) Obtain proper keying material for use in CCI equipment.

(2) Meteorological Radar System (MRS).
- (a) Establish and maintain system setup and configuration parameters.
- (b) Archive/restore configuration data to tape. (Level 0 Dump tape).
- (c) Install system software when required.
- (d) Establish standard processes for desired products.
- (e) Establish standard product set for each established process.
- (f) Configure network interfaces within the operating system and application software.
- (g) Establish and manage scheduled processes.
- (h) Create underlay/overlays for desired AO.
- (i) Ensure configuration and operation are within frequencies allocated and in accordance with safety requirements.

(3) Meteorological Satellite Subsystem (MSS).
- (a) Establish and maintain system setup and configuration parameters.
- (b) Archive/restore configuration data to tape. (Level 0 Dump tape).
- (c) Install system software when required.
- (d) Configure network interface within the operating system.
- (e) Maintain and follow file-naming conventions.
- (f) Configure automatic export of satellite imagery to meet mission requirements.

(4) Communications Subsystem (CSS).
- (a) Obtain appropriate keying material for system.
- (b) Ensure appropriate frequencies have been allocated for use.

(c) Ensure configuration and operation are within frequencies allocated and in accordance with safety requirements.
(d) Establish and maintain system setup and configuration parameters.

(5) Local/Remote Sensor Subsystem (LSS/RSS).
(a) Configure software and hardware interfaces for data reception.
(b) Configure software for data export and archive.
(c) Establish and maintain system setup and configuration parameters.

(6) Rawinsonde subsystem (RWS).
(a) Configure UMQ-12 for different locations and output types.
(b) Establish and maintain system setup and configuration parameters.

Performance Standard. Requirement must be meet without violating component, system or network integrity.

MPC-253	16.0	365	R	E	G,M,N	L	(N)

Goal. Master the Defense Messaging System (DMS).

Requirement. Create listed messages:

(1) Casualty Reports (CASREP).
(2) Weather Forecast (WEAX).
(3) Joint Operational Area Forecast (JOAF).
(4) Tactical Atmospheric Summary (TAS).
(5) Assault Forecast (ASLTFCST).
(6) Amphibious Objective Area Forecast (AOAFCST).
(7) Strike Forecast (STRKFCST).
(8) Chemical Downwind Message (CDM).

Performance Standard. Messages must comply with applicable references.

MPC-254	32.0	*	E	G,M,N	L	(N)

Goal. Conduct deployment requirements and procedures.

Requirement. Accomplish the following tasks:

(1) Plan a deployment of tactical METOC assets to a Forward Operating Base (FOB).
(2) Coordinate transportation of equipment (classified and unclassified) to designated area.
(3) Coordinate personnel transportation and billeting.
(4) Conduct appropriate inspections.
(5) Coordinate network connectivity (where available).
(6) Coordinate logistical support.

Performance Standard. Personnel and equipment must arrive at the designated area to establish METOC support capabilities.

MPC-255	24.0	*	E	G,M,N	L	(N)

Goal. Submit METOC reports.

Requirement. Draft and submit the listed reports:

(1) Validate and submit Joint Universal Lessons Learned Summary (JULLS) report.
(2) Validate and submit METOC After Action Reports.
(3) Validate and submit Marine Corps Lessons Learned System (MCLLS) reports.
(4) Validate and submit Universal Needs Statement (UNS) reports.
(5) Validate and submit equipment casualty reports (CASREP).

Performance Standard. Content and format will be in accordance with orders and directives governing the individual report.

MPC-256	51.0	*	E	G,M,N	L	(N)

Goal. Submit input to annex of operational orders.

Requirement. Submit METOC input to the annexes of operational orders and LOIs to the requesting command. Complete the requirement on each of the following:

(1) Intelligence operations, Annex B.
(2) Environmental operations, Annex H.
(3) Collection plan, Annex J.
(4) Communications and information systems, Annex K.

Performance Standard. Draft METOC input must be in Joint Operational Planning and Execution System (JOPES) or applicable format, contain all required information to support designated mission and designate all external requirement for METOC support per applicable references.

MPC-257	24.0	*	E	G,M,N	L	(N)

Goal. Conduct METOC support operations for MAGTF.

Requirement. Provide METOC support through all phases of MAGTF planning and execution operations. Complete the following items:

(1) Participate in rapid response planning process (R2P2) training and operation-planning teams (OPT).
(2) Coordinate METOC support requirements for the MEU.
(3) Liaison with MEF METOC units on METOC support issues.
(4) Identify and correct METOC support deficiencies.
(5) Provide operational planning products in support of the Intelligence Preparation of the Battlefield (IPB) process.

Performance Standard. Ensure Marine METOC interest and planning requirements are addressed.

MPC-258	24.0		*	E	G,M,N	L	(N)

Goal. Introduce joint operation METOC functions.

Requirement. Be familiar with the following tasks:

(1) Coordinate joint METOC support.
(2) Liaise with component METOC units/commands.
(3) Identify and correct joint METOC support deficiencies.
(4) Provide operational planning products in support of the IPB process.

Performance Standard. Ensure that Marine METOC interest and planning requirements are addressed.

8. ADMINISTRATION (ADM)

a. Purpose. Demonstrate proficiency of properly administering METOC personnel and programs under their cognizance.

b. General

(1) METOC Officers must be designated as MMA (chapter 3, event DTC-663) prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall be adept in the proper administrative functions necessary to support MAGTF operations.

c. Total Training Events. 9 Events, 47.0 Hours

ADM-260	2.0	365	R	E	G,M,N	L	(N)

Goal. Describe METOC support architecture.

Requirement. State and discuss the missions, composition, equipment and capabilities of all USMC METOC support unit/billets.

Performance Standard. Identify components, structure, billets, unit supported, equipment inherent to each support element and capabilities of the billets/components.

ADM-261	2.0	365	R	E	G,M,N	L	(N)

Goal. Describe Department of Defense and Department of Commerce METOC support architecture.

Requirement. State and discuss the missions, composition, equipment and capabilities of all METOC support unit/billets.

Performance Standard. Identify components, structure, billets, unit supported, and standard mission based capabilities.

Prerequisite. ADM-260

ADM-262	1.0	*	E	G,M,N	L	(N)

Goal. Utilize orders and directives governing METOC support.

Requirement. Provide a verbal overview of the following references:

(1) Desktop procedures.
(2) NAVMETOCCOMINST 3141.2 Surface METAR Observation User's Manual.
(3) OPNAVINST 3140.24(_) Warning and Conditions of Readiness.
(4) NAVMETOCCOMINST 3142.1(_) Pilot Reports.
(5) OPNAVINST 3710.7(_) NATOPS Manual.
(6) Local Destructive Weather Order.
(7) MCWP 3-35.7 MAGTF METOC Support.
(8) CJCSI 3810.01B.
(9) JP-3-59 Joint Doctrine, Tactics, Techniques, and Procedures for METOC Operations.
(10) MOS Manual
(11) NWP 3-10 Chapter 2 (CASREPs)

Performance Standard. Define the contents of the above listed references to an 80% accuracy.

ADM-263	3.0	*	E	G,M,N	L	(N)

Goal. Manage logistical support program.

Requirement. Demonstrate the knowledge to supervise and maintain METOC logistical support programs.

Performance Standard. Must comply with applicable orders and directives.

ADM-264	2.0	*	E	G,M,N	L	(N)

Goal. Promulgate equipment casualty reporting procedures.

Requirement. Given a meteorological and oceanographic (METOC) equipment casualty, report it to higher headquarters via a naval message in casualty report (CASREP) format within 24 hours:

(1) Identify an equipment casualty.
(2) Supervise drafting of casualty reports.
(3) Contact METOC Systems Knowledge Center (MSKC) for initial CASREP reporting and Systems Command notification.
(4) Submit casualty report for naval message release.
(5) Submit follow-up casualty reports as required.

Performance Standard. CASREP and supplemental reports must be completed per applicable references.

ADM-265	6.0	*	E	G,M,N	L	(N)

Goal. Maintain and manage the maintenance, management, and material (3M) processes of the MetMF(R).

Requirement. Implement and supervise coordinated requisition, repair, and re-supply of Consolidated Shipboard Allowance List (COSAL) and Table of Basic Allowance (TBA) items within the MALS:

(1) Validate and verify all METOC equipment on accounts by applicable nomenclature and/or national stock numbers (NSN).
(2) Supervise the requisition of replacement equipment/material or documented deficiencies.
(3) Identify and validate future requirements as necessary for addition to the TBA.

Performance Standard. Validation must be adhered to per applicable references.

ADM-266	6.0	*	E	G,M,N	L	(N)

Goal. Consolidate customer support requirements.

Requirement. Consolidate METOC support requirements to enhance efficiency, identify deficiencies and provide METOC data and products to satisfy all support requirements:

(1) Identify customer METOC support requirements.
(2) Correlate requirements to METOC support capabilities.
(3) Prioritize and satisfy support requirements.
(4) Incorporate support capabilities in appropriate standard operating/desktop procedures for action by METOC personnel.
(5) Document and forward via the chain of command all requested METOC support requirements not able to be fulfilled.

Performance Standard. Must exhibit ability to identify and the develop procedures to respond support requests per applicable references.

ADM-267	24.0	*	E	G,M,N	L/S	(N)

Goal. Identify and coordinate METOC equipment requirements.

Requirement. Conduct the following tasks:

(1) Identify, submit, and coordinate METOC equipment requirements.
(2) Identify, submit, and coordinate METOC equipment maintenance requirements.
(3) Validate table of allowances.
(4) Establish local concept of operations.
(5) Coordinate and supervise testing of new technologies.

Performance Standard. Requirements must meet standards set forth by applicable orders and directives.

ADM-268	2.0	*	E	G,M,N	L/S	(N)

Goal. Facilitate forward area limited observation program (FALOP) procedures.

Requirement. Given a request for information (RFI), respond with requested support products. Complete the following:

(1) Record observational data requested.
(2) Encode observational data requested.
(3) Disseminate observational data requested.

Performance Standard. Encode, record and disseminate METOC observation data using applicable FALOP procedures.

208. CORE SKILL ADVANCED PHASE

1. General. This level contains advanced Core Skill training. It increases proficiency in basic Core Skills and develops mission-level leadership that leads to combat qualifications and leadership designations. Crews proficient in this phase of training should be capable of planning/leading/directing flights of numerous aircraft in a contingency operation or crews within command and control or aviation ground support agencies. Assignment of CRP values should fall within the range of 0.50 - 1.00 per event. CRP weighting shall reflect the hierarchical nature of core competencies. Upon completion of the Core Skill Advanced Phase, an individual shall be at 95 percent CRP (Core Skill Advanced phase = 20 percent CRP).

A. STAGES.

(1) MPC
(2) ADM

2. METOC PLANNING AND COORDINATION (MPC)

a. Purpose. Demonstrate expertise in the ability to attain and maintain MPC for mission specific support.

b. General

(1) METOC Officers must obtain MFS qualification (QTC-600) prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall adept at planning and coordinating all facets of METOC support to the MAGTF.

c. Total Training Events. 13 Events, 176.0 Hours

MPC-300	32.0	*	E	G,M,N	L/S	(N)

Goal. Conduct deployment requirements and procedures.

Requirement. Accomplish the following tasks:

(1) Plan a deployment of tactical METOC assets to a Forward Operating Base (FOB).
(2) Coordinate transportation of equipment (classified and unclassified) to designated area.
(3) Coordinate personnel transportation and billeting.
(4) Conduct appropriate inspections.
(5) Coordinate network connectivity (where available).
(6) Coordinate logistical support.

Performance Standard. Conduct the above tasks so personnel and equipment successfully arrive at the designated area and establish METOC support capabilities.

MPC-301	2.0	*	E	G,M,N	L/S	(N)

Goal. Demonstrate proficiency with deployment requirements and procedures.

Requirement. Given a simulated METOC deployment scenario, perform the following tasks per the LOI:

(1) Identify embarkation requirements.
(2) Identify communication requirements.
(3) Identify METOC support requirements.
(4) Identify personnel requirements.
(5) Identify equipment support procedures.

Performance Standard. Task must be completed per applicable references.

MPC-302	6.0	*	E	G,M,N	L/S	(N)

Goal. Be familiar with METOC logistics and external support requirements.

Requirement. Comprehend the listed logistical and external support programs and requirements:

(1) Hazardous materials (HAZMAT).
(2) Marine Aviation Logistics Squadron (MALS) support structure.
(3) Mobile facility lift and transportation requirements.
(4) Time Phased Force Deployment Data (TPFDD).
(5) Equipment Density lists (EDL).
(6) Table of basic allowance (TBA).
(7) Consolidated shipboard allowance list (COSAL).
(8) Contingency support package (CSP).
(9) Calibration.

Performance Standard. Identify and discuss logistical and external support per orders and regulations governing logistical support program(s).

MPC-303	16.0	365	R	E	G,M,N	L/S	(N)

Goal. Embarkation of the MetMF(R).

Requirement. Embark the MetMF(R) to a designated area. Perform the following:

(1) Supervise pack up of the MetMF(R).
(2) Coordinate and supervise lift.
(3) Transport classified materials.
(4) Unpack the MetMF(R) at a designated area.
(5) Establish METOC support.

Performance Standard. Successful embarkation procedures conducted in compliance with applicable references.

External Support Syllabus. Heavy equipment and transport.

MPC-304	24.0	*	E	G,M,N	L/S	(N)

Goal. Conduct METOC support operations for the MAGTF.

Requirement. Provide METOC support through all phases of MAGTF planning and execution operations. Complete, at a minimum, the following items:

(1) Participate in rapid response planning process (R2P2) training and operation-planning teams (OPT).

(2) Coordinate METOC support requirements for the MEU.

(3) Liaise with MEF METOC units on METOC support issues.
(4) Identify and correct METOC support deficiencies.
(5) Provide operational planning products in support of the Intelligence Preparation of the Battlefield (IPB) process.

Performance Standard. Ensure Marine METOC interests and planning requirements are addressed.

MPC-305	6.0	*	E	G,M,N	L/S	(N)

Goal. Support Staff Planning.

Requirement. Provide commanders and staff with METOC specific operational impacts for planning considerations:

(1) Conduct climatological study.
(2) Assess impacts on friendly and enemy operations.
(3) Integrate the METOC impact assessment with the commander’s stated mission, IPB and COA development.
(4) Continue to support the commander’s COA.

Performance Standard. Complete above listed tasks per applicable references.

MPC-306	24.0	*	E	G,M,N	L/S	(N)

Goal. Introduce joint operation METOC functions.

Requirement. Be familiar with the following tasks:

(1) Coordinate joint METOC support.
(2) Liaison with component METOC units/commands.
(3) Identify and correct joint METOC support deficiencies.
(4) Provide operational planning products in support of the IPB process.

Performance Standard. Ensure Marine METOC interest and planning requirements are addressed.

MPC-307	24.0	*	E	G,M,N	L/S	(N)

Goal. Produce products to support planning and execution of joint operations and missions.

Requirement. Produce mission specific impact assessments for listed joint missions. Exhibit a comprehensive knowledge of METOC element impacts on major weapon and support categories and missions:

(1) Humanitarian aid missions.
(2) Deep strike missions.
(3) Force on force missions.
(4) Over the horizon missions.
(5) Counterinsurgency missions.
(6) Weaponry.

    (a) Weapons of mass destruction.
    (b) Laser guided munitions.
    (c) Infrared guided munitions.
    (d) Visual guided munitions.
    (e) GPS guided munitions.

(7) Communications.

    (a) Satellite.
    (b) UHF/VHF.

(8) Trafficability.
(9) MEU(SOC).

Performance Standard. Complete briefing with 3 hours of receipt of RFI. Content and format be according to applicable references and guidance.

Prerequisite. Applicable portion of MCWP 3-35.7.

MPC-308	5.0	*	E	G,M,N	L	(N)

Goal. Establish and maintain liaison with other service counterparts.

Requirement. Maintain interoperability with other services liaison with other service counterparts to assist one another in the accomplishment of METOC functions:

(1) Monitor other services' METOC programs and establish liaison with other service counterparts through official correspondence.
(2) Identify relevant METOC programs to include coordination of research and development efforts, to avoid duplication and ensure commonality in the improvement of METOC capabilities.
(3) Implement programs identified for Marine Corps use.

Performance Standard. Complete above listed tasks per applicable references.

MPC-309	16.0	365	R	E	G,M,N	L	(N)

Goal. Introduce Defense Messaging System (DMS).

Requirement. Identify content and format for the messages listed:

(1) Casualty Reports (CASREP).
(2) Joint Operational Area Forecast (JOAF).
(3) General Administrative (GENADMIN)

Performance Standard. Message must comply with applicable references.

MPC-310	8.0	*	E		G,M,N	L	(N)

Goal. Submit input to annexes of operational orders.

Requirement. Submit METOC input to the annexes of operational orders and LOIs to the requesting command. Complete the requirement on each of the following:

(1) Intelligence operations, Annex B.
(2) Environmental operations, Annex H.
(3) Collection plan, Annex J.
(4) Communications and information systems, Annex K.

Performance Standard. Draft METOC input must be in Joint Operational Planning and Execution System (JOPES) or applicable format; be in accordance with orders and directives; and contain all required information to support designated mission and designate all external requirement for successful METOC support.

MPC-311	10.0	*	E		G,M,N	L	(N)

Goal. Introduce concepts to METOC support issues.

Requirement. Familiarize and draft the listed reports:

(1) Draft Joint Universal Lessons Learned Summary (JULLS)

report.

(2) Draft METOC After Action Reports.
(3) Draft Marine Corps Lessons Learned System (MCLLS) reports.
(4) Draft Universal Needs Statement (UNS) reports.
(5) Draft equipment casualty reports (CASREP).

Performance Standard. Content and format will be in accordance with orders and directives governing the individual report.

MPC-312	3.0	*	E	G,M,N	L	(N)

Goal. Manage logistical support program.

Requirement. Manage the listed METOC logistical support programs:

(1) Supply requisitions.
(2) Equipment outages.
(3) Fiscal.

Performance Standard. Comply with applicable orders and directives.

3. ADMINISTRATION (ADM)

a. Purpose. To administer METOC personnel and programs.

b. General

(1) METOC Officers must obtain MFS qualification prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC Officers shall be adept in the proper administrative functions necessary to support MAGTF Operations.

c. Total Training Events. 10 Events, 182.0 Hours

ADM-310	24.0	*	E	G,M,N	L	(N)

Goal. Develop METOC Standard Operating and Desktop Procedures.

Requirement. Standard Operating Procedures (SOP) and/or Desktop Procedures must outline and specifically address local METOC procedures. Must conform to METOC doctrine and policies that govern Marine Corps practices and requirements:

(1) Review existing or previous SOPs and local directives.
(2) Assess meteorological and oceanographic support requirements.
(3) Assess locally imposed manpower, fiscal, facility constraints.
(4) Document SOPs.
(5) Submit SOP to the Commanding Officer for approval and signature.

Performance Standard. Complete above listed tasks per applicable references.

ADM-311	24.0	*	E	G,M,N	L	(N)

Goal. Manage METOC unit personnel.

Requirement. Manage the following personnel functions:

(1) Manage METOC personnel readiness.
(2) Identify manpower requirements and shortfalls through official communications.
(3) Coordinate task organized personnel requirements.
(4) Conduct T/O reviews for both the supporting establishment and MARFORs.

Performance Standard. Complete above listed tasks per applicable references.

ADM-312	6.0	*	E	G,M,N	L	(N)

Goal. Establish and oversee qualification and designation program for METOC personnel.

Requirement

(1) Select qualified board evaluators.
(2) Task individual to prepare a forecast or to take observations (surface, surf, upper-air).
(3) Question individual on reasoning and logic concerning their forecast or observations.
(4) Review recommendations of all evaluators.
(5) Make certification recommendation to signing authority.
(6) Prepare and forward appropriate certification certificate for successful forecasters/observers to the signing authority.

Performance Standard. Complete above listed tasks per applicable references.

ADM-313	24.0	*	E	G,M,N	L	(N)

Goal. Establish and maintain a METOC security program.

Requirement. Establish and maintain security program that safeguards communications security (COMSEC) equipment and classified material based on the commander’s guidance:

(1) Ensure METOC Marines have required clearance from Security Manager, commensurate with billet.
(2) Maintain access letters to local secured spaces.
(3) Maintain copy of letter granting access until no longer required per current directives.
(4) Maintain and revise as necessary, local security SOP.
(5) Request, maintain, and/or update as necessary, a physical security evaluation (PSE) from the authority.

(6) Ensure personnel receive all security-training requirements directed by the references.
(7) Establish and maintain an emergency action plan (EAP).

Performance Standard. Complete above listed tasks per applicable references.

ADM-314	24.0		*	E	G,M,N	L	(N)

Goal. Identify METOC doctrinal, equipment or training deficiencies.

Requirement. Develop a Universal Needs Statement (UNS) identifying METOC specific doctrinal, equipment or training deficiencies:

(1) Identify and document support requirements not covered by doctrine.
(2) Develop UNS to satisfy deficiency.
(3) Submit UNS to higher headquarters through the chain of command.

Performance Standard. UNS must be completed per applicable references.

ADM-315	56.0	365	R	E	G,M,N	L	(N)

Goal. Identify and submit fiscal requirements.

Requirement. Identify annual projections and mid-year deficiencies. Submit locally required reports in support of METOC equipment and operational training requirements:

(1) Identify annual operational fiscal requirements.
(2) Estimate annual costs for fiscal requirements.
(3) Prepare annual budget submission and mid-year review deficiencies.
(4) Submit annual and review mid-year review budgets to the appropriate fund administrator.
(5) Monitor and review budgeting accounts.
(6) Identify and submit budget shortfalls.

Performance Standard. Complete above listed tasks per applicable references.

ADM-316	4.0		*	E	G,M,N	L	(N)

Goal. Provide information for Base Engineering Site Evaluation Plan (BESEP) equipment studies.

Requirement. Provide specific information for the completion of the equipment installation BESEP:

(1) Identify future equipment installation requirements.
(2) Assist S-4/Facilities Officer/ROICC in identifying location equipment installation.
(3) Review draft BESEP.

(4) Provide additional information as required in development of the BESEP.
(5) Notify BESEP Engineering Agent when identified plans/facilities change.

Performance Standard. Must be in accordance with applicable orders and directives.

ADM-317 1.0 * E G,M,N L (N)

Goal. Establish and conduct Tower Visibility certification procedures for Air Traffic Control (ATC) personnel.

Requirement. Establish a localized training program to certify ATC personnel as Tower Visibility Observers:

(1) Maintain current versions of all training materials.
(2) Obtain results of tower visibility exams.
(3) Prepare certification certificate for the appropriate certifying authority signature.
(4) Return signed certificates to ATC Officer.
(5) Maintain copies of all test results and signed certificates.
(6) Maintain a roster of Tower Visibility certified ATC personnel.

Performance Standard. Complete the above listed tasks per applicable references.

ADM-318 3.0 * E G,M,N L (N)

Goal. Establish a METOC training program to satisfy MAGTF METOC support requirements.

Requirement. Establish a METOC training program to satisfy MAGTF component METOC support requirements:

(1) Determine MAGTF METOC support requirements.
(2) Develop a comprehensive training plan.
(3) Implement the training plan, to include deployment of personnel and assets.
(4) Evaluate effectiveness of training plan and revise accordingly.

Performance Standard. Complete the above listed tasks per applicable references.

ADM-319 16.0 * E G,M,N L (N)

Goal. Conduct and evaluate pre-deployment screenings and inspections.

Requirement. Utilize the MWSG MCCRES to ensure section deployment readiness and conduct. Evaluate and determine whether the METOC unit is capable of its mission by providing required services in support of the MAGTF:

(1) Conduct and evaluate, using mission performance standards (MPS), the capability to perform all mission support functions using the MWSG MCCRES checklist.
(2) Assign grade (mission capable or non-mission capable).
(3) Utilize inspection results and findings to correct deficiencies.

Performance Standard. Complete the above listed tasks per applicable references.

209. CORE PLUS PHASE

1. General. This level contains skill training associated with low probability of execution and/or theater specific operations. Although Core Plus training events may provide valuable training opportunities, they are not considered essential to achieve unit Core Competency. Core Plus training is conducted at the discretion of operational commanders and allows unit training flexibility. Upon completion of the Core Plus Phase, an individual shall be at l00 percent CRP (Core Plus Phase = 5 percent CRP). Core Competency for operational units resides in the 200-300 training levels (considered 'Core' at the operational echelon). Mastery of 200-300 level Core Skills results in highly trained personnel who contribute to the unit's overall warfighting capability and enables a combat unit to accomplish its assigned mission. Therefore, fleet units shall emphasize individual proficiency in 200-300 level Core Skills. In some instances, certain Core Plus skills may be deemed essential depending on mission requirements and therefore may be considered Core Skills for pre-deployment readiness determination. Only the MAW or MAGTF commander may "re-designate" a Core Plus Skill to the Core Skill level for readiness reporting purposes.

a. Stages.

(1) ADM
(2) MPC

2. ADMINISTRATION (ADM)

a. Purpose. Demonstrate mastery in the ADM of METOC personnel and programs.

b. General

(1) METOC Officers must complete 300-level ADM training prior to commencing the 400 level ADM stage.

(2) Upon completion of this stage of training, METOC Officers shall be adept in the proper administrative functions necessary to support MAGTF operations.

c. Total Training Events. 1 Events, 18.0 Hours

ADM-400	18.0	*	E	G,M,N	L/S	(N)

Goal. Conduct a METOC Staff Study for each new DOD weapon system.

Requirement. Given a staff study objective and availability of required resources, submit a finalized conclusion or recommendation to a staff study:

(1) Evaluate objectives of an assigned staff study.
(2) Research applicable resources of information.
(3) Compile data necessary to satisfy objectives of the assigned study.

Performance Standard. Complete above listed tasks per applicable references.

Prerequisite. Complete ADM 300 level.

3. METOC PLANNING AND COORDINATION (MPC)

a. Purpose. Demonstrate expertise in ability to attain and maintain MPC for mission specific support.

b. General

(1) METOC Officers must complete the 300-level MPC training prior to commencing the 400-level MPC stage.

(2) Upon completion of this stage of training, METOC Officers shall adept at planning and coordinating all facets of METOC support to the MAGTF.

c. Total Training Events. 2 Event, 48.0 Hours

MPC-410	24.0	*	E	G,M,N	L/S	(N)

Goal. Perform duties as MARFOR Staff METOC Officer.

Requirement. Coordinate METOC effort to support the MAGTF AO as a MARFOR METOC Officer for an operation or contingency:

(1) Identify MARFOR METOC requirements.
(2) Identify and organize staff.
(3) Develop Annex H and provide input to other annexes of the Operational Order (OPORD)/OPLAN.
(4) Maintain liaison with JMO and component SMOs.
(5) Supervise and manage MARFOR METOC assets.

Performance Standard. Complete above listed tasks per applicable references.

MPC-411	24.0	*	E	G,M,N	L/S	(N)

Goal. Perform duties as Joint/Combined METOC Officer.

Requirement. Coordinate METOC effort to support the CJTF’s AO when assigned as Joint METOC Officer (JMO) for an operation or contingency:

(1) Identify theater METOC requirements.
(2) Identify and organize staff.
(3) Develop Annex H to OPORD/OPLAN/CONPLAN.
(4) Identify JMFU location, staff and operational requirements.
(5) Maintain liaison with combatant commander SMO and component SMOs.
(6) Supervise and manage theater METOC assets.

Performance Standard. Complete above listed tasks per applicable references.

210. INSTRUCTOR TRAINING PHASE

1. General. This phase contains instructor workup and evaluation certification syllabus events. This level will also contain instructor workup and certification syllabus events as applicable for Contract Instructors (CI) who instructs simulator events.

A. STAGES.

(1) WTI

1. WEAPONS TACTICS INSTRUCTOR (WTI)

a. Purpose. This stage of the training prepares personnel to become instructors of MAGTF weapons and tactics.

b. General

(1) Administrative Notes. Training shall be conducted by MAWTS-1 at MCAS Yuma, AZ.

(2) Stage End Performance. Upon completion of this stage of training, the METOC officer shall be eligible for the 6877 MOS. Completion of DTC-601 event required for qualification tracking.

d. Academic Training. Academic training events are graded and tracked at the administering unit. Supplemental training events and training packages are highly encouraged.

e. Total Training Events. 3 Events, 487.0 Hours

WTI-500	480.0	*	E	G,M,N	L	(N)

Goal. WTI training.

Requirement. Complete WTI Course.

Performance Standard. Successfully complete WTI Course and be awarded the 6877 MOS.

Prerequisite. CWO2, 18 months MARFOR experience, and a corresponding MEF level exercise.

External Syllabus Support. MAWTS–1 syllabus.

WTI-501	3.0	*	E	G,M,N	L/S	(N)

Goal. Provide Marine aviation weapon and tactics instruction.

Requirement. Train METOC personnel on capabilities and environmental impacts on Marine aviation functions, weapons, platforms, radars, and jammers and the capability of each:

(1) Prepare tailored periods of instruction based upon WTI curriculum.
(2) Present period of instruction on WTI curriculum.

Performance Standard. Must be in accordance with applicable orders and directives.

Prerequisite. WTI-500 and QTC-600.

External Syllabus Support. MAWTS-1 Academic Support Package.

WTI-502	4.0	*	E	G,M,N	L	(N)

Goal. Establish and conduct a Weapons and Tactics Training Program (WTTP).

Requirement. Establish a professional Aviation WTTP that includes both individual and collective training. Training shall emphasize integration with other aviation units and supporting arms to support the scheme of maneuver:

(1) Maintain relevant knowledge concerning the threat, threat tactics and counter tactics.
(2) Prepare tailored periods of instruction based upon WTI training curriculum.
(3) Present period of instruction.
(4) Within 30 days of deployments, operations and major exercises, submit appropriate information including post exercise/deployment reports and MCLLS.

Performance Standard. Must be in accordance with applicable orders and directives.

Prerequisite. WTI-500, WTI-501 and QTC-600.

External Syllabus Support. MAWTS-1 Academic Support Package.

211. REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS (RQD) PHASE

1. General. This phase contains all other syllabus events and special interest tracking codes that do not neatly ‘fit’ into the above phases and is designed to facilitate training management. The 600 phase contains standardized combat leadership evaluation events. This phase often contains event requirements not mandated by the T&R program such as NATOPS. RQD codes are not events but codes used to facilitate community training management that may be used in the 600 level if M-SHARP does not otherwise handle the specific instance that the community wishes to track. For example, RQD codes may be established to monitor execution of specific instances of weather

events, specific exercises, etc. M-SHARP functionality eliminates the need for tracking codes related to the possession of qualifications, designations, and certifications.

a. Stages.

(1) MFS
(2) WTI

2. MAGTF FORECAST SUPPORT (MFS) QUALIFICATION

a. Purpose. To provide tracking codes for events required for the MFS qualification.

b. General. Completion of this event will not result in an increase in CRP. The code is used for tracking of the MFS qualification.

c. Total Training Events. 1 event xx HOURS

QTC-600	N/A	*	E	G,M,N	(N)

Goal. Tracking code for MFS Qualification.

Requirement. Complete 200 phase of training.

Prerequisite. 6842 syllabus.

3. WEAPONS TACTICS INSTRUCTOR (WTI) DESIGNATION

a. Purpose. To provide a tracking code for the WTI designation.

b. General. Completion of this event will not result in an increase in CRP. The code is used for tracking of the WTI designation.

c. Total Training Events. 1 event xx HOURS

DTC-601	N/A	*	E	G,M,N	(N)

Goal. Tracking code for Weapons and Tactics Instructor.

Requirement. To ensure WTI course completion is obtained.

Performance Standard. Successful completion of WTI course.

Prerequisite. WTI-500 and the 6877 MOS.

212. T&R SYLLABUS MATRIX. Tables 2-7 through 2-11 provide a quick reference of the events (stage and code), hours, refresh intervals, combat readiness percentage, and chaining for each stage of training.

Table 2-7.--Core Skill Basic Events.

METOC SERVICES MOS: 6802/6877												
200 LEVEL CORE SKILL BASIC												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
AMS	200		2.0	NA	G,M,N	L/S	(N)	*	E	0.5	NA	DTC-663 6842 POI
AMS	201		1.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
AMS	202		0.5	NA	G,M,N	L/S	(N)	*	E	0.5	NA	NA
AMS	203		2.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
AMS	204		10.0	365	G,M,N	L/S	(N)	R	E	0.50	NA	AMS-201 AMS-202 AMS-203
MPB	210		8.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	DTC-663 6842 POI
MPB	211		6.0	365	G,M,N	L/S	(N)	R	E	0.50	NA	AMS-204
MPB	212		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	
MPB	213		40.0	365	G,M,N	L/S	(N)	R	E	0.50	NA	AMS-204
MPB	214		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
MPB	215		24.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
MDR	220		6.0	NA	G,M	L/S	(N)	*	E	1.0	NA	DTC-663 6842 POI
MDR	221		6.0	365	G,M	L/S	(N)	R	E	1.0	NA	MDR-220
MIA	230		8.0	365	G,M,N	L/S	(N)	R	E	.75	NA	DTC-663 6842 POI
MIA	231		3.0	365	G,M,N	L/S	(N)	R	E	0.25	NA	MIA-230
MIA	232		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	MIA-231
MIA	233		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	MIA-231
MIA	234		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	MIA-231
MIA	235		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	MIA-231
MIA	236		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	MIA-231
MIA	237		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	MIA-231
MIA	238		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	MIA-231
MFS	240		6.0	365	G,M,N	L/S	(N)	R	E	1.0	NA	AMS-204 MPB-211 MPB-212 MPB-213 MDR-221 MIA-231
MFS	241		12.0	NA	G,M,N	L/S	(N)	*	E	0.50	NA	NA
MFS	242		6.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
MPC	250		6.0	NA	G,M,N	L/S	(N)	*	E	0.15	NA	DTC-663 6842 POI
MPC	251		16.0	365	M	L/S	(N)	R	E	0.25	NA	NA
MPC	252		48.0	NA	M	L/S	(N)	*	E	0.25	NA	NA
MPC	253		16.0	365	G,M,N	L/S	(N)	R	E	0.15	NA	NA
MPC	254		32.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
MPC	255		24.0	*	G,M,N	L/S	(N)	*	E	0.20	NA	NA

Table 2-7.--Core Skill Basic Events continued.

METOC SERVICES MOS: 6802/6877												
200 LEVEL CORE SKILL BASIC												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
MPC	256		51.0	*	G,M,N	L/S	(N)	*	E	0.25	NA	NA
MPC	257		24.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
MPC	258		24.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
ADM	260		2.0	365	G,M,N	L/S	(N)	R	E	0.25	NA	DTC-6636842POI
ADM	261		2.0	365	G,M,N	L/S	(N)	R	E	0.25	NA	ADM-260
ADM	262		1.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
ADM	263		3.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
ADM	264		2.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
ADM	265		6.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
ADM	266		6.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
ADM	267		24.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
ADM	268		2.0	NA	G,M,N	L/S	(N)	*	E	0.25	NA	NA
			465.5							15.0		

Table 2-8.--Core Skill Advanced Events.

METOC SERVICES MOS: 6802/6877												
300 LEVEL CORE SKILL ADVANCED												
STAGE	NEW CODE	OLD COCE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDTIIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
MPC	300	305	32.0	NA	G,M,N	L/S	(N)	*	E	0.5	NA	QTC-600
MPC	301		2.0	NA	G,M,N	L/S	(N)	*	E	0.5	NA	NA
MPC	302		6.0	NA	G,M,N	L/S	(N)	*	E	0.5	NA	NA
MPC	303		16.0	365	M	L/S	(N)	R	E	0.5	NA	NA
MPC	304		24.0	NA	G,M,N	L/S	(N)	*	E	0.5	NA	NA
MPC	305		6.0	NA	G,M,N	L/S	(N)	*	E	0.5	NA	NA

Table 2-8.--Core Skill Advanced Events continued.

METOC SERVICES MOS: 6802/6877												
300 LEVEL CORE SKILL ADVANCED												
STAGE	NEW CODE	OLD COCE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDTIIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
MPC	306		24.0	NA	G,M,N	L/S	(N)	*	E	1.0	NA	NA
MPC	307	301	24.0	NA	G,M,N	L/S	(N)	*	E	1.0	NA	NA
MPC	308	302	5.0	NA	G,M,N	L/S	(N)	*	E	1.0	NA	NA
MPC	309		16.0	365	G,M,N	L/S	(N)	R	E	1.0	NA	NA
MPC	310		8.0	NA	G,M,N	L/S	(N)	*	E	1.0	NA	NA
MPC	311		10.0	NA	G,M,N	L/S	(N)	*	E	1.0	NA	NA
MPC	312		3.0	NA	NA	L/S	(N)	*	E	1.0	NA	NA
ADM	320		24.0	NA	NA	L/S	(N)	*	E	1.0	NA	QTC-600
ADM	321		24.0	NA	NA	L/S	(N)	*	E	1.0	NA	NA
ADM	322		6.0	365	NA	L/S	(N)	R	E	1.0	NA	NA
ADM	323		24.0	NA	NA	L/S	(N)	*	E	1.0	NA	NA
ADM	324		24.0	NA	G,M,N	L/S	(N)	*	E	1.0	NA	NA
ADM	325		56.0	365	NA	L/S	(N)	R	E	1.0	NA	NA
ADM	326		4.0	NA	NA	L/S	(N)	*	E	1.0	NA	NA
ADM	327		1.0	NA	NA	L/S	(N)	*	E	1.0	NA	NA
ADM	328		3.0	NA	NA	L/S	(N)	*	E	1.0	NA	NA
ADM	329		16.0	NA	M,N	L/S	(N)	*	E	1.0	NA	NA
			358.0							20.0		

Table 2-9.--Core Plus Skill Events.

METOC SERVICES MOS: 6821/6842/6852												
400 LEVEL CORE PLUS												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
ADM	400		18.0	NA	NA	L/S	(N)	*	E	2.0	NA	300 ADM STAGE
MPC	410		24.0	NA	NA	L/S	(N)	*	E	2.0	NA	300 MPC STAGE
MPC	411		24.0	NA	NA	L/S	(N)	*	E	1.0	NA	300 MPC STAGE
			66.0							5.0		

Table 2-10.–-Instructor Training Events.

METOC SERVICES MOS: 6821/6842/6852												
500 LEVEL INSTRUCTOR QUALIFICATION												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
WTI	500		480.0	NA	NA	L/S	(N)	NA	E	0.0	NA	CWO2; 18-MONTHS MARFOR; (1) MEF exercise
WTI	501		3.0	NA	NA	L/S	(N)	NA	E	0.0	NA	WTI-500 QTC-600
WTI	502		4.0	NA	NA	L/S	(N)	NA	E	0.0	NA	WTI-500 WTI-501 QTC-600
			487.0									

Table 2-11.–-Requirements, Qualification and Designation Events.

METOC SERVICES MOS: 6821/6842/6852												
600 LEVEL QUALIFICATIONS AND DESIGNATIONS												
STAGE	NEW CODE	OLD CODE	HOURS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
QTC	600	MFS-600	NA	NA	NA	*	(N)	NA	E	0.0	NA	200 LEVEL; 6842 MFS STAGE
DTC	601	WTI-601	NA	NA	NA	*	(N)	NA	E	0.0	NA	WTI-500; WTI-501 6877 MOS
NOTES												
3	*Qualification letter required.*											
4	*Designation letter required.*											

**Note. Event Chaining. Currently no chaining exists for the METOC officer syllabus.

213. SYLLABUS EVALUATION FORMS. The METOC community has developed a standardized evaluation form for all events contained in the T&R syllabus. The form has two pages, the first page shall list the stage and subsequently the event with a description of the goal for that event and the proficiency for that event. T&R syllabus evaluation form(s) is placed in the T&R manual as appendix I and is maintained by the syllabus sponsor. The syllabus sponsor shall ensure electronic copies are made available to fleet units. *See appendix I for syllabus evaluation forms*.

CHAPTER 3

METEOROLOGICAL AND OCEANOGRAPHIC (METOC) SERVICES ENLISTED SYLLABUS (6842/6852)

FIGURES

TABLES

TABLES page

CHAPTER 3

METOC SERVICES
ENLISTED SYLLABUS

300. METOC ANALYST/6842 INDIVIDUAL TRAINING AND READINESS REQUIREMENTS.

This T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core Skills. The goal of this chapter is to develop individual and unit war fighting capabilities. Realizing this Manual is unclassified; DC AVN and CG MCCDC encourage squadrons to use the full range of current, newly developed and proven tactics. The Core Skill Introduction phase is designed for instructors and trainees to maximize training and minimize syllabus support hours. An instructor shall evaluate all events annotated with an “E” per Aviation T&R Program Manual, chapter 2. Instructors are responsible for assessing performance during a particular event. The METOC Senior enlisted or METOC officer (METOCO) shall ensure designation, qualification and requirement codes are entered in the appropriate event, stage or phase tracking software and the individual training jackets.

301. TRAINING PROGRESSION MODEL.

METOC Enlisted Training Progression Model. The METOC training Progression Model represents training progression for the average (6842) in terms of core skill, qualification and designation attainment (see figure 3-1). Units should use the model as a point of departure to generate individual training plans for METOC personnel.

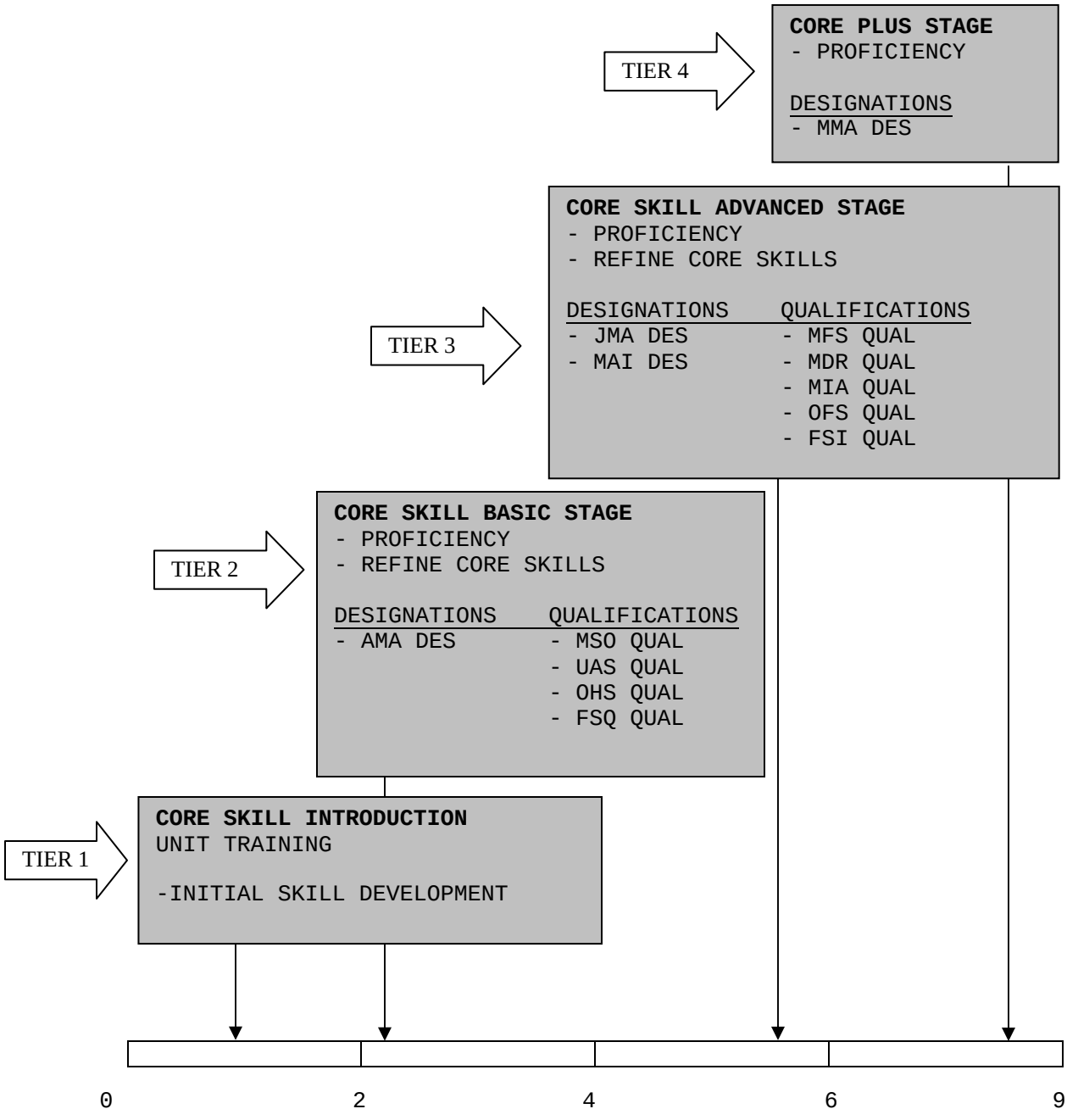

Figure 3-1.-- METOC Enlisted Training Progression Model.

302. INDIVIDUAL CORE SKILL PROFICIENCY(CSP) REQUIREMENTS. A CSP watch consists of individuals representing each watch 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.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 200-300 level T&R events listed for that Core Skill:

Table 3-1.--Individual CSP Attain.

Individual CSP Attain Table													
6842	UAS	OHS	MDR	MSAT	MCS	AMS	MSO	MFS	MIA	WWA	MDA	MPB	MPC
T&R event requirements to attain CSP	210 211 212R 213R	220R 221 222 300R 301R 302 303R	240 241R 242R 310R 311	245 246 247R 320	250 251 330R	225 226 227R 228 229 230 231R 232R 233 234 235	200 201 202 203R	275R 276R 277 278 347R 348R 349	360 361 362R 363 364R 365 366 367R	255R 256R 257	260 261 262 263R 264R 265 266R 267R	270R 340 341R 342 343R 344 345R 346R	350R 351 352 353R
R = Refresher POI event S = Event conducted in simulator													

2. Events Required to Maintain Individual CSP. To maintain CSP in a core skill, an individual must maintain proficiency in all 200-300 level T&R events listed for that core skill:

Table 3-2.--Individual CSP Maintain.

Individual CSP Maintain Table													
6842	UAS	OHS	MDR	MSAT	MCS	AMS	MSO	MFS	MIA	WWA	MDA	MPB	MPC
T&R event requirements to attain CSP	212R 213R	22OR 300R 301R 303R	241R 242R 310R	247R	330R	227R 231R 232R	203R	275R 276R 347R 348R	362R 364R 367R	255R 256R	263R 264R 266R 267R	270R 341R 343R 345R 346R	350R 353R
R = Refresher POI event S = Event conducted in simulator													

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

Table 3-3.--Individual Core Plus Skills Attain

Individual Core Plus Skills Attain				
6842	MPB	MDR	MPC	MIA
T&R event requirements to attain CPSP	400R	410R	420 421 422R 423 424R 425	430R 431 432 433R
R = Refresher POI event S = Event conducted in simulator				

4. Events Required to Maintain Individual Proficiency in Core Plus Skills
To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all of the T&R events listed in the table below for that Core Plus Skill.

Table 3-4.--Individual Core Plus Skills Maintain

Individual Core Plus Skills Maintain				
6842/6852	MPB	MDR	MPC	MIA
T&R event requirements to maintain CPSP	400R	410R	422R 424R	430R 433R
R = Refresher POI event S = Event conducted in simulator				

303. Certifications, Qualifications and Designations

1. Certification. A certification refers to the evaluation process for personnel during a syllabus event(s) by a designated instructor or authorized person for the purpose of ascertaining proficiency in qualification and designation event(s) as a prerequisite to qualification or designation.

2. Qualification. Qualifications is a status assigned to personnel based on demonstration of proficiency in a specific skill. Individuals do not lose a qualification as a function of refresh factor for individual events. Specific criteria to achieve qualifications is delineated in table 1-12 and the MAWTS-1 Course Catalog. Upon completion of the qualification criteria, commanding officers may issue a qualification letter for inclusion into the individual training jackets. However, loss of proficiency (delinquent refresh factor) for all associated qualification events (events with measurable refresh factor)constitutes loss of that qualification. Requalification requires demonstrated proficiency by successfully repeating all R-coded events associated with the respective qualification (unless waived). All qualifications are assigned one or more T&R events related to that qualification, known as qualification events. When an individual completes all qualification requirements to include qualification events, the individual may be granted the respective qualification by the commanding officer. The individual proficiency status of these qualification events are used to determine qualification status. An individual’s qualification status may be either “Qualified” or “Not Qualified” for a given qualification.

3. Designations. A designation is a status assigned to an individual based on leadership ability. It is a command specific, one-time occurrence and

remains in effect until removed for cause or the individual is transferred to another command. When an individual completes all designation training requirements, the individual may be granted the respective designation by the commanding officer. The designation letter to individuals shall be included into training tracking system, electronic training jacket(if available) and a Page-11 entry in the Service Record Book (SRB).

a. Instructor Designations. Instructor designations are assigned to personnel based on ability to conduct instruction of a Core Skill. Instructor designations are designed to enhance standardization and safety while training unqualified personnel in specific skills. T&R instructor designation/re-designation requirements should be consistent with, and may reference instructor requirements listed in the MAWTS-1 course catalog, NATOPS, and other applicable directives.

4. Qualification and Designation Tables. The tables below delineate T&R events required to be completed to attain initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Qualification and designation letters signed by the commanding officer shall be placed in Individual Performance Record (IPR). Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

Table 3-5.--Individual Qualification Requirements

	Initial Event Qualification Requirements
Qualification (Tracking code)	Event Requirements
QTC-650 MSO	MSO-200,MSO-201,MSO-202,MSO-203R,UAS-210,MDN-623,GME-632,GME-633
QTC-651 UAS	UAS-210,UAS-211,UAS-212R,UAS-213R,MDN-623
QTC-652 OHS	OHS-220R,OHS-221,OHS-222,MDN-623
QTC-653 FSQ	AMS-228,AMS-230,MDA-266,QTC-650,QTC-651
QTC-654 MFS	MSO-200,MSO-201,MSO-202,MSO-203R,UAS-210,UAS-211,UAS-212R, UAS-213R,OHS-220R,OHS-221,OHS-222,AMS-225,AMS-226,AMS-227R, AMS-228, AMS-229,AMS-230,AMS-231R,AMS-232R,AMS-233,AMS-234, AMS-235, MDR-240,MDR-241R,MDR-242R,MSAT-245, MSAT-246, MSAT-247R,MCS-250,MCS-250,MCS-251,WWA-255R, WWA-256R,WWA-257, MDA-260,MDA-261, MDA-262,MDA-263R,MDS-264R,MDA-265,MDA-266R,MDA-267R,MPB-270R,MFS-275R,MFS-276R,MFS-277,MFS-278
QTC-655 MDR	MDR-240,MDR-241R,MDR-242R,MDR-310R,MDR-311
QTC-656 OFS	OHS-220R,OHS-221,OHS-222,OHS-300R,OHS-301R,OHS-302,OHS-303R
QTC-657 MIA	MSO-200,MSO-201,MSO-202,MSO-203R,UAS-210,UAS-211,UAS-212R, UAS-213R,OHS-220R,OHS-221,OHS-222,AMS-225,AMS-226,AMS-227R, AMS-228,AMS-229,AMS-230,AMS-231R,AMS-232R,AMS-233,AMS-234 , AMS-235,MDR-240,MDR-241R,MDR-242R,MSAT-245,MSAT-246,MSAT-247R,MCS-250,MCS-250,MCS-251,WWA-255R,WWA-256R,WWA-257,MDA-260,MDA-261,MDA-262,MDA-263R,MDA-264R,MDA-265,MDA-266R,MDA-267R,MPB-270R,MFS-275R,MFS-276R,MFS-277,MFS-278,MIA-363,MIA-364R,MIA-365,MIA-366,MIA-367R,MPB-341R,MPB-342,MPB-343R, MPB-344,MFS-347R
QTC-658 FSI	MSO-200,MSO-201,MSO-202,MSO-203R,UAS-210,UAS-211,UAS-212R, UAS-213R,OHS-220R,OHS-221,OHS-222,AMS-225,AMS-226,AMS-227R ,AMS-228,AMS-229,AMS-230,AMS-231R,AMS-232R,AMS-233,AMS-234, AMS-235,MDR-240,MDR-241R,MDR-242R,MSAT-245,MSAT-246, MSAT-247R,MCS-250,MCS-250,MCS-251,WWA-255R,WWA-256R,WWA-257,MDA-260,MDA-261,MDA-262,MDA-263R,MDS-264R,MDA-265,MDA-266R,MDA-267R,MPB-270R,MFS-275R,MFS-276R,MFS-277,MFS-278,OHS-300,OHS-301,OHS-302,OHS-303R,MDR-310R,MDR-311,MSAT-320,MCS-330R, MPB-340,MPB-341R,MPB-342,MPB-343R,MPB-344,MPB-345R,MPB-346R ,MFS-347R,MFS-348R,MFS-349,MPC-350R,MPC-351,MPC-352,MPC-353R,MIA-360,MIA-361,MIA-362R,MIA-363,MIA-364R,MIA-365,MIA-366,MIA-367R
R = Refresher POI events required for re-qualification	

Table 3-6.--Individual Designation Requirements

	Individual Designation Requirements
Designation (Tracking code)	Event Requirements
DTC-660 AMA	QTC-654
DTC-662 JMA	QTC-654,DTC-661,All 300 level events
DTC-663 MMA	DTC-660,DTC-662,DTC-664,rank of GySgt or above, 8 yrs TIS
DTC-664 MAI	DTC-662

304. 6842 PROGRAMS OF INSTRUCTION (POI)

1. BASIC POI

WEEKS	COURSE/PHASE	ACTIVITY
1-32	Meteorology Oceanography Analyst Forecaster Course	Keesler AFB, MS
33-84	Core Skill Basic Training	FMF Unit
85-344	Core Skill Advanced Training	FMF Unit
345-520	Core Plus Training	FMF Unit

2. POI FOR 6842 REFRESHER TRAINING

WEEKS	COURSE/PHASE	ACTIVITY
1-26	Core Skill Basic Training	FMF Unit
27-52	Core Skill Advanced Training	FMF Unit
53-520	Core Plus Training	FMF Unit

3. POI FOR 6842 FORMAL SCHOOLS INSTRUCTOR

WEEKS	COURSE/PHASE	ACTIVITY
1-6	Basic Instructor Course	81TRW USAF
7-10	Training Supervisor Course (OIC/NCOIC)	81TRW USAF
7-22	Teaching Practicum	335TRS USAF
23-24	Objectives and Tests	81TRW USAF
31-32	Instructional Systems Development (ISD)	81TRW USAF
*52-53	Instructor Supervisor Course	81TRW USAF
*104-130	Master Instructor Program	335TRS USAF

* Not all instructors will attend weeks 52 through 130.

305. ACADEMIC/GROUND TRAINING.

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained form the sponsoring activity. This manual provides METOC units with the standards of training to obtain and maintain proficiency in the MOS. METOC officers shall coordinate the development of lesson plans to support this syllabus as required.

2. External academic courses of instruction available to complete the syllabus are listed below.

COURSE	ACTIVITY
Online Weather Studies	NMOPDC
Online Ocean Studies	NMOPDC

306. SYLLABUS NOTES. List notes, policies and guidelines applicable to the T&R syllabus if required.

307. CORE SKILL INTRODUCTION PHASE

1. General. Realizing this manual is unclassified, DC AVN and CG MCCDC encourage units to use the full range of current, newly developed and proven tactics for training. Currently, initial accession standards are met by the formal school at Keesler AFB, MS. The course is Meteorology and Oceanography Analyst Forecaster (MOAF) course. The core skill introduction phase is designed for instructors and trainees to maximize training and syllabus support hours. An instructor shall evaluate all events annotated with an "E" per Aviation T&R Program Manual. The tracking of such events, stages and phases shall be entered in the individual training jacket or appropriate electronic software. This initial accession stage of training is vital to the way forward in the 6800 occupational field.

a. Stages.

(1) FAM

2. Familiarization (FAM).

a. Purpose. To introduce core skills required to function within the USMC METOC community.

b. General

(1) The requirements for initial accession into occupational field 6800 are outlined in the Marine Corps MOS Manual. A Top Secret security clearance eligibility is required.

(2) Prerequisites: None.

(3) Complete written and performance tests in accordance with the established proficiency standard.

c. Crew Requirements. State which crewmembers are required.

d. Ground/Academic Training. Academic training shall be conducted at the Weather Training Complex aboard Keesler Air Force Base, Mississippi. Currently, there is one pipeline for initial accession training for OccFld 6800: The requirement for an initial accession course that introduces all core skills in a single initial accession course has been implemented, approved and is currently being validated at the school house level. The MOAF course attendees shall have completed events annotated in their individual training jackets or in electronic training jackets currently under development. Training of the Core Skill Basic Phase shall commence upon reporting to the FMF unit.

e. Total Training Events. 18 Events, 1291.50 HOURS

FAM-100	57.0	*	B	E	L/S	(N)

Goal. Familiarization with meteorological reports.

Requirement. Receive academic training on the different types of meteorological reports.

(1) Identify facts about the elements of a weather observation.
(2) Decode a METAR observation.
(3) Decode and encode pilot reports.
(4) Decode Land and Ship Synoptic observations.
(5) Decode a rawinsonde observation.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-101 77.5 * B E L/S (N)

Goal. Familiarization with meteorological principles.

Requirement. Receive academic training on meteorological principles.

(1) Identify facts about space environment.
(2) Relate principles about the Earth and its atmosphere.
(3) Relate principles about atmospheric physics.
(4) Relate principles about atmospheric dynamics.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-102 66.5 * B E L/S (N)

Goal. Familiarization with meteorological features.

Requirement. Receive academic training on meteorological features.

(1) Relate principles about hemispheric weather features.
(2) Relate principles about continental weather features.
(3) Relate principles about regional weather features.
(4) Relate principles about tropical weather features.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-103 9.0 * B E L/S (N)

Goal. Familiarization with basic computer operations.

Requirement. Receive academic training on the information assurance program and basic computer operations.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-104 34.0 * B E L/S (N)

Goal. Familiarization with meteorological satellites.

Requirement. Receive academic training on meteorological satellites.

(1) Relate principles about the types of meteorological satellite systems.
(2) Relate principles about microwave satellite products.
(3) Relate principles about meteorological features on satellite imagery.
(4) Relate principles about meteorological events depicted on satellite imagery.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-105 71.0 * B E L/S (N)

Goal. Conduct basic meteorological chart analysis.

Requirement. Receive academic training on and conduct basic meteorological chart analysis.

(1) Given a satellite image, depict wind flow.
(2) Analyze upper-air charts.
(3) Analyze surface charts.
(4) Given a plotted Skew-T/Log-P diagram, analyze Stability parameters.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-106	56.0	*	B	E	L/S	(N)

Goal. Familiarization with macroscale analysis techniques.

Requirement. Receive academic training on macroscale analysis techniques and conduct macroscale analysis.

(1) Identify facts about the components of an effective regime forecast process.
(2) Select effective quality assurance program procedures.
(3) Relate principles about macroscale weather analysis techniques.
(4) Given appropriate weather charts, analyze macroscale weather features.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-107	152.0	*	B	E	L/S	(N)

Goal. Familiarization with synoptic analysis techniques.

Requirement. Receive academic training on synoptic analysis techniques and conduct synoptic analysis.

(1) Relate principles about synoptic scale weather analysis techniques.
(2) Identify facts about synoptic weather regimes.
(3) Given appropriate weather charts, analyze synoptic scale weather features.

Performance Standards. Complete progress checks and exams with 70% proficiency.

FAM-108	80.0	*	B	E	L/S	(N)

Goal. Familiarization with mesoscale analysis techniques.

Requirement. Receive academic training on mesoscale analysis techniques and conduct mesoscale analysis.

(1) Relate principles about mesoscale weather analysis techniques.
(2) Relate principles about the forecast model initialization and verification process.
(3) Given appropriate weather data, references and equipment, analyze mesoscale weather features.

Performance Standards. Complete written and performance tests in

accordance with the established proficiency standard.

FAM-109 37.0 * B E L/S (N)

Goal. Familiarization with Doppler Weather Radar fundamentals and interpretation.

Requirement. Receive academic training on Doppler weather radar fundamentals and product interpretation.
(1) Identify facts about WSR-88D radar system components and products.
(2) Given WSR-88D products, describe radar features.
(3) Given a WSR-88D OPUP workstation, perform general operations and product manipulation processes.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-110 56.0 * B E L/S (N)

Goal. Familiarization with macroscale forecasting.

Requirement. Receive academic training on macroscale forecast techniques and forecast macroscale weather features.

(1) Relate principles about macroscale weather forecast techniques.
(2) Given appropriate weather charts, forecast macroscale weather features.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-111 109.0 * B E L/S (N)

Goal. Familiarization with synoptic scale forecasting.

Requirement. Receive academic training on synoptic scale forecast techniques and forecast synoptic weather features.

(1) Relate principles about synoptic scale weather forecast techniques.
(2) Given appropriate weather charts, forecast synoptic weather features.
(3) Given analyzed charts and diagrams, forecast tropical weather elements.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-112 200.0 * B E L/S (N)

Goal. Familiarization with mesoscale forecasting.

Requirement. Receive academic training on mesoscale forecast techniques and forecast mesoscale weather features.

(1) Relate principles about mesoscale weather forecast techniques.
(2) Using appropriate weather data, select meteorological parameters from mesoscale numerical weather prediction text products.
(3) Given appropriate weather data, references and equipment, forecast mesoscale weather features.

(4) Using appropriate weather data, prepare and present a terminal aerodrome forecast.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-113 128.0 * B E L/S (N)

Goal. Familiarization with Joint Meteorological and Oceanographic Forecast Unit (JMFU) operations.

Requirement. Receive academic training on and perform JMFU operations.

(1) Given appropriate weather data, references and equipment, perform duties related to the synoptic forecaster position.
(2) Given appropriate weather data, references and equipment, prepare a weather discussion bulletin.
(3) Given appropriate weather data, references and equipment, perform duties related to the mission briefer position.
(4) Given appropriate weather data, references and equipment, prepare and present a flight weather briefing.
(5) Given appropriate weather data, references and equipment, perform duties related to the forecaster position.
(6) Given appropriate weather data, references and equipment, prepare special notices (weather warnings and advisories).
(7) Given appropriate weather data, prepare and present a shift change briefing.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-114 3.0 * B E L/S (N)

Goal. Familiarization with the Marine Corps Meteorology and Oceanography (METOC) occupational field training and career progression.

Requirement. Identify facts about the Marine Corps METOC training (T&R manual) and career progression (MOS roadmap).

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-115 3.0 * B E L/S (N)

Goal. Familiarization with meteorological sensors.

Requirement. Identify facts about meteorological sensors (ASOS).

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-116 50.0 * B E L/S (N)

Goal. Familiarization with surface weather observations.

Requirement. Receive academic training on surface weather observation elements and procedures and conduct surface weather observation operations.
(1) Relate meteorological elements to an accurate surface observation.
(2) Given weather scenarios, encode and record observations in METAR code.

(3) Using current weather conditions, the required references and equipment, observe and record all elements for surface weather observations.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

FAM-117 102.5 * B E L/S (N)

Goal. Familiarization with Marine Corps Meteorological and Oceanographic (METOC) forecast support products.

Requirement. Receive academic training on and develop and brief Marine Corps METOC forecast support products.

(1) Given applicable references and meteorological support products, produce a Terminal Aerodrome Forecast (TAF).
(2) Given meteorological and oceanographic support products, produce and disseminate a plain language forecast.
(3) Given applicable references and meteorological support products, prepare and present a Flight Weather Briefing.
(4) Given applicable references and meteorological support products, issue local weather warnings.
(5) Conduct a watch turnover brief.

Performance Standards. Complete written and performance tests in accordance with the established proficiency standard.

308. CORE SKILL BASIC PHASE

1. General. This phase of training deal with Core Skills that are specific mission-related task areas that support METOC METLs and consist of like T&R events. The core model requires individual and unit proficiency in 200 level core skills in order to perform all tasks in the unit METL and to execute the unit core capability. This phase includes Core Skill training essential to wartime employment of the unit. Training at this level enhances proficiency from fundamental understanding of Core Skills to proficiency in basic required Core Skills. Individuals should normally complete this phase of training within the first year of assignment to a unit. Assignment of CRP values should fall within the range of 0.30 - 1.00 per event. CRP weighting shall reflect the hierarchical nature of core competencies. Upon completion of the Core Skill Basic Phase, an individual shall be at 75 percent CRP (Core Skill Basic phase = 15 percent CRP).

a. Stages.

(1) MSO
(2) UAS
(3) OHS
(4) AMS
(5) MDR
(6) MSAT
(7) MCS
(8) WWA
(9) MDA
(10) MPB
(11) MFS

2. Meteorological Surface Observations (MSO)

a. Purpose. To develop proficiency in observing, recording and disseminating meteorological elements that comprise the surface meteorological reports (observations).

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at observing, recording and disseminating meteorological surface observations.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 4 Events, 34.5 Hours

MSO-200	2.0	*	E	G,M,N	L/S	(N)

Goal. Master fundamentals of surface observations.

Requirement. Discuss, in detail, the elements that comprise a METAR surface observation. Discussion will include rules governing the taking and observing of elements, conversion or computation (as required), and encoding.

(1) Sky condition.
(2) Visibility.
(3) Weather and obstructions to vision.
(4) Pressure.
(5) Temperature.
(6) Wind.
(7) Remarks/additive data.
(8) Special Criteria.
(9) Local Criteria.

Performance Standard. Evaluation of knowledge may be obtained through oral or written exam. Responses must be in accordance with, NAVMETOCCOMINST 3141.2_.

References. NAVMETOCCOMINST 3141.2

MSO-201	0.5	*	E	G,M	L/S	(N)

Goal. Perform ceiling balloon operations.

Requirement. In accordance with NAVMETOCCOMINST 3141.2_, successfully determine ceiling heights.

Performance Standard. Practical application without error.

MSO-202	2.0	*	E	G,M	L	(N)

Goal. Compute meteorological values.

Requirement. Verbally state the computation procedures:

(1) Pressure altitude.
(2) Density altitude.
(3) Altimeter.
(4) Wet Bulb Globe Temperature Index.
(5) Wind Chill Temperature.
(6) Fahrenheit to Celsius.
(7) Relative Humidity.
(8) Knots to Miles per hour.
(9) Dew point.
(10) Humidity Types.

Performance Standard. List parameters required for computations and state the computation procedures without error.

MSO-203	30.0	180	R	E	G,M,N	L	(N)

Goal. Take, record and disseminate a surface meteorological observation.

Requirement. Evaluate, record and decode elements from automated sensing equipment under supervision. Perform the following:
(1) Determine and record type of observation.
(2) Record time of observation.
(3) Verify and record wind direction, speed, character, and significant wind events.
(4) Evaluate, verify and record visibility.
    (a) Types and direction of obscuring phenomena.
    (b) Types and intensity of weather.
(5) Determine and record sky condition.
    (a) Cloud type.
    (b) Cloud height.
    (c) Cloud direction and movement.
    (d) Cloud amount.
(6) Read and record dry bulb and dew point temperatures.
(7) Read and record current altimeter setting.
(8) Encode and record applicable remarks.
(9) Read and record station pressure.
(10) Read and record sea level pressure.
(11) Proof read recorded elements.
(12) Initial observation, confirming accuracy of report.
(13) Record summary of the day.

Performance Standard. In accordance with NAVMETOCCOMINST 3141.2_, record a minimum of 100 surface weather observations with an accuracy rate of 97.0%; 50% of the total observations must take place in a nighttime environment.

Prerequisite. MSO-200, MSO-201, MSO-202.

3. Upper Atmospheric Sensing (UAS)

a. Purpose. To develop proficiency in upper atmospheric sensing, analysis and reporting.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at observing, recording and disseminating upper atmospheric observations.

d. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

e. Total Training Events. 4 Events, 4.5 Hours

UAS-210	0.5		*	E	M	L/S	(N)

Goal. Introduction to upper air observational equipment and procedures.

Requirement. Identify and state use of the components and apply procedures required for taking an upper air observation.

(1) Identify the following components:
    (a) Upper air sensing equipment and antennas.
    (b) Upper air sensor /transmitter.
    (c) Required weight sets if applicable.
(2) State the use of the following components:
    (a) Upper air sensing equipment and antennas.
    (b) Upper air sensor /transmitter.
    (c) Required weight sets if applicable.
(3) Read and comprehend procedures for conducting upper air observations.

Performance Standard. Demonstrate knowledge of components prior to conducting an upper air observation.

UAS-211	1.0		*	E	G,M,N	L/S	(N)

Goal. Decode upper air messages.

Requirement. Decode upper atmospheric soundings and exhibit an understanding of the scales and features of a Skew-T Log P diagram.

(1) Decode upper atmospheric sounding per applicable references.
(2) Identify scales and use of scales located on the Skew-T, Log P diagram.

Performance Standard. Decode upper atmospheric soundings and components of the Skew-T Log P diagram.

UAS-212	2.0	180	R	E	M	L/S	(N)

Goal. Conduct an upper-atmospheric sounding.

Requirement. Utilizing upper air sensing equipment, the appropriate balloon, and mini-rawinsonde if applicable, successfully receive and process data.

(1) Energize upper air sensing equipment.
(2) Prepare balloon and sonde if applicable.
(3) Enter the surface observation and coefficients.
(4) Tune radiosonde or equivalent.
(5) Compare readings with current surface observation.
(6) Ensure adequate satellite synchronization.
(7) Obtain clearance and launch sounding.
(8) Post process sounding.
(9) Save data to appropriate location.
(10) Encode and disseminate alphanumeric data as appropriate.

Performance Standard. Complete requirement in accordance with FMH #3 – Rawinsonde and PIBAL Observations, a minimum of three times.

Prerequisite. UAS-210 and UAS-211.

UAS-213	1.0	180	R	E	G,M,N	L/S	(N)

Goal. Plot and analyze a Skew-T Log P diagram.

Requirement. Utilizing a blank Skew-T diagram and/or appropriate software and upper air sounding, plot and analyze upper-air data. Perform the following:

(1) Obtain Upper Air Observation Data.
(2) Plot mandatory levels, significant levels, and significant wind data.
(3) Analyze the following:
    (a) CCL.
    (b) LCL.
    (c) LFC.
    (d) PEA.
    (e) NEA.
    (f) SSI.
    (g) T1.
    (h) T2.
    (i) Forecasted maximum temperature.
    (j) Forecasted minimum temperature.
    (k) Freezing level.
    (l) Contrails.
    (m) Tropopause.

Performance Standard. Within a 30-minute period, plot and analyze a Skew-T Log P diagram without error.

Prerequisite. UAS-211.

4. Oceanographic and Hydrological Services (OHS)

a. Purpose. To acquire proficiency in the observation of required

recording procedures and the dissemination of oceanographic and hydrological elements utilizing applicable equipment.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at observing, recording and disseminating oceanographic surface observations. Personnel shall also be familiar with necessary oceanographic and hydrographic elements or concepts that support mission requirements.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC commanders shall review academic periods of instruction for applicability and content and utilize ASPs when appropriate.

d. Total Training Events. 3 Events, 17.0 Hours

OHS-220	2.0	180	R	E	G,M,N	L	(N)

Goal. Certify proficiency at calculating tidal data.

Requirement. Calculate tidal data for five specified locations utilizing available equipment and software.

Performance Standard. Calculate tidal data per applicable references.

OHS-221	10.0	*	E	G,M,N	L/S	(N)

Goal. Introduce oceanographic and littoral warfare products.

Requirement. Gain familiarity with the content and orders/directives governing the preparation and use of the following oceanographic/littoral warfare products:

(1) Sea Surface Temperature Charts.
(2) Current and Tidal Charts.
(3) Modified Surf Index.
(4) Beach Survey Charts.
(5) Specialized Analyzed Image Littoral (SAIL) charts.
(6) Specialized Tactical Oceanographic Information (STOIC) chart.
(7) Rapid Environmental Assessment Chart Tactical (REACT).
(8) Riverine Survey Charts.

Performance Standard. Without error, identify, describe and gather each product listed above with applicable references.

OHS-222	5.0	*	E	G,M,N	L/S	(N)

Goal. Assess river stages.

Requirement. Given access to appropriate systems/data, assess the following to determine the stage of a given point on a river:

(1) Determine type of river.

(2) Assess hydrograph.
(3) Determine flood crest stage.
(4) Assess river gage height.
(5) Assess discharge.

Performance Standards. Without error, identify, describe and gather each product listed above with applicable references.

External Syllabus Support: Applied Environmental Science Course.

5. Applied Meteorological Science (AMS)

a. Purpose. To introduce the fundamental principles of the atmosphere required to produce mission specific products.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall possess and demonstrate proficiency in meteorological fundamentals.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC commanders shall review academic periods of instruction for applicability and content and utilize supplemental training packages when appropriate.

d. Total Training Events. 11 Events, 65.5 Hours

AMS-225	15.0	*	E	G,M,N	L/S	(N)

Goal. Comprehend atmospheric physics.

Requirement. Understand fundamental concepts of the following subjects:

(1) Atmospheric structure.
(2) Atmospheric variables.
(3) Vectors.
(4) Pressure.
(5) Temperature and moisture.
(6) Fundamentals of atmospheric concepts.
(7) Advection.
(8) Thermal winds.
(9) Thickness charts.
(10) Heat transfer.
(11) Cloud formation and dissipation.
(12) Precipitation types.

Performance Standard. With an 80% accuracy, define the subjects listed and state how each subject affects the other.

AMS-226	15.0	*	E	G,M,N	L/S	(N)

Goal. Comprehend atmospheric dynamics.

Requirement. Understand fundamental concepts of the following subjects:

(1) Rotational and circular motion.
(2) Atmospheric forces.
(3) Divergence/convergence (speed & directional)
(4) Vorticity.
(5) Jet streams.
(6) Atmospheric wave terminology.
(7) 500mb heights and vorticity chart.
(8) Vertical motions.
(9) Air masses.
(10) Frontal systems.
(11) Evolution of frontal systems.
(12) Synoptic scale systems.
(13) Evolution of synoptic scale baroclinic systems.
(14) Local modification to large-scale circulations.

Performance Standard. Explain each of the concepts listed and state the development and dissipation processes, where applicable to an 80% accuracy.

Prerequisite. AMS-225.

AMS-227	5.0	180	R	E	G,M,N	L/S	(N)

Goal. Comprehend atmospheric fundamentals.

Requirement. Verbally define and discuss the atmospheric fundamentals listed below during a technical discussion with qualified METOC personnel.

(1) Long/short wave trough/ridges.
    (a) Deepening/building/intensifying.
    (b) Filling/weakening.
    (c) Cyclogenesis/frontogenesis.
    (d) Cyclolysis/frontolysis.
(2) Pressure systems. Baroclinic/barotropic.
    (a) Warm/cold air advection.
    (c) Dry/moist air advection.
(3) Frontal systems.
    (a) Active/inactive cold fronts.
    (b) Active/inactive warm fronts.
    (c) Stationary fronts.
    (d) Warm/Cold occlusions.
    (e) Type “A”/”B” occlusions.
(4) Jet features.
    (a) Polar front jet stream.
    (b) Subtropical jet stream.
    (c) Conduction/radiation/advection/convection.
(5) Vorticity.
(6) Thickness.
(7) Condensation/evaporation/sublimation.
(8) Convergence/confluence.
(9) Divergence/diffluence.
(10) Types of baroclinic/barotropic low-pressure systems.
(11) Types of baroclinic/barotropic high-pressure systems.

(12) Gradient wind.
(13) Geostrophic wind.
(14) Relative/absolute/specific humidity.
(15) Pressure gradient.
(16) Cloud identification/formation.

Performance Standard. With an 80% accuracy, discuss 10 topics assigned by the METOC Analyst Instructor from the topics listed in the requirement and respond to questions posed.

Prerequisite. AMS-225, AMS-226.

AMS-228	2.0	*	E	G,M,N	L/S	(N)

Goal. Comprehend Global and Regional METOC models.

Requirement: Identify and state the strengths and weaknesses for each numerical model applicable to a given AOR.

Performance Standard. Retrieve a given numerical model and accurately identify its strengths and weaknesses.

Prerequisite. AMS-227.

AMS-229	2.0	*	E	G,M,N	L/S	(N)

Goal. Initialize and verify meteorological model output.

Requirement. Verify meteorological model output by identifying strengths and weaknesses of global, regional, and mesoscale numerical models.

Performance Standard. Through practical application, initialize and verify model output with 12/24/48/72 analyses with an 80% accuracy.

Prerequisite. AMS-228.

AMS-230	20.0	*	E	G,M,N	L/S	(N)

Goal. Graphical METOC product familiarization.

Requirement. Define the graphical METOC products listed below:

(1) Horizontal/vertical weather depiction.
(2) Satellite imagery.
(3) Radar imagery.
(4) Surface chart.
(5) Constant pressure charts.
(6) Oceanographic charts.
(7) Tropical weather charts.
(8) Vorticity charts.
(9) Thickness charts.
(10) Thermodynamic diagrams.

Performance Standard. Define the use of each chart listed above. Identify and explain the various meteorological features with an 80% accuracy.

Prerequisite. AMS-227.

AMS-231	2.0	180	R	E	G,M,N	L(N)

Goal. Forecast synoptic scale systems.

Requirement. Given required charts, forecast intensity and movement of surface and upper-level features listed for the following:

(1) Major short wave troughs/ridges.
(2) High and low pressure system(s).
(3) Moisture.
(4) Frontal systems.
(5) Weather elements.
(6) Long wave patterns.
(7) Jet streams.

Performance Standard. Provide meteorological justification for forecast placement.

Prerequisite. AMS-230.

AMS-232	1.0	180	R	E	G,M,N	L(N)

Goal. Forecast severe weather.

Requirement. Given required charts and a designated Area Of Responsibility (AOR), analyze and forecast for the severe weather elements listed and provide meteorological reasoning for each:

(1) Convective phenomena.
(2) Non-convective phenomena.

Performance Standard. Derived forecast must display sound meteorological reasoning.

Prerequisite. AMS-231.

AMS-233	0.5	*	E	G,M,N	L/S	(N)

Goal. Forecast local area (mesoscale/microscale) meteorological elements and phenomenon.

Requirement. Utilize local, regional, and global meteorological models to assess and determine the current and forecast meteorological elements. Prepare a local area forecast for a 96-hour period. At a minimum, forecast for the following:

(1) Cloud types, height and coverage.
(2) Precipitation types, intensity and duration.
(3) Surface visibility.
(4) Weather and obstruction(s) to visibility.

(5) Maximum/Minimum temperatures.
(6) Wind Speed, Direction, and character.
(7) Icing type, height, and intensity.
(8) Turbulence type, height, and intensity.
(9) Atmospheric pressure.

Performance Standard. Derived forecast must display sound meteorological reasoning.

Prerequisite. AMS-232.

AMS-234 2.0 * E G,M,N L/S (N)

Goal. Forecast tropical cyclone development and movement.

Requirement. METOC products (live or canned data) and under conditions for tropical development, analyze for tropical cyclone development, movement, and intensity. Compute a 96-hour forecast for movement/intensity of the system.

(1) Interpret cyclone warnings and advisories.
(2) Modify computer generated tropical cyclone models and available centrally prepared products based on climatological summaries of cyclone storm tracks, forecasting rules, and local area requirements.
(3) Forecast tropical cyclone development, movement, and intensity using satellite data and other applicable products.
(4) Interpret METOC data parameters.
(5) Prepare a brief to include on a minimum:
    (a) Recommendation to cyclone conditions of readiness.
    (b) Cyclone categories.
    (c) Impacts to cyclone evacuation plan.
    (d) Impacts based on cyclone storm surge forecasts.

Performance Standard. Meet requirements per local METOC SOP. Repetition of tasks shall be carried out until an 80% accuracy level is achieved in content and format.

Prerequisite. AMS-233.

AMS-235 1.0 * E G,M,N L/S (N)

Goal. Produce a limited data forecast.

Requirement. Given three METOC products and a location, write a plain language forecast for a period of 48 hours and verify for accuracy.

Performance Standard. The elements of the forecast shall be verified to an 80% accuracy.

Prerequisite. AMS-233.

6. Meteorological Doppler Radar (MDR)

a. Purpose. To become proficient in the basic operation of the Doppler

Weather Radar and knowledge of atmospheric features on available Doppler products.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be proficient at analyzing and interpreting radar products while demonstrating basic radar operations.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC commanders shall review academic periods of instruction for applicability and content and utilize ASPs when appropriate.

d. Total Training Events. 3 Events, 17.0 Hours

MDR-240	2.0		*	E	G,M,N	L/S (N)

Goal. Perform basic meteorological radar system(s) operations.

Requirement. Given a meteorological radar and applicable operating manuals, display a working knowledge of radar operations. Complete the following tasks:

(1) Conduct power up/power down procedures.
(2) Conduct log on/log off functions.
(3) Display radar products.
(4) Monitor system performance.
(5) Archive ingested data.
(6) Retrieve and display archived data.

Performance Standard. Completion of the requirement without violating system integrity, configuration or communications.

MDR-241	5.0	180	R	E	G,M,N	L/S (N)

Goal. Perform basic radar imagery interpretation.

Requirement. Utilizing live or archived base radar products, identify the following features:

(1) Base reflectivity:
    (a) Precipitation.
    (b) Thunderstorms.
    (c) Outflow boundaries.
(2) Base velocity:
    (a) Convergence and divergence.
    (b) Cyclonic and anticyclonic rotation.
(3) Base spectrum width products:
    (a) Significant motion.
    (b) Turbulence.

Performance Standard. Retrieve specified product and identify, at a minimum, the features designated by the requirement.

Prerequisite. MDR-240.

MDR-242	10.0	180	R	E	G,M,N	L/S	(N)

Goal. Perform advanced radar imagery interpretation.

Requirement. Utilizing live or archived derived radar products, identify the following features:

(1) Tight reflectivity gradients.
(2) Line Echo Wave Patterns (LEWP).
(3) Mid-level overhang.
(4) Weak echo region (WER).
(5) Bounded weak echo region (BWER)
(6) Mesocyclones.
(7) Tornadic Vortex Signatures (TVS).
(8) Freezing levels.
(9) Base reflectivity and velocity cross-sections.
(10) Gate-to-gate shear.
(11) Anomalous propagation.
(12) Range-folding.
(13) Radar (sun) spikes.
(14) Identify false echoes.

Performance Standard. Complete requirement until all steps are completed without error.

Prerequisite. MDR-241.

7. METOC Satellite (MSAT)

a. Purpose. To become proficient in the basic operation of the available weather satellite system(s) and knowledge of atmospheric features on available on satellite imagery.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be proficient at analyzing and interpreting satellite products while demonstrating basic satellite operations.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 3 Events, 8.0 Hours

MSAT-245	2.0		*	E	G,M,N	L/S	(N)

Goal. Analyze meteorological features on satellite imagery.

Requirement. Utilizing satellite imagery, correctly identify synoptic and/or mesoscale meteorological features:

(1) Areas of high pressure.
(2) Areas of low pressure.
(3) Frontal boundaries.
(4) Thunderstorms.
(5) Basic and significant cloud elements.
(6) Jet streams.
(7) Land/terrain features.
(8) Non-cloud features (i.e. smoke, dust).
(9) Significant weather phenomena.

Performance Standard. Discuss the identification of the features and uses of the analyzed features using visual, infrared, Multi-Spectral Imagery (MSI) and water vapor imagery all within an 80% accuracy.

MSAT-246	5.0	*	E	G,M	L/S	(N)

Goal. Perform advanced operations on available satellite system.

Requirement. Utilizing the available equipment and manuals, perform the listed tasks:

(1) Transfer satellite imagery product to database.
(2) Perform archive product function.
(3) Perform zoom functions.
(4) Execute loop functions.
(5) Execute pre-established product set enhancement curves.
(6) Perform color scale adjustments for product display.

Performance Standard. Physically demonstrate requirement tasks with an 80% accuracy.

MSAT-247	1.0	180	R	E	G,M,N	L	(N)

Goal. Analyze and interpret satellite imagery.

Requirement. Given a satellite image, determine and state the type of satellite imagery and apply analytical techniques to depict the features listed:

(1) Jet streams.
    (a) Location of jet streams.
    (b) Type of jet streams.
(2) High and low circulation center locations.
(3) Cloud types.
(4) Frontal systems, troughs and ridges.
(5) Land/terrain features.
(6) Significant weather phenomena.
    (a) Thunderstorms.
    (b) Squall lines.
(7) Tropical features.

(a) Tropical cyclones.
(b) Tropical upper tropospheric troughs.

Performance Standard. Complete the requirement within one-hour through practical application and discuss reasoning for feature placement to an 80% accuracy.

Prerequisite. MSAT-245.

8. METOC Climatological and Astronomical Services (MCS)

a. Purpose. To develop proficiency at deriving climatological and astronomical data.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be able to compute or retrieve astronomical or Climatological data.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 2 Events, 6.0 Hours

MCS-250	1.0	*	E	G,M,N	L	(N)

Goal. Calculate astronomical data.

Requirement. Utilizing available equipment and software, calculate solar and lunar data for five specified locations.

Performance Standard. Produce appropriate data to an 100% accuracy.

MCS-251	5.0	*	E	G,M,N	L/S	(N)

Goal. Generate astronomical and climatological data.

Requirement. Given mission parameters and appropriate software or forms, generate astronomical, tidal, and climatological data for the five locations.

Performance Standard. The specified locations shall be in differing countries. Data shall be verified for accuracy.

9. Warnings, Watches and Advisories (WWA)

a. Purpose. To acquire proficiency in obtaining and disseminating weather warnings, watches, or advisories as mandated by requirements.

b. General

(1) Completion of MOAF is required prior to commencing this stage of

training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at disseminating appropriate METOC warnings and advisories.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 3 Events, 4.5 Hours

WWA-255	2.0	180	R	E	G,M,N	L	(N)

Goal. State weather warning and advisory criterion.

Requirement. State the local criteria for weather warnings and advisories to include, but not limited to:

(1) Thunderstorm warnings.
(2) Severe thunderstorm warnings/watches.
(3) Tornado warnings/watches.
(4) Wind warnings.
(5) Storm warning.
(6) Gale warning.
(7) Flood warning.
(8) Flash flood warning.
(9) Freeze/Hard freeze warning.
(10) Small craft warnings/advisories.
(11) Lightning warnings.
(12) Tropical.

Performance Standard. Define warning criteria per OPNAVINST 3140.24_ and local directives.

WWA-256	2.0	180	R	E	G,M,N	L/S	(N)

Goal. Be proficient in procedures for displaying, and disseminating weather warnings and advisories.

Requirement. Complete the following to include, but not limited to:

(1) Define criteria for setting weather warnings and advisories.
(2) State processes for issuing weather warnings and advisories.
(3) Display and disseminate per local SOP.

Performance Standard. Complete the requirement per OPNAVINST 3140.24_ and local operating procedures. Within 20 minutes of warning issuance, plot warning or advisory without error.

Prerequisite. WWA-255.

WWA-257	0.5	*	E	G,M,N	L/S	(N)

Goal. Produce weather warnings/advisories.

Requirement. Given a weather scenario, produce the appropriate weather warning or advisory in accordance with appropriate order and/or local SOP.

(1) Define criteria for setting weather warnings and advisories.
(2) State processes for issuing weather warnings and advisories.

Performance Standard. Produce the warning, disseminate as required, within specified timeframe without error.

Prerequisite. WWA-256.

10. METOC Data Analysis (MDA)

a. Purpose. To develop proficiency in the analysis of basic atmospheric features on atmospheric charts.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at analyzing and interpreting surface and atmospheric phenomena.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 8 Events, 23.0 Hours

MDA-260	0.5	*	E	G,M,N	L/S	(N)

Goal. Analyze and interpret a thickness chart.

Requirement. Given a SFC-500mb thickness chart, analyze and depict the features listed:

(1) Warm/cold air advection.
(2) High and low pressure centers.
(3) Fronts.
(4) 540 Dam line.
(5) Troughs.
(6) Label air masses.
(7) Jet stream.

Performance Standard. Complete requirement within 30 minutes of chart receipt. Discuss meteorological reasoning for placement of features to an 80% accuracy.

Prerequisite. AMS-227, AMS-231, AMS-232.

MDA-261	0.5	*	E	G,M,N	L/S	(N)

Goal. Analyze and interpret a vorticity chart.

Requirement. Given a 500mb vorticity chart, analyze and depict the following features:

(1) Positive/negative vorticity advection areas.
(2) Shear lobes.
(3) Advection lobes.
(4) Jet stream.
(5) X-N distribution.

Performance Standard. Complete requirement within 30 minutes of chart receipt. Explain meteorological reasoning for placement of features to an 80% accuracy.

Prerequisite. AMS-227, AMS-231, AMS-232.

MDA-262	6.0	*	E	G,M,N	L/S	(N)

Goal. Analyze and interpret upper atmospheric weather charts.

Requirement. Within 6 hours and given standard level chart set (850mb, 700mb, 500mb, 300mb, and 200mb) analyze the mandatory level constant pressure charts for features listed below (as applicable):

(1) Isoheights.
(2) Isotherms.
(3) Areas of significant moisture.
(4) Major short wave axis, troughs and ridges.
(5) Minor short wave axis, troughs and ridges.
(6) High and low height centers.
(7) Warm and cold pockets.
(8) Upper fronts.
(9) Jet stream features.

Performance Standard. Upon completion of analysis, explain meteorological reasoning for placement of features to an 80% accuracy.

Prerequisite. MDA-260, MDA-261.

MDA-263	1.0	180	R	E	G,M,N	L/S	(N)

Goal. Analyze and interpret a surface chart.

Requirement. Given a surface chart, depict the following features:

(1) Isobars.
(2) High and low pressure centers.
(3) Fronts.
(4) Highlight weather symbols.
(5) Troughs.
(6) Label air masses.

(7) Dry lines.
(8) Isallobars.
(9) Isodrosotherms.
(10) Identify outflow boundaries.
(11) Nephanalysis.

Performance Standard. Complete requirement within 45 minutes of chart receipt and explain meteorological reasoning for placement of features with an 80% accuracy.

Prerequisite. MDA-260, MDA-261, MDA-262.

MDA-264	10.0	180	R	E	G,M,N	L/S	(N)

Goal. Develop synoptic scale forecast using prognosis techniques.

Requirement. Analyze centrally prepared products, apply academic principles, and forecast synoptic scale features by completing the listed items:

(1) Initialize model data.
(2) Analyze or re-analyze:
    (a) Surface chart.
    (b) Thickness chart.
    (c) Vorticity.
    (d) Standard Upper Air chart set.
    (e) Satellite imagery.
    (f) Radar imagery.
    (g) Weather depiction charts.
(3) Develop forecasted intensity and location of weather features.
(4) Discuss meteorological reasoning for forecasted elements.

Performance Standard. Identify, depict and provide dynamically sound reasoning for a synoptic forecast to an 80% accuracy.

Prerequisite. MDA-260, MDA-261, MDA-262, MDA-263.

MDA-265	2.0		*	E	G,M,N	L/S	(N)

Goal. Introduce elements forecasted from a plotted Skew-T Log P Diagram.

Requirement. Discuss and define elements that can be forecasted from the Skew-T Log P diagram:

(1) Severe weather probability.
(2) Maximum and minimum temperatures.
(3) Turbulence.
(4) Icing.
(5) Hail size.
(6) Convective gusts.
(7) Fog dissipation.
(8) Contrails.
(9) Cloud height, types and coverage.
(10) Precipitation.

Performance Standard. State procedures for properly forecasting elements listed per the applicable references.

Prerequisite. AMS-227, AMS-231, AMS-232.

MDA-266	2.0	180	R	E	G,M,N	L/S	(N)

Goal. Analyze atmospheric conditions from the Skew-T, Log P diagram.

Requirement. Analyze a Skew-T, Log P diagram for elements listed:

(1) Compute following stability indices(at a minimum).
    (a) Lifted index.
    (b) K index.
    (c) Sweat index.
    (d) Showalter's index.
    (e) Total totals.
(2) Analyze negative/positive energy areas.
(3) Analyze for equilibrium levels.
(4) Compute turbulent areas.
(5) Analyze Potential temperature.
(6) Compute contrails.
(7) Compute icing types and levels.
(8) Compute maximum and minimum temperatures.
(9) Compute hail.
(10) Compute thunderstorm gusts.
(11) Analyze freezing level.
(12) Analyze for areas of moisture.
(13) Compute D-Values.
(14) Compute relative humidity.

Performance Standard. State how derived values and/or elements apply to forecasting atmospheric conditions.

Prerequisite. MDA-265.

MDA-267	1.0	180	R	E	G,M,N	L/S	(N)

Goal. Interpret a streamline analysis.

Requirement. Given a streamline analysis denote the following features:

(1) Streamlines.
(2) Asymptotes (convergent/divergent).
(3) Neutral points.
(4) Cyclonic and anti-cyclonic centers.
(5) Isotachs.
(6) Wind maximums and minimums.

Performance Standard. Identify and interpret required features within an 80% accuracy.

11. METOC Product Briefing (MPB)

a. Purpose. To develop proficiency in the techniques and tactics used to verbally present current and future states of the atmosphere.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at conducting METOC briefings in support of mission requirements.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 1 Events, 3.0 Hours

MPB-270	3.0	180	R	E	G,M,N	L/S	(N)

Goal. Brief synoptic chart set.

Requirement. Utilizing an analyzed chart set, brief meteorological features from the following products:

(1) Surface chart.
(2) Constant pressure charts.
(3) Support charts:
    (a) Satellite Imagery.
    (b) Vorticity.
    (c) 1000-500mb Thickness.

Performance Standard. Conduct brief until individual demonstrates mastery of sound atmospheric fundamentals.

Prerequisite. MDA-264.

12. MAGTF Forecast Support (MFS)

a. Purpose. To acquire proficiency in forecasting routine aviation support elements and products.

b. General

(1) Completion of MOAF is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at forecasting and disseminating METOC information in support of mission requirements.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 4 Events, 33.5 Hours

MFS-275	1.5	180	R	E	G,M,N	L/S	(N)

Goal. Encode and disseminate pilot reports (PIREPs).

Requirement. Given a PIREP and appropriate forms, correctly encode and disseminate the PIREP within 10 minutes of receipt. Perform the following:

(1) Receive PIREP via available communication device.
(2) Annotate the data on the correct form.
(3) Disseminate the PIREP.

Performance Standard. Conduct the requirement a minimum of 10 times per NAVMETOCCOMINST 3142.1_.

MFS-276	26.0	180	R	E	G,M,N	L/S	(N)

Goal. Produce Terminal Aerodrome Forecast (TAF).

Requirement. Use available meteorological data to assess and interpret meteorological conditions to produce a TAF.

Performance Standard. Complete requirement a minimum of 26 times per NAVMETOCCOMINST 3143.1_. 50% of the TAFS are for a location, other than their current location, to an 80% verification of weather elements.

MFS-277	2.0	*	E	G,M,N	L/S	(N)

Goal. Generate Optimum Path Aircraft Routing System (OPARS) products.

Requirement. Given mission parameters and appropriate software or forms, generate OPARS support products for five flight requests.

Performance Standard. OPARS products shall be evaluated for accuracy of output based on given mission parameters.

Prerequisite. Read and understand OPARS User’s Manual.

MFS-278	4.0	*	E	G,M,N	L/S	(N)

Goal. Introduce flight weather products.

Requirement. Gain familiarity with the content and orders governing preparation and use of the following flight weather products:

(1) DD 175-1 flight weather briefing.
(2) Flight Weather Folder.
(3) Squadron Briefings.
(4) Aviation Strike Brief.
(5) Convective Sigmets/Airmets.
(6) Non-Convective Sigmets/Airmets.

Performance Standard. Identify and locate references governing each product listed without error.

309. CORE SKILL ADVANCED PHASE

1. General. This level contains advanced Core Skill training. It increases proficiency in basic Core Skills and develops mission-level leadership that leads to combat qualifications and leadership designations. Crews proficient in this phase of training should be capable of planning/leading/directing flights of numerous aircraft in a contingency operation or crews within command and control or aviation ground support agencies. Assignment of CRP values should fall within the range of 0.50 - 1.00 per event. CRP weighting shall reflect the hierarchical nature of core competencies. Upon completion of the Core Skill Advanced Phase, an individual shall be at 95 percent CRP (Core Skill Advanced phase = 20 percent CRP).

a. Stages.

(1) OHS
(2) MDR
(3) MSAT
(4) MCS
(5) MPB
(6) MFS
(7) MPC
(8) MIA

2. Oceanographic and Hydrological Services (OHS)

a. Purpose. To demonstrate proficiency in the principles of oceanography required to produce mission specific support.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at observing, forecasting and disseminating oceanographic information and products.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 5 Events, 10.0 Hours

OHS-300	0.5	180	R	E	G,M,N	L/S	(N)

Goal. Conduct surf observations.

Requirement. Utilize appropriate equipment to observe and annotate a surf observation. Perform the following:

(1) Determine point of observations.
(2) Determine and annotate:

(a) Significant breaker height.
(b) Maximum breaker height.
(c) Breaker period.
(d) Breaker types.
(e) Angle of breaker relative to beach.
(f) Littoral current.
(g) Surf zone.
(h) Additional remarks.

Performance Standard. Complete requirement 3 times per the Joint Surf Manual COMNAVSURFPAC/LANT 3840.1_.

OHS-301	5.0	180	R	E	G,M,N	L	(N)

Goal. Demonstrate knowledge of surf forecasting.

Requirement. Define and explain:

(1) Significant breaker height.
(2) Maximum breaker height.
(3) Breaker period.
(4) Breaker types.
(5) Angle of breaker relative to beach.
(6) Littoral current.
(7) Modified surf index.
(8) Wind direction in surf zone.
(9) Obtain/develop beach profile data.

Performance Standard. Per the Joint Surf Manual COMNAVSURFPAC/LANT 3840.1_, define and explain the significance of the listed subjects.

OHS-302	1.0		*	E	G,M,N	L/S	(N)

Goal. Compute Modified Surf Index (MSI).

Requirement. Given mission parameters, observed/forecasted conditions/parameters and appropriate software or forms, generate MSI for three separate locations.

Performance Standard. MSI shall be evaluated for format and content per the references prior to awarding completion credit.

OHS-303	0.5	180	R	E	G,M,N	L	(N)

Goal. Create a surf forecast.

Requirement. Utilizing appropriate software and requirements for operations, generate a surf forecast that contains the listed components:

(1) Beach survey.
(2) Significant breaker height.
(3) Maximum breaker height.
(4) Breaker period.

(5) Breaker type.
(6) Breaker angle.
(7) Littoral current speed and direction.
(8) Modified surf index.
(9) Wind direction in surf zone.
(10) Beach profile data.

Performance Standard. Forecast must meet mission requirements and contain the above listed elements. The event shall be repeated until an 80% accuracy exists in content and format.

Prerequisite. OHS-301.

OHS-304	3.0	*	E	G,M,N	L/S	(N)

Goal. Forecast (flash) floods.

Requirement. Given access to appropriate systems/data, assess the following to determine if the potential for (flash) flooding exists for a given AOR:

(1) Assess local topography.
(2) Assess soil conditions.
(3) Determine floodplain.
(4) Determine river stages.
(5) Forecast rainfall amounts for time period.

Performance Standard. Decipher potential for flooding (yes or no) and forecast time of event within a 2-hour time window.

Prerequisite: None

External Syllabus Support: Applied Environmental Science Course.

3. Meteorological Doppler Radar (MDR)

a. Purpose. To become proficient in the advanced operation of the Doppler Weather Radar and atmospheric features on available Doppler products.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be capable of performing advanced operations and management functions on meteorological Doppler radar equipment.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training events. 2 Events, 8.0 Hours

MDR-310	2.0	180	R	E	G,M	L/S	(N)

Goal. Perform advanced operations on meteorological radar.

Requirement. Given a meteorological radar and applicable manuals, complete advanced operations while maintaining both operator and equipment safety. Perform the following tasks:

(1) Select product type for generation.
(2) Transfer radar product type to database (if applicable).
(3) Perform:
    (a) Archive product functions.
    (b) Zoom functions.
    (c) Loop functions.
    (d) Three-dimensional (3D) display functions.
    (e) Range height indicator (RHI) applications.
    (f) Color scale adjustments for product display.
    (g) Cross-section functions.
(4) Setup and implement job scheduling of radar products.

Performance Standard. Physically demonstrate the above listed tasks while providing verbal explanations to an 80% accuracy.

MDR-311 6.0 * E M L (N)

Goal. Conduct management operations for the meteorological radar system.

Requirement. Given a Doppler radar system, applicable operating manuals and understanding the configurations, limitations, and capabilities of Doppler radar systems, display a working knowledge of Doppler radar management functions. Configuration should allow for ingest, analysis, manipulation, and production of derived radar products. Perform, at a minimum, the following tasks:

(1) Ensure configuration is commensurate with desired product generation.
    (a) Pulse repetition frequency.
    (b) Sample rates.
    (b) Gate width.
    (c) Beam width.
    (d) Operating frequency.
    (e) Scanning speeds.
(2) Archive generated products.
(3) Discuss Doppler radar product algorithms and products derived from them.
(4) Ensure Doppler radar products are available through electronic means to the end customer.
(5) Ensure hazards of electromagnetic radiation to fuels (HERF) procedures are implemented and adhered to.
(6) Ensure hazards of electromagnetic radiation to personnel (HERP) procedures are implemented and adhered to.
(7) Ensure hazards of electromagnetic radiation to ordnance (HERO) procedures are implemented and adhered to.

Performance Standard. Conduct the above listed tasks with 80% accuracy.

4. METOC Satellite (MSAT)

a. Purpose. To become proficient in the advanced operation and management of available meteorological satellite systems.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at performing advanced satellite equipment operations.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 1 Events, 2.0 Hours

MSAT-320	2.0	*	E	M	L	(N)

Goal. Perform advanced operations on tactical satellite system.

Requirement. Given a tactical satellite system, applicable operating manuals, and understanding limitations and capabilities of satellite imagery acquisition and enhancements, display a working knowledge of satellite system operations.

(1) Conduct power up/power down procedures.
(2) Conduct log on/log off functions.
(3) Schedule receipt of imagery.
(4) Update of Ephemeris Data.
(5) Ensure product path for received products is correct.
(6) Ensure naming conventions are adhered to.
(7) Ensure signal decryption values are set for reception of scheduled passes.
(8) Archive imagery for later retrieval.

Performance Standard. Demonstrate completion using practical application.

5. METOC Climatological and Astronomical Services (MCS)

a. Purpose. To demonstrate familiarity with Marine Corps METOC support architecture, missions and local operating procedures.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be proficient at briefing Climatological data in support of mission requirements.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 1 Events, 12.0 Hours

MCS-330	12.0	180	R	E	G,M,N	L/S	(N)

Goal. Generate a climatology brief.

Requirement. Research and prepare a three-month climatology brief for a specified location. Elements to be included in the brief include, but are not limited to, the following:

(1) Overview.
(2) Geography.
(3) Terrain.
(4) Oceanography.
(5) Astronomical.
(6) Specific weather elements, if applicable:
    (a) Relative humidity.
    (b) Temperature.
    (c) Thunderstorms/precipitation.
    (d) Prevailing winds.
    (e) Sky condition.
    (f) IFR/VFR/Marginal VFR percentages.
    (g) Ice thickness and flow.
    (h) Plume location and drift.

Performance Standard. Presentation shall be completed within 12 hours. It is recommended that the designated location or AOR for the climatology presentation be located in a foreign and/or unfamiliar country.

6. METOC Product Briefing (MPB)

a. Purpose. To demonstrate advanced proficiency in the techniques and tactics used to verbally present current and future states of the atmosphere.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be able to accurately and competently present the full range of METOC briefings to appropriate audiences.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 7 Events, 53.5 Hours

MPB-340	2.5		*	E	G,M,N	L/S	(N)

Goal. Conduct METOC training briefs.

Requirement. Prepare and conduct each brief once. Preparation time for each brief is one week. Develop and brief

specialized/tailored weather briefs listed below, but not limited to:

(1) Instrument Ground School (IGS) brief.
(2) Seasonal weather briefs.
(3) Holiday/travel Briefs.
(4) Special events.
(5) METOC capabilities brief.

Performance Standard. Content and verification of forecasted elements are subjective and shall be verified for accuracy.

MPB-341	3.0	180	R	E	G,M,N	L/S	(N)

Goal. Conduct an MAGTF Mission Brief.

Requirement. Prepare and conduct an aviation (mission specific) strike weather brief within 3-hours. Include the following information:

(1) Nephanalysis.
(2) Enroute weather.
    (a) Sky condition.
    (b) Weather.
    (c) Visibility/Slant range visibility (NM).
    (d) Sea surface temperature/in-water survival time.
    (e) Winds.
    (f) Temperatures.
    (g) Turbulence.
    (h) Icing.
    (i) Contrail formation.
    (j) Ditch heading.
(3) Target Area Weather (repeat for each area).
    (a) Sky condition.
    (b) Weather.
    (c) Visibility/slant range visibility (NM).
    (d) Surface winds.
    (e) Maximum/minimum temperatures.
    (f) Cloud tops/ceilings.
    (g) Freezing level.
    (h) D-Values.
(4) Astronomical Data.
    (a) Sunrise/Sunset.
    (b) Sun elevation angles/azimuth.
    (c) Beginning/ending civil/nautical twilights.
    (d) Moonrise/moonset.
    (e) Lunar illumination.
    (f) Moon angles elevation/azimuth.
    (g) Lux values.
    (h) Shadow forecast.
(5) 48-hour outlook.
(6) Tactical assessment.
(7) Electro-Optical sensor performance predictions.

Performance Standard. Complete briefing within 24 hours of receipt of RFI per MCWP 3-35.7.

MPB-342	2.0	*	E	G,M,N	L/S	(N)

Goal. Conduct a Search And Rescue (SAR) brief.

Requirement. Prepare and conduct the following:

(1) Current and forecast weather information for predetermined areas of operation.
(2) Provide mission planning forecasts to include, but not limited to:

    (a) Water temperatures.
    (b) Drift data.
    (c) Survival times.
    (d) Current speed and direction.

Performance Standard. Complete the briefing within 2 hours of receipt of RFI per MCWP 3-35.7.

MPB-343	15.0	180	R	E	G,M,N	L/S	(N)

Goal. Conduct a climatology brief.

Requirement. Prepare and conduct a 3-month climatology brief that includes:

(1) Overview.
(2) Geography.
(3) Terrain.
(4) Operational interests (if applicable).
(5) Oceanography.
(6) Astronomical.
(7) Plume location and drift.
(8) Historical EM conditions.
(9) General climate.
(10) Specific weather elements (if applicable).
     (a) Relative humidity.
     (b) Thunderstorms/precipitation.
     (c) Prevailing winds.
     (d) Sky condition.
     (e) IFR/VFR/Marginal VFR percentages.
     (f) Assessments and recommendations.
(11) Hydrology (as required).

Performance Standard. Brief within 48 hours of receipt of RFI per MCWP 3-35.7.

Prerequisite. MCS-330

MPB-344	1.0	*	E	N/A	L/S	(N)

Goal. Demonstrate knowledge of environmental reports covering procedures.

Requirement. Discuss the products listed:

(1) Volcanic eruption.

(2) Tidal wave/tsunami.
(3) Avalanches.
(4) Earthquakes (reports).

Performance Standard. Demonstrate basic understanding of events and describe the product customer relationship.

MPB-345	24.0	180	R	E	N/A	L	(N)

Goal. Conduct an amphibious warfare brief.

Requirement. Prepare and present an amphibious warfare brief that contains the listed items:

(1) Current weather information.
(2) 24-hour weather information.
(3) Aviation parameters.
(4) Surf forecast.
(5) Tactical assessment.
(6) Atmospheric refractive summary.
(7) Astronomical data.
(8) 24-hour radiological/chemical fallout forecast.

Performance Standard. Complete the briefing with 24 hours of receipt of RFI per MCWP 3-35.7.

MPB-346	6.0	180	R	E	N/A	L	(N)

Goal. Conduct a pre-deployment brief.

Requirement. Prepare and conduct a mission specific deployment brief. Brief shall include, but is not limited to:

(1) Basic meteorological parameters.
(2) Aviation impacts and hazards.
(3) Types, amounts, coverage of severe weather to include localized effects.
(4) climatological summary.
(5) Astronomical brief.
(6) METOC support capabilities.
(7) Type of terrain in area of interest and influence of METOC parameters.
(8) beach surveys as applicable.

Performance Standard. Complete briefing with 8 hours of receipt of RFI per MCWP 3-35.7.

7. MAGTF Forecast Support (MFS)

a. Purpose. To acquire proficiency in forecasting routine aviation support elements and products.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be proficient in developing, then delivering, forecasts within the context of the mission support requirements.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 3 Events, 9.5 Hours

MFS-347	3.5	180	R	E	N/A	L/S	(N)

Goal. Demonstrate proficiency in flight weather briefings.

Requirement. Given a DD-175 or flight weather request, graphic METOC products, alphanumeric meteorological products, appropriate software and hardware, prepare a minimum of 20 flight weather briefings and 5 VFR Stamp flight weather briefings.

Performance Standard. Requirement must be met within a reasonable timeframe (average of 10-20 minutes, but may vary dependant upon the situation) per NAVMETOCCOMINST 3140.14_. Specific criteria for content are:

(1) Sky conditions (within 500 feet of actual arrival conditions).
(2) Visibility (within 1 mile of the actual arrival conditions).
(3) Type and character of precipitation or obstruction to visibility.
(4) Wind direction (within 30 degrees if wind speed greater than six knots of actual arrival conditions).
(5) Wind speed (within 5 knots of actual conditions).
(6) Altimeter setting (within 2 in. of mercury of actual arrival conditions).

MFS-348	2.0	180	R	E	N/A	L/S	(N)

Goal. Produce flight weather packets.

Requirement. Given a flight weather packet request, prepare and brief a flight weather packet.

Performance Standard. Flight weather packet must be in accordance with NAVMETOCCOMINST 3140.14_, be completed within 2 hours, and be accomplished a minimum of five times.

Prerequisite. MFS-347.

MFS-349	4.0	*	E	G,M,N	L/S	(N)

Goal. Produce mission specific meteorological products that support MAGTF operations.

Requirement. Prepare products listed and discuss the content thereof:

(1) Chemical downwind message.
(2) Blast forecast.
(3) Drop zone forecast.
(4) Sound propagation forecast.
(5) Any other forecasted products requested by the commander.

Performance Standard. Product content must be in accordance with applicable orders.

8. METOC Planning/Coordination (MPC)

a. Purpose. To demonstrate familiarity with the coordination of Marine Corps METOC support.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at performing METOC functions that aid mission planning and support requirements.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events 4 Events, 40.0 Hours

MPC-350	16.0	180	R	E	N/A	L	(N)

Goal. Embarkation of the MetMF(R).

Requirement. Embark the MetMF(R) to a designated area. Perform the following:

(1) Supervise pack up of the MetMF(R).
(2) Coordinate and supervise lift.
(3) Transport classified materials.
(4) Unpack the MetMF(R) at a designated area.
(5) Establish METOC support.

Performance Standard. Successful embarkation procedures conducted in compliance with applicable references.

External Support Syllabus. Heavy equipment and transport.

MPC-351	2.0	*	E	N/A	L/S		(N)

Goal. Demonstrate proficiency with deployment requirements and procedures.

Requirement. Given a simulated METOC deployment scenario, perform the following tasks per the LOI:

(1) Identify embarkation requirements.

(2) Identify communication requirements.
(3) Identify METOC support requirements.
(4) Identify personnel requirements.
(5) Identify equipment support procedures.

Performance Standard. Task must be completed per applicable references.

MPC-352	6.0	*	E	N/A	L/S	(N)

Goal. Be familiar with METOC logistics and external support requirements.

Requirement. Comprehend the listed logistical and external support programs and requirements:

(1) Hazardous materials (HAZMAT).
(2) Marine Aviation Logistics Squadron (MALS) support structure.
(3) Mobile facility lift and transportation requirements.
(4) Time Phased Force Deployment Data (TPFDD).
(5) Equipment Density lists (EDL).
(6) Table of basic allowance (TBA).
(7) Consolidated shipboard allowance list (COSAL).
(8) Contingency support package (CSP).
(9) Calibration.

Performance Standard. Identify and discuss logistical and external support per orders and regulations governing logistical support program(s).

MPC-353	16.0	180	R	E	N/A	L	(N)

Goal. Introduce Defense Messaging System (DMS).

Requirement. Identify content and format for the messages listed:

(1) Casualty Reports (CASREP).
(2) Joint Operational Area Forecast (JOAF).
(3) General Administrative (GENADMIN).

Performance Standard. Message must comply with applicable references.

9. METOC Impact Assessment (MIA)

a. Purpose. To demonstrate advanced knowledge of the processes and products that assist in providing assessment of atmospheric conditions to mission specific support requirements.

b. General

(1) The Core Skill Basic phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at providing commanders an accurate assessment of METOC impacts

to MAGTF operations.

(3) Prerequisites: 200 level events completed.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 8 Events, 21.0 Hours

MIA-360	1.0	*	E	N/A	L	(N)

Goal. Be familiar with products and sources for assessment of METOC impacts on MAGTF operations.

Requirement. Given a mission, state the sources and products required for assessing meteorological impacts on a specified mission.

Performance Standard. Verbally identify sources and products for assessing METOC impacts in accordance with local SOPs.

MIA-361	2.0	*	E	N/A	L	(N)

Goal. Assess METOC impacts on amphibious operations.

Requirement. Identify and discuss products used for deriving forecasts for the oceanographic elements listed below and assess the impacts on operations:

(1) Sea state.
(2) Tidal data.
(3) Breaker types and heights.
(4) Fetch areas.
(5) Swells.
(6) Currents.

Performance Standard. Define the various products used in deriving oceanographic forecasts and state, to an 80% accuracy, how the elements above impact mission specific operations.

External Syllabus Support: MIA Course.

MIA-362	3.0	180	R	E	N/A	L	(N)

Goal. Demonstrate proficiency on METOC software applications.

Requirement. Operate each suite to exhibit working proficiency of knowledge:

(1) Forecaster Toolkit
(2) Environmental decision aids.

Performance Standard. Successfully produce assigned products utilizing appropriated software.

MIA-363	3.0	*	E	N/A	L	(N)

Goal. Assess METOC impacts on aviation operations.

Requirement. After conducting a thorough mission analysis, utilize METOC equipment to assess and brief METOC impacts on operations. The assessment shall include, at a minimum, the following essential elements of information (EEIs):

(1) Sea surface temperature.
(2) Sky condition.
(3) Visibility (surface/slant).
(4) Winds (surface and aloft).
(5) Temperature.
(6) Precipitation.
(7) Hazardous weather.
(8) Turbulence.
(9) Icing.
(10) Hail.
(11) Astronomical data.
(12) Humidity (relative and absolute).
(13) Pressure.
(14) Ditch headings.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are in accordance with applicable references.

External Syllabus Support: MIA Course.

MIA-364	3.0	180	R	E	N/A	L/S	(N)

Goal. Assess METOC impacts on ground operations.

Requirement. After conducting a thorough mission analysis, utilize METOC equipment to assess and brief METOC impacts on operations. The assessment shall include, at a minimum, the following EEI:

(1) River stage and currents.
(2) Sky condition.
(3) Visibility.
(4) Wind.
(5) Temperature.
(6) Precipitation.
(7) Snow/ice depth and coverage.
(8) Freeze and thaw depth.
(9) Hazardous weather.
(10) Astronomical data.
(11) Sea/shore conditions (tides, currents, surf, and water temperature).
(12) Vertical wind profile.
(13) Wind chill and WBGTI.
(14) Solar/Lunar Shadows
(15) max/min pa/da
(16) Sound propagation

Performance Standard. Complete the briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are in accordance per applicable references.

Prerequisite. MIA-362.

MIA-365 3.0 * E N/A L/S (N)

Goal. Assess METOC impacts on intelligence operations.

Requirement. After conducting a thorough mission analysis, utilize METOC equipment to assess and brief METOC impacts on operations. The assessment shall include, at a minimum, the following EEI:

(1) Hazardous weather.
(2) Sky condition.
(3) Visibility.
(4) Wind.
(5) Temperature.
(6) Precipitation.
(7) Snow depth and coverage.
(8) Astronomical data.
(9) EM propagation.
(10) River stage and currents.
(11) Freeze and thaw depth.
(12) Sea/shore conditions (tides, currents, surf, and water temperature).
(13) Wind chill and WBGTI.
(14) Solar/Lunar Shadows
(15) Space weather
(16) Sound propagation

Performance Standard. Complete the briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are in accordance with applicable references.

MIA-366 3.0 * E N/A L/S (N)

Goal. Assess METOC impacts on logistical operations.

Requirement. Assess and brief the METOC impacts on logistical operations. The assessment shall include, at a minimum, the following EEI:

(1) Bathymetry.
(2) Sky condition.
(3) Visibility.
(4) Maximum/minimum temperature.
(5) Precipitation.
(6) Snow depth and coverage.
(7) Astronomical data.
(8) EM propagation.
(9) Hazardous weather.
(10) Currents.
(11) Tides.

(12) Water temperature.
(13) Sea state.
(14) Surf conditions.
(15) Ice conditions.
(16) Wind chill and WBGTI.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are in accordance with applicable references.

MIA-367	3.0	180	R	E	N/A	L/S	(N)

Goal. Produce mission specific products.

Requirement. Utilizing Tactical Decision Aids, produce friendly/enemy products for known assets create the following:

(1) Historical environmental prediction condition (HEPC) summary.
(2) Refractive index profile.
(3) Radar coverage diagrams.
(4) Radar propagation loss.
(5) Platform vulnerability.
(6) Platform Probability of detection.
(7) Electronic support measures.
(8) Electronic countermeasures.
(9) Solar lunar products.
(10) Weapons performance.
(11) SAR product

Performance Standard. Complete the briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are in accordance with the reference.

310. CORE PLUS PHASE

1. General. This level contains skill training associated with low probability of execution and/or theater specific operations. Although Core Plus training events may provide valuable training opportunities, they are not considered essential to achieve unit Core Competency. Core Plus training is conducted at the discretion of operational commanders and allows unit training flexibility. Upon completion of the Core Plus Phase, an individual shall be at l00 percent CRP (Core Plus Phase = 5 percent CRP). Core Competency for operational units resides in the 200-300 training levels (considered ‘Core’ at the operational echelon). Mastery of 200-300 level Core Skills results in highly trained personnel who contribute to the unit's overall warfighting capability and enables a combat unit to accomplish its assigned mission. Therefore, fleet units shall emphasize individual proficiency in 200-300 level Core Skills. In some instances, certain Core Plus skills may be deemed essential depending on mission requirements and therefore may be considered Core Skills for pre-deployment readiness determination. Only the MAW or MAGTF commander may “re-designate” a Core Plus Skill to the Core Skill level for readiness reporting purposes.

a. Stages.

(1) MPB

(2) MDR
(3) MPC
(4) MIA

2. METOC Product Briefing (MPB)

a. Purpose. To demonstrate advanced proficiency in techniques and tactics used to verbally present current and future states of the atmosphere.

b. General

(1) The Core Skill Advanced phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be completely proficient in briefing METOC parameters in relation to mission support requirement.

(3) Prerequisites: 300 level events completed.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 1 Events, 66.0 Hours

MPB-400	66.0	365	R	E	N/A	L	(N)

Goal. Conduct a climatic impact brief.

Requirement. Prepare and conduct a known friendly and enemy platform climatic impact brief. A 3-6 month period for an OCONUS location using local intelligence assets if available. Brief shall include general TDA impacts. Brief shall include, but is not limited to:

(1) Basic meteorological parameters.
(2) Aviation impacts and hazards.
(3) Types, amounts, coverage of severe weather to include localized effects.
(4) climatological summary.
(5) Astronomical brief.
(6) host nation METOC support capabilities.
(7) Type of terrain in area of interest and influence of METOC parameters.
(8) beach surveys as applicable.

Performance Standard. Complete briefing within 48 hours of receipt of RFI per MCWP 3-35.7.

2. Meteorological Radar (MDR)

a. Purpose. To demonstrate proficiency at meteorological radar management.

b. General

(1) The Core Skill Advanced phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be completely proficient in radar operations and management.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 1 Event, 6.0 Hours

MDR-410	6.0	365	R	E	N/A	L	(N)

Goal. Manage meteorological radar operations.

Requirement. Complete tasks listed below to gain proficiency in management of Doppler radar techniques:

(1) Establish and coordinate background maps.
(2) Coordinate Doppler radar maintenance.
(3) Identify and implement software and hardware configurations.
(4) Identify and configure radar user functions.
(5) Establish radar regular and limited access adaptation data.
(6) Participate in unit radar committee meetings.
(7) Establish radar alerts and thresholds.
(8) Establish one-time product request procedures.
(9) Establish radar product set lists.
(10) Establish dedicated and non-associated radar product generator (RPG) lists.
(11) Set radar system clock.

Performance Standard. Completion of requirement must not violate local or RDA system integrity.

External syllabus support. Complete the WSR-88D OPUP Operators/manager course.

3. METOC Planning Coordination (MPC)

a. Purpose. To demonstrate familiarity in coordinating METOC support in support of MAGTF missions.

b. General

(1) The Core Skill Advanced phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be proficient in METOC planning and coordination as it relates to mission support requirements.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 6 Events, 101.0 Hours

MPC-420	24.0		*	E	N/A	L (N)

Goal. Introduce joint operation METOC functions.

Requirement. Be familiar with the following tasks:

(1) Coordinate joint METOC support.
(2) Liaison with component METOC units/commands.
(3) Identify and correct joint METOC support deficiencies.
(4) Provide operational planning products in support of the IPB process.

Performance Standard. Ensure Marine METOC interest and planning requirements are addressed.

MPC-421	8.0		*	E	N/A	L (N)

Goal. Submit input to annexes of operational orders.

Requirement. Submit METOC input to the annexes of operational orders and LOIs to the requesting command. Complete the requirement on each of the following:

(1) Intelligence operations, Annex B.
(2) Environmental operations, Annex H.
(3) Collection plan, Annex J.
(4) Communications and information systems, Annex K.

Performance Standard. Draft METOC input must be in Joint Operational Planning and Execution System (JOPES) or applicable format; be in accordance with orders and directives; and contain all required information to support designated mission and designate all external requirement for successful METOC support.

MPC-422	10.0	365	R	E	N/A	L (N)

Goal. Introduce concepts to METOC support issues.

Requirement. Familiarize and draft the listed reports:

(1) Draft Joint Universal Lessons Learned Summary (JULLS) report.
(2) Draft METOC After Action Reports.
(3) Draft Marine Corps Lessons Learned System (MCLLS) reports.
(4) Draft Universal Needs Statement (UNS) reports.
(5) Draft equipment casualty reports (CASREP).

Performance Standard. Content and format will be in accordance with orders and directives governing the individual report.

MPC-423	3.0		*	E	N/A	L (N)

Goal. Manage logistical support program.

Requirement. Manage the listed METOC logistical support programs:

(1) Supply requisitions.
(2) Equipment outages.
(3) Fiscal.

Performance Standard. Comply with applicable orders and directives.

MPC-424	32.0	365	R	E	N/A	L	(N)

Goal. Conduct deployment requirements and procedures.

Requirement. Accomplish the following tasks:

(1) Plan a deployment of tactical METOC assets to a Forward Operating Base (FOB).
(2) Coordinate transportation of equipment (classified and unclassified) to designated area.
(3) Coordinate personnel transportation and billeting.
(4) Conduct appropriate inspections.
(5) Coordinate network connectivity (where available).
(6) Coordinate logistical support.

Performance Standard. Conduct the above tasks so personnel and equipment successfully arrive at the designated area and establish METOC support capabilities.

MPC-425	24.0	*	E	N/A	L	(N)

Goal. Conduct METOC support operations for the MAGTF.

Requirement. Provide METOC support through all phases of MAGTF planning and execution operations. Complete, at a minimum, the following items:

(1) Participate in rapid response planning process (R2P2) training and operation-planning teams (OPT).
(2) Coordinate METOC support requirements for the MEU.
(3) Liaise with MEF METOC units on METOC support issues.
(4) Identify and correct METOC support deficiencies.
(5) Provide operational planning products in support of the Intelligence Preparation of the Battlefield (IPB) process.

Performance Standard. Ensure Marine METOC interests and planning requirements are addressed.

4. METOC Impact Assessment (MIA)

a. Purpose. To demonstrate core plus proficiency on the processes and products that assist in providing assessment of atmospheric conditions to mission specific support requirements.

b. General

(1) The Core Skill Advanced phase is required prior to commencing this stage of training.

(2) Upon completion of this stage of training, METOC personnel shall be competent at providing commanders an accurate assessment of METOC impacts to MAGTF, Joint, and Coalition operations.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 4 Events, 33.0 Hours

MIA-430	24.0	365	R	E	N/A	L	(N)

Goal. Produce products to support planning and execution of joint operations and missions.

Requirement. Produce mission specific impact assessments for the listed joint missions. Exhibit a comprehensive knowledge of METOC element impacts on the major weapon and support categories and missions:

(1) Humanitarian aid missions.
(2) Deep strike missions.
(3) Force on force missions.
(4) Over the horizon missions.
(5) Counterinsurgency missions.
(6) Weaponry.
    (a) Weapons of mass destruction.
    (b) Laser guided munitions.
    (c) Infrared guided munitions.
    (d) Visual guided munitions.
    (e) GPS guided munitions.
(7) Communications.
    (a) Satellite.
    (b) UHF/VHF.
(8) Trafficability.
(9) MEU(SOC).

Performance Standard. Complete the briefing with 3 hours of receipt of RFI. Completion will not be awarded until content and format per applicable references and guidance.

Prerequisite. Discuss at TR conference Applicable portion of MCWP 3-35.7.

MIA-431	3.0	*	E	N/A	L	(N)	

Goal. Assess METOC impacts on Chemical, Biological, Radiological and nuclear (CBRN) defensive operations.

Requirement. Assess and brief METOC impacts on operations. The assessment will consider, at a minimum, the following EEI:

(1) Hazardous weather.
(2) Sky condition.
(3) Humidity.
(4) Wind.
(5) Temperature.
(6) Atmospheric stability.
(7) Precipitation.
(8) EM propagation.

Performance Standard. Complete the briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are achieved per applicable references.

Prerequisite. Applicable portion of MCWP 3-35.7.

MIA-432	3.0	*	E	N/A	L	(N)

Goal. Assess METOC impacts on communication operations.

Requirement. Assess and brief the METOC impacts on operations. The assessment will consider, at a minimum, the following EEI:

(1) Space weather.
(2) Wind.
(3) Temperature profile.
(4) Precipitation.
(5) Snow depth and coverage.
(6) EM propagation.
(7) Hazardous weather.

Performance Standard. Complete the briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are in accordance with the reference.

Prerequisite. Applicable portion of MCWP 3-35.7.

MIA-433	3.0	365	R	E	N/A	L	(N)

Goal. Assess METOC impacts to amphibious operations.

Requirement. After conducting a thorough mission analysis, utilize METOC equipment to assess and brief the METOC impacts on operations. The assessment will consider, at a minimum, the following EEI:

(1) Bioluminescence.
(2) Sky condition.
(3) Visibility.
(4) Wind.
(5) Temperature.
(6) Precipitation.
(7) Illumination.
(8) Currents.
(9) Tides.
(10) Water temperature.
(11) Sea state.
(12) Surf conditions.

(13) Hazardous weather.
(14) Ice conditions.
(15) Bathymetry.

Performance Standard. Complete briefing within 3 hours of receipt of RFI. Completion will not be awarded until content and format are achieved per the reference.

Prerequisite. Applicable portion of MCWP 3-35.7.

311. INSTRUCTOR TRAINING PHASE

1. General. This phase contains instructor workup and evaluation certification syllabus events. This level will also contain instructor workup and certification syllabus events as applicable for Contract Instructors (CI) who instructs simulator events.

a. Stages.

(1) FSI
(2) MAI

2. Formal Schools Instructor (FSI)

a. Purpose. To prepare personnel to become instructors at METOC formal schools.

b. General

(1) Administrative Notes. Training shall be conducted at Keesler, Air Force Base, Mississippi. Course number for the Basic Instructor Course (BIC) is E3AIR3S200.

(2) Prerequisite

(a) JMA Designation with 3 years of operational METOC forecasting.
(b) Top Secret clearance.
(c) Rank of Sergeant through Master Gunnery Sergeant.
(d) Assignment to POI.

(3) Refresher Training. Refresher events shall be completed annually or when assigned by the course supervisor.

(4) Stage End Performance. Upon completion of this stage, personnel shall have knowledge of techniques of military instruction and be eligible for qualification as a Formal Schools Instructor.

c. Crew Requirements. Designated as a JMA and qualified as Formal Schools Instructor (FSI).

d. Academic Training. Academic training events are graded and tracked at the administering unit. Supplemental training events and training packages are required.

e. Total Training Events. 6 Events, 531.0 Hours

FSI-500	150.0	*	E	N/A	L	(N)

Goal. Attend BIC.

Requirement. Complete BIC or refresher BIC.

Performance Standards. Complete all written measurements with at least a 70% proficiency and pass all progress checks with 75% proficiency.

Prerequisite. JMA Designation with 3 years in operational METOC forecasting. Rank of Sergeant through Master Gunnery Sergeant.

FSI-501	150.0	*	E	N/A	L	(N)

Goal. Complete instructor certification process.

Requirement. Complete the following:

(1) Observe course curriculum.
(2) Pass required tests and progress checks.
(3) Instruct under supervision.
(4) Successful qualification/certification.

Performance Standards. Achieve 100 % proficiency on all measurements and progress checks.

Prerequisite. FSI-500.

FSI-502	6.0	365	R	E	N/A	L	(N)

Goal. Complete annual requalifications.

Requirement. Successfully complete annual requalifications testing and receive satisfactory instructor evaluations.

Performance Standards. Achieve 100% proficiency on written test and progress checks for each block of instruction.

Prerequisite. FSI-501.

FSI-503	75.0	*	E	N/A	L	(N)

Goal. Complete supplemental instructor training.

Requirement. Successfully complete supplemental instructor training.

(1) Objectives and test course.
(2) Instructional system development process.
(3) Instructor Supervisor Course, as required.

Performance Standards. Achieve 100% proficiency on written test and progress checks for each block of instruction.

Prerequisite. FSI-501.

FSI-504	75.0	*	E	N/A	L	(N)

Goal. Complete curriculum development program.

Requirement. Complete the Technical Writer Principles Course.

Performance Standards. Complete required course with a minimum passing score of 70%.

Prerequisite. FSI-500, FSI-501, FSI-502, FSI-503.

FSI-505	75.0	*	E	N/A	L	(N)

Goal. Achieve Master Instructor Rating.

Requirement. Complete Master Instructor Program.

(1) Two year assignment to the prescribed course of instruction.
(2) Technical Writer Principles Course.
(3) Complete curriculum project.
(4) Formal graded presentation.

Performance Standards. Complete all requirements with a minimum passing score of 70%.

Prerequisite. FSI-504.

3. METOC Analyst Instructor (MAI)

a. Purpose. To train METOC personnel to become instructors and mentors at local METOC commands.

b. General

(1) Administrative Notes. Training shall be conducted at local METOC units.

(2) Prerequisites

(a) Journeyman designation.
(b) Top Secret clearance.
(c) Rank of Sergeant through Master Gunnery Sergeant.
(d) Assignment to POI.

(3) Refresher Training. Refresher events shall be completed annually or when assigned.

(4) Stage End Performance. Upon completion of this stage, personnel shall have knowledge of techniques of military instruction and eligible for qualification as a MAI. Completion of DTC-664 event denotes designation.

c. Crew Requirements. Designated Journeyman METOC Analyst (JMA), designated METOC Analyst Instructor (MAI), Master METOC Analyst (MMA) and/or qualified METOC Officer.

d. Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

e. Total Training Events. 2 Events, 113 Hours

MAI-510	108.0	*	E	N/A	L	(N)

Goal. METOC subjects certification.

Requirement. METOC Analyst instructor under training (IUT) shall be required to complete the Core Skill Basic and Core Skill Advanced phases of training. The instructor under training shall prepare and present periods of instruction for all 200 and 300 level events.

Performance Standard. The Master METOC Analyst (MMA) or METOC Officer shall evaluate the IUT on class presentation and knowledge of subject; and provide recommendation to the designating authority for MAI designation.

Prerequisite. Rank of Sergeant or above; complete NCO resident or non-resident course.

MAI-511	5.0	365	R	E	N/A	L	(N)

Goal. Conduct techniques of military instruction (TMI) for instructor/mentorship designation.

Requirement. Comprehend TMIs by conducting five periods of instructions chosen by the MMA and evaluated by the NCOIC and/or METOC Officer.

Performance Standard. Exhibit knowledge of the selected subjects, counseling, and TMI.

Prerequisite. MAI-510.

312. REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS (RQD) PHASE

1. General. This phase contains all other syllabus events and special interest tracking codes that do not neatly 'fit' into the above phases and is designed to facilitate training management. The 600 phase contains standardized combat leadership evaluation events. This phase often contains event requirements not mandated by the T&R program such as NATOPS. RQD codes are not events but codes used to facilitate community training management that may be used in the 600 level if M-SHARP does not otherwise handle the specific instance that the community wishes to track. For example, RQD codes may be established to monitor execution of specific instances of weather events, specific exercises, etc. M-SHARP functionality eliminates the need for tracking codes related to the possession of qualifications, designations, and certifications. All of these can be logged and reported within M-SHARP and therefore shall not be authorized.

a. Stages.

(1) RQD
(2) MDN
(3) GME
(4) TME
(5) QTC
(6) DTC

1. REQUIREMENTS, QUALIFICATIONS, AND DESIGNATIONS (RQD)

a. Purpose. To provide METOC requirements for progression within the occupational specialty. Documentation of training events shall be completed and reported in training management software and local training jackets.

b. General. Academic events do not count towards combat readiness percentage (core skill proficiency); however, every attempt shall be made to complete all required events at appropriate levels of training.

c. Academic Training. Correspondence courses aid to further enhance individual knowledge base.

d. Total Training Events. 2 events NA HOURS

RQD-600 E L

Goal. Track secret clearances.

Requirement. Ensure secret clearances are obtained and maintained.

Performance Standard. Complete and submit periodic reviews as required by applicable references.

RQD-601 E L

Goal. Track top-secret clearances.

Requirement. Ensure top-secret clearances are obtained and maintained.

Performance Standard. Complete and submit periodic reviews as required per applicable references.

2. METOC Doctrine (MDN)

a. Purpose. To demonstrate familiarity with the Marine Corps METOC support architecture, missions and local operating procedures.

b. General. All personnel shall be assigned this stage of training upon completion of the Core Skill Introduction phase and prior to assignment to any other stage.

c. Prerequisites. 100 level events completion.

d. Ground/Academic Training. Academic training syllabus shall be developed and approved by the MWSG METOC officer prior to implementation. Checklists contained within this Manual are provided to ensure comprehensive and cohesive training within the METOC community. Local mission and operating procedures will dictate the academic training in support of the events. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

e. Total Training Events. 8 Events, 15.0 Hours

MDN-620 6.0 E N/A L

Goal. Equipment Casualty reporting familiarization.

Requirement. Per NAVMETOCCOMINST 13950.1, draft each message listed below a minimum of 3 times:

(1) Casualty report.
(2) Casualty update.
(3) Casualty correct.
(4) CSR.

Performance Standard. Draft message must meet requirements for content and format requirements per applicable references.

MDN-621 1.0 E N/A L

Goal. MAGTF operations familiarization.

Requirement. Identify the roles and missions of each element of the MAGTF:

(1) Air Combat Element (ACE).
(2) Ground Combat Element (GCE).
(3) Command Element (CE).
(4) Combat Service Support Element (CSSE).
(5) Supporting Establishment(SE).

Performance Standard. Stated roles and missions shall be verified by applicable references to an 80% accuracy.

MDN-622 2.0 E N/A L

Goal. METOC support architecture comprehension.

Requirement. Receive training on the components, billets, equipment and capabilities that comprise the Marine Corps METOC support architecture. State and discuss the missions, composition, equipment and capabilities of the following METOC support unit/billets:

(1) MCAS/MCAF METOC support.
(2) Marine Wing Support Group (MWSG).
(3) Marine Expeditionary Force (MEF).
(4) METOC Support Team (MST).
(5) Marine Wing Support Squadron (MWSS) METOC Service Section.
(6) Staff METOC Officer (SMO).
(7) Joint METOC Officer (JMO).
(8) Joint METOC Forecast Center (JMFU).
(9) ACE METOC Officer (ACE METOCO).
(10) Mobile Meteorological Facility Replacement (MetMF(R)).
(11) NITES IV.

Performance Standard. Verbally or in writing, identify the components, billets, units supported, and equipment inherent to

each support element and capabilities of the billets/components listed above without error.

MDN-623 2.0 E N/A L

Goal. Comprehend local area policies and procedures.

Requirement. Define and discuss the listed local area knowledge:

(1) Airfield description.
(2) SOP procedures.
(3) Command support structure.
(4) Destructive weather procedures.
(5) Security requirements.
(6) Watch composition and schedule.
(7) Watch procedures.
(8) Local forms.
(9) Reference and technical library procedures.
(10) Local area forecaster handbook.
(11) Weather regimes.
(12) Local security procedures.
(13) Airfield description.
(14) Watch routine.
(15) METOC equipment.
(16) Command structure.
(17) Warning criteria/procedures.
(18) Quality Assurance Programs.
(19) Communication configurations and procedures.
(20) Administrative Reports.

Performance Standard. Without the aid of references, respond to questions, either verbally or in writing, to an 80 % proficiency.

MDN-624 1.0 E N/A L

Goal. Demonstrate comprehension of regulations, orders and instructions governing classified materials and software.

Requirement. Identify regulations, orders and instructions governing security and state the general content of each.

Performance Standard. Demonstrate knowledge, verbally or in writing, of all applicable orders.

MDN-625 1.0 E N/A L/S

Goal. Conduct tower visibility observer training.

Requirement. Prepare and disseminate tower visibility training to Air Traffic Controllers (ATC), if available, for tower visibility certification.

Performance Standard. Ensure ATC personnel comprehend subject material by their achieving 80% on tower visibility certification exams.

MDN-626 1.0 E N/A L

Goal. METOC mission comprehension.

Requirement. Review MCWP 3-35.7 and SOP with MAI. State the mission and composition of each echelon of MAGTF METOC support.

(1) Marine Corps METOC community.
(2) Local METOC mission.
(3) Apprentice METOC Analyst mission.
(4) Airfield Operations.
(5) Marine Corps Aviation.
(6) Deployable METOC units.
    (a) MWSS.
    (b) MST.
    (c) Intel Bn.

Performance Standard. Define the mission of the above listed elements without error.

Prerequisite. Academic training. Read and comprehend MCWP 3-35.7 and SOP.

MDN-627 1.0 E N/A L

Goal. Comprehend orders and directives governing METOC support.

Requirement. Review listed items with MAI. Demonstrate comprehension of the following orders and directives:

(1) Desktop procedures.
(2) NAVMETOCCOMINST 3141.2 Surface METAR Observation User's Manual.
(3) OPNAVINST 3140.24(_) Warning and Conditions of Readiness.
(4) NAVMETOCCOMINST 3142.1(_) Pilot Reports.
(5) OPNAVINST 3710.7(_) NATOPS Manual.
(6) Local Destructive Weather Order.
(7) MCWP 3-35.7 MAGTF METOC Support.

Performance Standard. Complete a verbal/written test on the orders and directives with 80% accuracy.

Prerequisite. Academic training. Read and comprehend listed orders and directives.

3. Garrison METOC Equipment (GME)

a. Purpose. To introduce academic and practical application of garrison METOC equipment.

b. General. These events are not related to combat ready or core skill proficiency readiness, but are available to assist in core skill training.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 5 Events, 31.0 Hours

GME-630	24.0	Z	E	N/A	L

Goal. Operate garrison METOC equipment in order to provide support to base operations.

Requirement. Configure, operate, and conduct operator level troubleshooting of the following METOC systems:

(1) Automated data processing (ADP) equipment.
(2) Lightning Position and Tracking System (LPATS).
(3) Pilot Metro Voice Frequency (PMSV) Radio.
(4) Weather Surveillance Radar-88D (WSR-88D).
(5) Wet Bulb Globe Temperature Index Sensors. (WBGTI).
(6) METOC closed circuit TV displays/communications (WX Vision).
(7) Hand Held equipment (PMQ-3, psychrometers).
(8) Automated Surface Observing System (ASOS).
(9) Telephone Alerting System (TAS)

Performance Standard. Configure, operate, and conduct operations on the selected equipment in order to support base operations as required.

GME-631	1.0		E	G,M	L

Goal. Operate the Lightning Position and Tracking System (LPATS).

Requirement. Given a lightning detection system, conduct power up and down procedures, reset range alarms, determine azimuth and distance of lightning from the area of interest, and manipulation of display. Perform the following:

(1) Power on system.
(2) Establish communications.
(3) Turn on/off directed alarm ranges.
(4) Set range alarms.
(5) Manipulate display to support mission.
(6) Display archived data.

Performance Standard. Conduct requirements so as to allow for maximum time for warning of lightning conditions.

GME-632	3.0		E	N	L

Goal. Operate garrison handheld meteorological devices.

Requirement. Operate all handheld sensing devices indigenous to the unit. Conduct sensing of environmental elements utilizing devices like those listed below. Devices may vary from site to site, unit commanders shall identify devices to be evaluated.

(1) Wind sensing devices.
(2) Pressure sensing devices.
(3) Temperature sensing devices.

Performance Standard. Conduct sensing of environmental elements utilizing the handheld device(s) without error.

GME-633	2.0	E	GE	L

Goal. Operate the Automated Surface Observing System (ASOS).

Requirement. Operate the ASOS to retrieve, archive, and adjust weather elements in order to ensure accurate weather information is displayed.

(1) Power on the ASOS.
(2) Log on as user.
(3) Manipulate software to display desired screens.
(4) Manipulate software to alter automated readings as required.
(5) Archive ASOS data.

Performance Standard. Operate the ASOS without error.

GME-634	2.0	E	GE	L

Goal. Operate the Telephone Alerting System (TAS).

Requirement. Operate the TAS to disseminate weather information.

(1) Power on the TAS.
(2) Log on as user.
(3) Manipulate the TAS to disseminate appropriate weather warnings.

Performance Standard. Operate the TAS without error.

4. Tactical METOC Equipment (TME)

a. Purpose. To introduce academic or practical application of tactical METOC equipment.

b. General. These events are not related to combat ready or core skill proficiency readiness, but are available to assist in core skill training.

c. Ground/Academic Training. Local mission and operating procedures will dictate academic training required to support events. Local METOC officers and/or qualified METOC personnel shall review academic POIs for applicability and content and utilize Academic Support Packages (ASP) when appropriate.

d. Total Training Events. 6 Events, 124.0 Hours

TME-640	4.0	E	C	L/S

Goal. Conduct logistic support functions.

Requirement. Conduct listed logistical support functions:

(1) Inventory consumables and identify deficiencies to the METOC chief.

(2) Initiate request for supplies and equipment.
(3) Execute hazardous materials program procedures.
(4) Execute deployment of METOC equipment when directed.

Performance Standard. The MAI will evaluate performance of the requirement for successful completion per applicable references.

TME-641	48.0	E	N/A	L

Goal. Perform system management functions of applicable subsystems inherent to the MetMF(R).

Requirement. Complete tasks listed below to configure and manage the components of the METMF(R). Ensure continuous data ingest and dissemination of the following subsystems:

(1) Processing Subsystem (PCS).
    (a) Establish and maintain integrity of operating systems.
    (b) Establish and configure components of the network.
    (c) Install authorized software upgrades and patches.
    (d) Optimize effective flow of meteorological data throughout the communication paths.
    (e) Establish network naming conventions and paths of received data.
    (f) Maintain the meteorological system interface with network and web dissemination and storage.
    (g) Obtain proper keying material for use in CCI equipment.
(2) Meteorological Radar Subsystem (MRS).
    (a) Establish and maintain system setup and configuration parameters.
    (b) Archive/restore configuration data to tape (Level 0 dump tape).
    (c) Install system software when required.
    (d) Establish standard processes for desired products.
    (e) Establish standard product set for each established process.
    (f) Configure network interfaces within the operating system and application software.
    (g) Establish and manage scheduled processes.
    (h) Create underlay/overlays for the desired AO.
    (i) Ensure configuration and operation are within frequencies allocated and in accordance with safety requirements.
(3) Meteorological Satellite Subsystem (MSS).
    (a) Establish and maintain system setup and configuration parameters.
    (b) Archive/restore configuration data to tape (Level 0 dump tape).
    (c) Install system software when required.
    (d) Configure network interface within the operating system.
    (e) Maintain and follow file naming conventions.
    (f) Configure automatic export of satellite imagery to meet mission requirements.
(4) Communications Subsystem (CSS).
    (a) Obtain appropriate keying material for system.
    (b) Ensure appropriate frequencies have been allocated for use.

(c) Ensure configuration and operation are within frequencies allocated and in accordance with safety requirements.
(5) Local/Remote Sensor Subsystem (LSS/RSS).
(a) Configure software and hardware interfaces for data reception.
(b) Configure software for data export and archive.
(6) Rawinsonde subsystem (RWS).
(a) Configure UMQ-12 for different locations and output types.

Performance Standard. Meet requirement without violating component, system or network integrity.

TME-642 16.0 180 R E N/A L

Goal. Deploy the MetMF(R).

Requirement. Given a simulated mission requirement, embark the MetMF(R) to the designated area. Perform the following:

(1) Supervise embarkation of MetMF(R).
(2) Supervise lift.
(3) Conduct pre-deployment operational checks.
(4) Inventory supplies.
(5) Pack out gear.
(6) Inspect personnel gear.
(7) Transport classified materials.
(8) Coordinate lift and transport equipment.
(9) Unpack gear and equipment.
(10) Setup sensing equipment.
(11) Perform post movement operational checks.
(12) Pack up METMF(R).
(13) Conduct hot wash of accomplishments and deficiencies.
(14) Generate and submit an after action report and submit to METOC Chief.

Performance Standard. Deployment procedures shall be evaluated by a Master METOC Analyst and must be conducted in compliance with applicable references. The refresh rate is semi-annually.

External Syllabus Support. Heavy Equipment.

TME-643 8.0 E N/A L

Goal. Setup and conduct operational checks of each subsystem inherent to the METMF(R).

Requirement. At designated area and per the reference, perform the following:

(1) Shelter Subsystem (SSS) – Place and level the shelter and ECUs. Ensure availability of safety equipment.
(2) Processing Subsystems (PCS).
(a) Power up component and log on to the applicable system software of the PCS.
(b) Test network connectivity for each component.
(3) Meteorological Radar Subsystem (MRS).

(a) Conduct power up procedures for MRS.
(b) Log on to the system.
(c) Ensure desired processes are scheduled.

(4) Meteorological Satellite Subsystem (MSS).
(a) Place and connect satellite antennas.
(b) Energize components.
(c) Log on to system.
(d) Generate satellite prediction schedule.
(e) Ensure data capture is achieved, to include proper keying of crypto gear (as applicable).

(5) Communications Subsystem (CSS).
(a) Place and connect antennas.
(b) Energize components.
(c) Key required Crypto gear as applicable.
(d) Conduct communications checks.

(6) Portable Meteorological Subsystem (PMS).
(a) Connect system components.
(b) Energize components.
(c) Log on to system.
(d) Establish required network or workgroup.
(e) Ensure receipt of products.

(7) Local Sensor Subsystem (LSS).
(a) Place and connect Local Sensor.
(b) Place and connect the ceilometer.
(c) Energize component of the LSS.
(d) Log on to system.
(e) Open applicable software.
(f) Ensure receipt of data.

(8) Remote Sensor Subsystem (RSS).
(a) Place and connect Remote Sensor(s).
(b) Place and connect Remote Sensor antenna array.
(c) Energize component of the RSS.
(d) Log on to system.
(e) Open applicable software.
(f) Ensure receipt of data.

(9) Rawinsonde subsystem (RWS).
(a) Place and connect Antenna array.
(b) Interface RWS with PCS.
(c) Energize system.
(d) Enter coefficients and local data.
(e) Launch sounding.
(f) Ensure receipt of data.

Performance Standard. Actions shall not violate system or software integrity and must be in compliance with applicable references.

External Syllabus Support. Heavy equipment.

TME-644 24.0 E N/A L

Goal. Operate the METMF(R).

Requirement. In a simulated or actual deployed environment, perform the following actions:

(1) Provide secured and unsecured pilot to METRO communications.

(2) Provide tower to METRO communications.
(3) Respond to requests for information (RFIs).
(4) Conduct METOC impact assessments to operations in Area of interest.
(5) Conduct data transmission and reception operations.
(6) Conduct data transfer to and from the common operating picture to determine and provide relevant tactical METOC pictures.
(7) Conduct secured and unsecured voice communications.
(8) Acquire and analyze all satellite imagery for the production of forecasts and assessment of impacts to MAGTF operations.
(9) Acquire and analyze all radar imagery for the production of forecasts/warnings, advisories and assessment of impacts to MAGTF operations.
(10) Acquire and analyze synoptic, mesoscale and microscale METOC model output for the production of forecasts and assessment of impacts to MAGTF operations.
(11) Acquire, analyze, encode and disseminate local and remotely sensed surface observations for the production of forecasts and assessment of impacts to MAGTF operations.
(12) Conduct upper atmospheric observations for the production of forecasts and assessment of impacts to MAGTF operations.
(13) Acquire and analyze all lightning data for the production of forecasts/warnings, advisories and assessment of impacts to MAGTF operations.
(14) Develop impact assessment briefing, for applicable MAGTF components, for large-scale dissemination via oral, electronic, or remote means.

Performance Standard. Perform all tasks without supervision. The MMA shall evaluate performance of the event for completion per applicable references.

TME-645	48.0	E	N/A	L

Goal. Operate the NITES IV.

Requirement. In a simulated or actual deployed environment, perform the following actions:

(1) Deploy and setup of NITES IV.
(2) Utilize directed means to provide METOC impact assessment to supported element.
(3) Conduct satellite communications operations (if available) for data receipt and communications.
(4) Conduct data receipt operations.
(5) Conduct data transfer to and from the common operating picture via predetermined software to determine and provide relevant tactical METOC impact assessments.
(6) Conduct graphical data retrieval and analyzation in support of impact assessment.
(7) Conduct analyzation of locally sensed data for METOC impact assessment.
(8) Develop impact assessment briefing for applicable MAGTF component for large-scale dissemination via oral, electronic and remote video means.
(9) Demonstrate how to send and receive e-mail's with the STRATOS

Software.

(10) Debark the INMARSAT Antenna (M4), and orient it the appropriate satellite (POR, IOR, AOR-E or AOR-W) in order to gain at least a signal strength of at least 350~400 (higher signal strength than 450 yields much better reception quality).

(11) Remote the INMARSAT Antenna at least 200 feet from the modem using the large diameter cables provided in the embarkation case.

(12) Disconnect from the local LAN, and connect to the internet via a INMARSAT's (STRATOS) connection using any NITES IV laptop, and the M4 antenna.

(13) Demonstrate access to the modem's menu (LCD screen) utilizing the PIN # for access.

(14) Utilize the handset to make a short (20~30 second), successful voice telephone call (to an official telephone number). This should be done at least once per 6 months if the setup location remains unchanged (Utilizing the Stratos network).

(15) Demonstrate how to make a successful INMARSAT to INMARSAT telephone call (Utilizing the Stratos network)).

(16) Demonstrate the proper method in which the battery in the modem is changed without an interruption in service.

(17) Demonstrate the proper method to change the battery in the Gigaset Handset.

(18) Demonstrate how to store/recall a phone number in the Gigaset's memory.

(19) Explain the procedure(s) how to associate an additional/replacement handset with the modem.

(20) Embark the INMARSAT (which includes removing the modem's battery) in the appropriate transit case(s).

Performance Standard. Perform all tasks with no supervision. The MMA shall evaluate performance of the event for completion per applicable references.

5. Qualifications Tracking Code

a. Purpose. To provide training tracking codes for enlisted METOC qualifications.

b. General

(1) This portion of the training syllabus is comprised of requirements for progression within MOS 6821 and MOS 6842. Documentation of training events shall be completed and reported in MSHARP T&R tracking software as well as local training jackets.

(2) The composition of a qualification board shall be determined by the qualifying authority, but as a minimum, shall consist of a designated MAI, MMA and/or a qualified METOC officer as delineated in chapter two of this Manual.

(3) Upon reassignment to another permanent duty station, all METOC personnel prior to any unsupervised attendance shall complete event MDN-623.

(4) Commanding officers may award the secondary MOS 6852 designation upon attaining the MIA qualification (event MIA-657).

(5) At the discretion of the commanding officer a letter assigning the Marine as qualified shall be placed in the training jacket.

c. Combat Readiness Percentage. The events in this stage are not associated with combat readiness percentages. Qualification events are utilized to track unit core skill proficiency.

d. Total Training Events. 9 events, 00 HOURS

QTC-650 E N/A L

Goal. Evaluation for Qualification as a surface meteorological observer.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. MSO-200 through MSO-203, MDN-623, GME-632, GME-633.

QTC-651 E N/A L

Goal. Evaluation for Qualification as capable of sensing upper-atmospheric elements.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. UAS-210 through UAS-213, MDN-623.

QTC-652 E N/A L

Goal. Evaluation for Qualification in Oceanography-Hydrological Services.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. OHS-220, OHS-221, OHS-222, MDN-623.

QTC-653 E N/A L

Goal. Evaluation for Qualification in Forecast Support.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. Possess 6821 MOS, complete events AMS-228, AMS-230, MDA-265, MDA-266, QTC-650, QTC-651.

QTC-654 E N/A L

Goal. Evaluation for Qualification in providing forecast support to the MAGTF.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. Complete the Core Skill Basic phase of training (200-level events).

QTC-655 E N/A L

Goal. Evaluation for Qualification in operation and product interpretation of meteorological radar(s).

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. MDR-240, MDR-241, MDR-242, MDR-310, MDR-311.

QTC-656 E N/A L

Goal. Evaluation for Qualification in oceanography-hydrological forecast support.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. OHS-220, OHS-221, OHS-222, OHS-300 through OHS-304.

QTC-657 E N/A L

Goal. Evaluation for Qualification in the assessment of METOC elements and conditions that relate to mission specific impacts support requirements.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. QTC-654, MIA-363 through MIA-367, MPB-341 through MPB-344, MFS-347.

QTC-658 E N/A L

Goal. Evaluation for Qualification as a formal schools instructor.

Requirement. Complete the prerequisites and a local qualification exam or board.

Performance Standards. Must be in compliance with applicable orders and directives, and local and higher echelon personnel programs.

Prerequisite. DTC-662.

6. Designations Tracking Code

a. Purpose. To provide training tracking codes for enlisted METOC designations.

b. General

(1) This portion of the training syllabus is comprised of requirements for progression within MOS 6821 and MOS 6842. Documentation of training events shall be completed and reported in MSHARP T&R tracking software as well as local training jackets.

(2) At the discretion of the commanding officer a letter assigning the Marine as Designated shall be placed in the training jacket.

c. Combat Readiness Percentage. The events in this stage are not associated with combat readiness percentages. Designation events are utilized to track unit core skill proficiency.

d. Total Training Events. 5 events, 00 HOURS

DTC-660 E L/S

Goal. Evaluation for Designation as an Apprentice METOC Analyst (AMA).

Requirement. The board shall assess the individual’s knowledge of Core Skill Basic events through practical applications and verbal or written response to questions. Upon completion of event, individual shall be granted signature authority as an Apprentice METOC Analyst.

Performance Standards. Comprehend materials contained in events and respond to verbal or written questions in a clear and concise manner to be recommended for designation as an AMA.

Prerequisite. QTC-654.

DTC-661 E N/A L

Goal. Complete designation checklist for a Journeyman METOC Analyst (JMA).

Requirement. Utilize Appendix F, local certification requirements, and question and answer periods to demonstrate knowledge of required core skills. Upon completion of the Appendix F, complete an oral or written certification board to discern proficiency required for JMA designation.

Performance Standard. Comprehend materials contained in events and respond to verbal or written questions in a clear and concise manner to be recommended for designation as an JMA.

Prerequisite. QTC-654, completion of the Core Skill Advanced phase of training.

DTC-662 E N/A L

Goal. Evaluation for Designation as a Journeyman METOC Analyst (JMA).

Requirement. The board shall assess the individual’s knowledge of Core Skill Advanced events through practical applications and verbal or written response to questions. Upon completion of event, individual shall be granted signature authority as an Journeyman METOC Analyst.

Performance Standard. SNM will be required to respond in a professional and technically correct manner to questions posed in a formal certification board.

Prerequisite. QTC-654, DTC-661, and completion of the Core Skill Advanced phase of training.

DTC-663 E N/A L

Goal. Evaluation for Designation as a Master METOC Analyst (MMA).

Requirement. Complete events and demonstrate proficiency in the following:

(1) Apprentice and Journeyman duties.
(2) Joint and MEF support events.
(3) METOC management and supervision events.

Performance Standard. Complete all pre-requisites and be recommended by a MMA and/or METOCO.

Prerequisite. DTC-660, DTC-662, DTC-664, Rank of GySgt or above, and a minimum of 8 years time in service.

DTC-664	E	N/A	L

Goal. Evaluation for Designation as a METOC Analyst Instructor (MAI).

Requirement. Complete the prerequisite. Demonstrate knowledge and ability to instruct METOC personnel of lesser skill ability.

Performance Standards. Must be in compliance with applicable references, orders and directives.

Prerequisite. DTC-662.

313. T&R SYLLABUS MATRIX. Tables 3-7 through 3-13 provide a quick reference of the events (stage and code), hours, refresh intervals, combat readiness percentage, and chaining for each stage of training.

Table 3-7.-- 100 LEVEL INTRODUCTION CORE SKILL

METOC SERVICES MOS: 6842												
100 LEVEL INTRODUCTION CORE SKILL												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
FAM	100	100	57.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	101	101	77.5	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	102	102	66.5	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	103	103	9.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	104	104	34.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	105	105	71.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	106	106	56.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	107	107	152.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	108	108	80.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	109	109	37.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	110	110	56.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	111	111	109.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	112		200.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	113		128.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	114		3.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	115		3.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	116		50.0	NA	G	L	(N)	*	E	3.33	NA	NA
FAM	117		102.5	NA	G	L	(N)	*	E	3.33	NA	NA

Table 3-8.-- 200 LEVEL CORE SKILL BASIC

METOC SERVICES MOS: 6821/6842/6852												
200 LEVEL CORE SKILL BASIC												
STAGE	**NEW CODE**	**OLD CODE**	**HRS**	**INTERVAL**	**EQUIPMENT**	**DEVICE OPTIONS**	**EVENT CONDITIONS**	**POI**	**EVAL**	**CRP**	**CHAINING**	**PREREQUISITE**
MSO	200		2.0	NA	G,M,N	L/S	(N)	*	E	0.5	NA	NA
MSO	201		0.5	NA	G,M	L/S	(N)	*	E	0.5	NA	NA
MSO	202		2.0	NA	G,M	L/S	(N)	*	E	0.5	NA	NA
MSO	203		30.0	180	G,M,N	L/S	(N)	R	E	0.25	NA	MSO-200 MSO-201 MSO-202
UAS	210		0.5	NA	M	L/S	(N)		E	0.25	NA	NA
UAS	211		1.0	NA	G,M,N	L/S	(N)		E	0.25	NA	NA
UAS	212		2.0	180	M	L/S	(N)	R	E	0.25	NA	UAS-210 UAS-211
UAS	213		1.0	180	G,M,N	L/S	(N)	R	E	0.25	NA	UAS-211
OHS	220		2.0	NA	G,M,N	L/S	(N)		E	0.5	NA	NA
OHS	221		10.0	NA	G,M,N	L/S	(N)		E	0.5	NA	NA
OHS	222		5.0	NA	G,M,N	L/S	(N)		E	0.5	NA	NA
AMS	225		15.0	NA	G,M	L/S	(N)		E	0.5	NA	NA
AMS	226		15.0	NA	G,M,N	L/S	(N)		E	0.5	NA	AMS-225
AMS	227		5.0	180	G,M,N	L/S	(N)	R	E	0.5	NA	AMS-226
AMS	228		2.0	NA	G,M,N	L/S	(N)		E	0.5	NA	AMS-227
AMS	229		2.0	NA	G,M,N	L/S	(N)		E	0.5	NA	AMS-228
AMS	230		20.0	NA	G,M,N	L/S	(N)		E	0.5	NA	AMS-227
AMS	231		2.0	180	G,M,N	L/S	(N)	R	E	0.5	AMS227	AMS-230
AMS	232		1.0	180	G,M,N	L/S	(N)	R	E	0.5	NA	AMS-231
AMS	233		0.5	NA	G,M,N	L/S	(N)		E	0.5	NA	AMS-232
AMS	234		2.0	NA	G,M,N	L/S	(N)		E	0.5	NA	AMS-233
AMS	235		1.0	NA	G,M,N	L/S	(N)		E	0.5	NA	AMS-233
MDR	240		2.0	NA	G,M,N	L/S	(N)		E	0.5	NA	NA
MDR	241		5.0	180	G,M,N	L/S	(N)	R	E	0.25	NA	NA
MDR	242		10.0	180	G,M,N	L/S	(N)	R	E	0.25	MDR241	MDR-241
MSAT	245		2.0	NA	G,M,N	L/S	(N)		E	0.25	NA	NA
MSAT	246		5.0	NA	G,M	L/S	(N)		E	0.25	NA	NA
MSAT	247		1.0	180	G,M,N	L/S	(N)	R	E	0.25	NA	MSAT-245
MCS	250		1.0	NA	G,M,N	L/S	(N)		E	0.25	NA	NA
MCS	251		5.0	NA	G,M,N	L/S	(N)		E	0.25	NA	NA
WWA	255		2.0	180	M,N	L/S	(N)	R	E	0.5	NA	NA
WWA	256		2.0	180	G,M,N	L/S	(N)	R	E	0.5	WWA-255	WWA-255
WWA	257		0.5	NA	G,M,N	L/S	(N)		E	0.5	NA	WWA-256

METOC SERVICES MOS: 6821/6842/6852 – CONTINUED												
200 LEVEL CORE SKILL BASIC												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDTIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
MDA	260		0.5	NA	G,M,N	L/S	(N)	NA	E	0.25	NA	AMS-227 AMS-231 AMS-232
MDA	261		0.5	NA	G,M,N	L/S	(N)	NA	E	0.25	NA	AMS-227 AMS-231 AMS-232
MDA	262		6.0	NA	G,M,N	L/S	(N)	NA	E	0.25	NA	MDA-260 MDA-261
MDA	263		1.0	180	G,M,N	L/S	(N)	R	E	0.25	NA	MDA-262
MDA	264		10.0	180	G,M,N	L/S	(N)	R	E	0.25	MDA-263	MDA-263
MDA	265		2.0	NA	G,M,N	L/S	(N)	NA	E	0.25	NA	AMS-227 AMS-231 AMS-232
MDA	266		2.0	180	G,M,N	L/S	(N)	R	E	0.25	NA	MDA-265
MDA	267		1.0	180	G,M,N	L/S	(N)	R	E	0.25	NA	NA
MPB	270		2.0	180	G,M,N	L/S	(N)	R	E	0.5	NA	MDA-264
MFS	275		1.5	180	G,M,N	L/S	(N)	R	E	0.5	NA	NA
MFS	276		26.0	180	G,M,N	L/S	(N)	R	E	0.5	NA	NA
MFS	277		2.0	NA	G,M,N	L/S	(N)	NA	E	0.5	NA	NA
MFS	278		4.0	NA	G,M,N	L/S	(N)	NA	E	0.5	NA	NA

Table 3-9.-- 300 LEVEL CORE SKILL ADVANCED

METOC SERVICES MOS: 6821/6842/6852												
300 LEVEL CORE SKILL ADVANCED												
STAGE	**NEW CODE**	**OLD COCE**	**HRS**	**INTERVAL**	**EQUIPMENT**	**DEVICE OPTIONS**	**EVENT CONDTIIONS**	**POI**	**EVAL**	**CRP**	**CHAINING**	**PREREQUISITE**
OHS	300		0.5	180	G,M,N	L/S	(N)	R	E	0.5	NA	NA
OHS	301		5.0	180	G,M,N	L/S	(N)	R	E	0.5	NA	NA
OHS	302		1.0	NA	G,M,N	L/S	(N)	NA	E	0.5	NA	NA
OHS	303		0.5	180	G,M,N	L/S	(N)	R	E	0.5	OHS-301	OHS-301
MDR	310		2.0	NA	G,M	L/S	(N)	NA	E	1.5	NA	NA
MDR	311		6.0	NA	M	L/S	(N)	NA	E	1.5	NA	NA
MSAT	320		2.0	NA	M	L/S	(N)	NA	E	1.0	NA	NA
MCS	330		12.0	180	G,M,N	L/S	(N)	R	E	1.0	NA	NA
MPB	340		2.5	NA	G,M,N	L/S	(N)	NA	E	0.7	NA	NA
MPB	341		3.0	180	G,M,N	L/S	(N)	R	E	0.7	NA	NA
MPB	342		2.0	NA	G,M,N	L/S	(N)	NA	E	0.7	NA	NA
MPB	343		15.0	180	G,M,N	L/S	(N)	R	E	0.7	MPB-340	MCS-330
MPB	344		1.0	NA	NA	L/S	(N)	NA	E	0.7	NA	NA
MPB	345		24.0	180	NA	L/S	(N)	R	E	1.0	NA	NA
MPB	346		6.0	180	NA	L/S	(N)	R	E	1.0	NA	NA
MFS	347	345	3.5	180	G,M	L/S	(N)	R	E	1.0	NA	NA
MFS	348	346	2.0	180	G,M	L/S	(N)	R	E	1.0	MFS347	MFS-347
MFS	349	347	4.0	NA	G,M,N	L/S	(N)	NA	E	0.5	NA	NA
MPC	350		16.0	180	NA	L/S	(N)	R	E	0.5	NA	NA
MPC	351		2.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MPC	352		6.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MPC	353		16.0	180	NA	L/S	(N)	R	E	0.5	NA	NA
MIA	360		1.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MIA	361		2.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MIA	362		3.0	180	NA	L/S	(N)	R	E	0.5	NA	NA
MIA	363	362	3.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MIA	364	363	3.0	180	NA	L/S	(N)	R	E	0.5	NA	NA
MIA	365	364	3.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MIA	366	365	3.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MIA	367	366	3.0	180	NA	L/S	(N)	R	E	0.5	NA	NA

Table 3-10.-- 400 LEVEL CORE PLUS SKILL

METOC SERVICES MOS: 6821/6842/6852												
400 LEVEL CORE PLUS												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
MPB	400		66.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MDR	410		6.0	NA	NA	L/S	(N)	NA	E	1.0	NA	NA
MPC	420		24.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MPC	421		8.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MPC	422		10.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MPC	423		3.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MPC	424		32.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MPC	425		24.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MIA	430		24.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA
MIA	431		3.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MIA	432		3.0	NA	NA	L/S	(N)	NA	E	0.25	NA	NA
MIA	433		3.0	NA	NA	L/S	(N)	NA	E	0.5	NA	NA

Table 3-11.-- 500 LEVEL INSTUCTOR

METOC SERVICES MOS: 6821/6842/6852												
500 LEVEL INSTRUCTOR QUALIFICATION												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
FSI	500		150.0	NA	NA	L/S	(N)	NA	E	0.0	NA	NA
FSI	501		150.0	NA	NA	L/S	(N)	NA	E	0.0	NA	FSI-500
FSI	502		6.0	365	NA	L/S	(N)	R	E	0.0	NA	FSI-501
FSI	503		75.0	NA	NA	L/S	(N)	NA	E	0.0	NA	FSI-502
FSI	504		75.0	NA	NA	L/S	(N)	NA	E	0.0	NA	FSI-503
FSI	505		75.0	NA	NA	L/S	(N)	NA	E	0.0	NA	FSI-504
MAI	510		108.0	NA	NA	L/S	(N)	NA	E	0.0	NA	NA
MAI	511		5.0	365	NA	L/S	(N)	R	E	0.0	NA	MAI-510

Table 3-12.-- 600 LEVEL REQUIREMENTS

METOC SERVICES MOS: 6821/6842/6852												
600 LEVEL QUALIFICATIONS AND DESIGNATIONS												
STAGE	NEW CODE	OLD CODE	HRS	INTERVAL	EQUIPMENT	DEVICE OPOTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
RQD	600	SEC-600	NA	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
RQD	601	SEC-601	NA	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	RQD-600
MDN	620		6.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
MDN	621		1.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
MDN	622		2.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
MDN	623		2.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
MDN	624		1.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
MDN	625		1.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
MDN	626		1.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
MDN	627		1.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
GME	630		24.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
GME	631		1.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
GME	632		3.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
GME	633		2.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
GME	634		2.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
TME	640		4.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
TME	641		48.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
TME	642		16.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
TME	643		8.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
TME	644		24.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA
TME	645		48.0	NA	G,M,N	L/S	(N)	NA	E	0.0	NA	NA

Table 3-13.-- 600 LEVEL QUALIFICATIONS DESIGNATIONS

METOC SERVICES MOS: 6821/6842/6852												
600 LEVEL QUALIFICATIONS AND DESIGNATIONS												
STAGE	NEW CODE	OLD CODE	HOURS	INTERVAL	EQUIPMENT	DEVICE OPTIONS	EVENT CONDITIONS	POI	EVAL	CRP	CHAINING	PREREQUISITE
QTC	650	MSO-650	*3	180	NA	L	(N)	NA	E	0.0	NA	MSO-200 MSO-201 MSO-202 MSO-203 MDN-623 GME-632 GME-633
QTC	651	UAS-651	*3	NA	NA	L	(N)	NA	E	0.0	NA	UAS-210 UAS-211 UAS-212, UAS-213 MDN- 623
QTC	652	OHS-652	*3	NA	NA	L	(N)	NA	E	0.0	NA	OHS-220 OHS- 221 OHS-222 MDN-623
QTC	653	FSQ-653	*3	NA	NA	L	(N)	NA	E	0.0	NA	AMS-228 AMS- 230 MDA-265, MDA-266 QTC-650 QTC-651
QTC	654	MFS-654	*3	NA	NA	L	(N)	NA	E	0.0	NA	*200 LEVEL
QTC	655	MDR-655	*3	NA	NA	L	(N)	NA	E	0.0	NA	MDR-240 MDR-241 MDR-242 MDR-310 MDR-311
QTC	656	OFS-656	*3	NA	NA	L	(N)	NA	E	0.0	NA	OHS-220 OHS- 221 OHS-222 OHS-300 OHS- 301 OHS-302 OHS-303 OHS-304
QTC	657	MIA-657	*3	NA	NA	L	(N)	NA	E	0.0	NA	MIA-360 MIA-361 MIA-362 MIA-363 MIA-364 MIA-365 MIA-366 MIA-367 MPB-340 MPB-341 MPB-342 MPB-343 MPB-344 MPB-346 MFS-349 QTC-654
QTC	658	FSI-658	*3	NA	NA	L	(N)	NA	E	0.0	NA	DTC-662
DTC	660	AMA-660	*4	NA	NA	L/S	(N)	NA	E	0.0	NA	QTC-654
DTC	661	JMA-661	*4	NA	NA	L	(N)	NA	E	0.0	NA	QTC-654, 300 LEVEL
DTC	662	JMA-662	*4	NA	NA	L	(N)	NA	E	0.0	NA	DTC-661,QTC-654,300 LEVEL
DTC	663	MMA-663	*4	NA	NA	L	(N)	NA	E	0.0	NA	DTC-660,DTC-662,DTC-664
DTC	664	MAI-664	*4	NA	NA	L	(N)	NA	E	0.0	NA	DTC-662
NOTES												
3	*Qualification letter required.*											
4	*Designation letter required.*											

314. SYLLABUS EVALUATION FORMS. The METOC community has developed a standardized evaluation form for all events contained in the T&R syllabus. The form has two pages, the first page shall list the stage and subsequently

the event with a description of the goal for that event and the proficiency for that event. T&R syllabus evaluation form(s) is placed in the T&R manual as appendix I and is maintained by the syllabus sponsor. The syllabus sponsor shall ensure electronic copies are made available to fleet units. See appendix I for syllabus evaluation form.

COURSE TABLES

1. Formal Courses. The following courses are available to assist in the completion of the T&R syllabus.

CODE CID/OS CODE	COURSE TITLE	SPONSOR
F02WAK1 E8ABR1W0313A1B	Meteorological and Oceanographic Analyst Forecaster (MOAF) course	335 TRS Keesler, AFB
F020321 E3OZR15W30A1A	Tropical Weather Analysis and Forecasting	335 TRS Keesler, AFB
F02KBK1 E3AZR1W051BA1A	WSR-88D OPUP Operator/Manager	335 TRS Keesler, AFB
	Mobile Tactical Training Course	PDDs
E3AIR3S200	Basic Instructors course	81ST TRW Keesler, AFB
O&T J6ADL3C200-024	Objectives and Tests	81ST TRW Keesler, AFB
ISD E6ADL3C200-000	Instructional System Development course	81ST TRW Keesler, AFB
M03DRRG MCB LEJ M22DRR4 JAPAN N01DRR1 SanDiego N02DRR1 NORFOLK N22DRR2 KBAY HI	USN/USMC Security Manager’s course	Assigned Unit S-2/G-2
M02RMG4	The Basic School	MCB Quantico, VA
M14P2A1	Weapons and Tactics Instructor	MCAS Yuma, AZ

2. Online Distance Learning Courses

COURSE	T&R ACADEMIC CODE	IDENTIFICATION CODE/STATUS
A Social Science Perspective on Flood Events	CBT 001	ACTIVE
Buoyancy and CAPE	CBT 002	ACTIVE
Coastally Trapped Wind Reversals	CBT 003	ACTIVE
Cold Air Damming	CBT 004	ACTIVE
Community Hurricane Preparedness	CBT 005	ACTIVE
Definition of the Mesoscale	CBT 006	ACTIVE
Diagnosing and Forecasting Extra-tropical Transition: A Case Exercise on Hurricane Michael	CBT 007	ACTIVE
Dispersion Basics	CBT 008	ACTIVE
Experimental Satellite Derived Tropical Rainfall Potential (TRAP)	CBT 009	ACTIVE
Feature Identification from Environmental Satellites	CBT 010	ACTIVE
Flow Interaction with Topography	CBT 011	ACTIVE
Forecasting Aviation Icing: Icing Type and Severity	CBT 012	ACTIVE
How Mesoscale Models Work	CBT 013	ACTIVE
Hurricane Strike	CBT 014	ACTIVE
Hurricanes Canadian Style: Extra-tropical Transition	CBT 015	ACTIVE
Hydrology for the Meteorologist: The Headwater Forecast Process	CBT 016	ACTIVE

Online Distance Learning Courses continued

COURSE	T&R ACADEMIC CODE	IDENTIFICATION CODE/STATUS
Icing Assessment Using Soundings and Wind Profiles	CBT 017	ACTIVE
Introduction to Fire Behavior: Influences of Topography, Fuels, and Weather on Fire Ignition and Spread	CBT 018	ACTIVE
Mesoscale Convective Systems: Squall Lines and Bow Echoes	CBT 019	ACTIVE
Predicting Supercell Motion Using Hodograph Techniques	CBT 020	ACTIVE
Principles of Convection I: Buoyancy and CAPE	CBT 021	ACTIVE
Quantitative Precipitation Forecasting Overview	CBT 022	ACTIVE
Radiation Fog	CBT 023	ACTIVE
Remote Sensing Using Satellites	CBT 024	ACTIVE
The Balancing Act of Geostrophic Adjustment	CBT 025	ACTIVE
The MJO Life Cycle	CBT 026	ACTIVE
The Role of the MJO on Oceanic and Atmospheric Variability	CBT 027	ACTIVE
The Use and Misuse of Conditional Symmetric Instability	CBT 028	ACTIVE
Thermally-forced Circulation I: Sea Breezes	CBT 029	ACTIVE
Thermally-forced Circulation II: Mountain/Valley Breezes	CBT 030	ACTIVE
Urban Flooding: It Can Happen in a Flash!	CBT 031	ACTIVE
West Coast Fog	CBT 032	ACTIVE

3. Navy E-Learning COMET Courses:

COURSE	**T&R ACADEMIC CODE**	**IDENTIFICATION CODE/STATUS**
Sea Breezes	CNET12007	ACTIVE
Mountain Valley Winds	CNET12010	ACTIVE
Cold Air Damming	CNET12013	ACTIVE
Coastally Trapped Wind Reversals	CNET12016	ACTIVE
Gap Winds	CNET12022	ACTIVE
Definition of the Mesoscale	CNET12025	ACTIVE
How Mesoscale Models Work	CNET12031	ACTIVE
Wave Life Cycle II: Propagation & Dispersion	METOC-045-792-106-001	ACTIVE
Shallow-Water Waves	METOC-045-792-106-002	ACTIVE
Ten Common NWP Misconceptions	METOC-045-792-106-016	ACTIVE

COURSE TABLES

4. Technical Training Publications.

PUBLICATION	IDENTIFICATION CODE/STATUS
FLEET OCEANOGRAPHIC AND ACOUSTIC REFERENCE MANUAL	RP33

5. Squadron Level Training

TRAINING TITLE	SPONSOR
Office 2000 Basics	Local ISC
Annual Security Refresher training	Security Manager
Information Assurance	MarineNet

6. METOC Unit Training

TRAINING TITLE	SPONSOR
Familiarization with Local Standing Operating Procedures	Local Office
Air Force Qualification Training Package	Air Force

APPENDIX B

REFERENCES

1. References

TITLE	IDENTIFICATION CODE
AIR TRAFFIC CONTROLLERS AS TOWER VISIBILITY OBSERVERS	NAVMETOCCOMINST 1500.3
JOINT SURF MANUAL	CNSPINST/CNSLINST 3840.1
JOINT METOC OPERATIONS	CJCSI 3810.01
JOINT OPERATIONAL PLANNING AND EXECUTION SYSTEM (JOPES)	CJCSM 3122.03
JOINT DOCTRINE FOR AMPHIBIOUS OPERATIONS	JP 3-02
JOINT DOCTRINE, TACTICS, TECHNIQUES AND PROCEDURES FOR METOC OPERATIONS	JP 3-59
JOINT METEOROLOGICAL HANDBOOK	JMH
PROCEDURES FOR QUALIFICATION AND CERTIFICATION OF NAVY AND MARINE CORPS AIR UNITED STATES NAVY METEOROLOGICAL AND OCEANOGRAPHIC SUPPORT MANUAL	NAVMETOCCOMINST 3140.1
FLIGHT WEATHER BRIEFING MANUAL	NAVMETOCCOMINST 3140.14
POLICIES CONCERNING THE PROVISION OF METEOROLOGICAL AND OCEANOGRAPHY PRODUCTS AND SERVICES	NAVMETOCCOMINST 3140.17
LOCAL AREA AND AREA OF RESPONSIBILITY FORECASTER'S HANDBOOKS	NAVMETOCCOMINST 3140.2
METEOROLOGICAL AND OCEANOGRAPHIC (METOC) POST-DEPLOYMENT REPORTS	NAVMETOCCOMINST 3140.23
ATMOSPHERIC TURBULENCE AND ICING CRITERIA	NAVMETOCCOMINST 3140.4
FLEET LIAISON PROGRAM	NAVMETOCCOMINST 3140.7
EARTHQUAKE OBSERVATIONAL REPORTING PROGRAM	NAVMETOCCOMINST 3141.1
SURFACE METAR OBSERVATIONS USER'S MANUAL	NAVMETOCCOMINST 3141.2
PROCEDURES GOVERNING PILOT WEATHER REPORTS	NAVMETOCCOMINST 3142.1
TERMINAL AERODROME FORECAST (TAF) CODE	NAVMETOCCOMINST 3143.1
UNITED STATES NAVY MANUAL FOR SHIP'S SURFACE WEATHER OBSERVATIONS	NAVMETOCCOMINST 3144.1
MAINTENANCE AND MATERIAL MANAGEMENT (3M) PROGRAM FOR NAVMETOCCOM ACTIVITIES	NAVMETOCCOMINST 4790.2
GEOPHYSICS FLEET MISSION PROGRAM LIBRARY	NAVMETOCCOMINST 5232.1
MISSION, ORGANIZATION, AND FUNCTIONS OF THE NAVAL METOC COMMUNITY	NAVMETOCCOMINST 5450.9
METEOROLOGICAL EQUIPMENT MANAGEMENT AND PLANNING POLICY	NAVMETOCCOMINST 13950.1
WARNINGS AND CONDITIONS OF READINESS CONCERNING HAZARDOUS OR DESTRUCTIVE WEATHER PHENOMENON	OPNAVINST 3140.24
NATOPS GENERAL FLIGHT AND OPERATING INSTRUCTIONS	OPNAVINST 3710.7
FLEET NUMERICAL METOC OPARS MANUAL	P-3710
FEDERAL METEROLOGICAL HANDBOOK NO.1, SURFACE WEATHER OBSREVATIONS AND REPORTS	FCM-H1-1998
FEDERAL METEROLOGICAL HANDBOOK NO.3 – RAWINSODE AND PIBAL OBSERVATIONS	FCM-H3-1997
FEDERAL METEROLOGICAL HANDBOOK NO.11 – DOPPLER RADAR METEOROLOGICAL OBSERVATION (WSR-88D) PART A – SYSTEM CONCEPTS, RESPONSIBILITIES, AND PROCEDURES	FCM-H11A-2004

(References – Continued.)

TITLE	IDENTIFICATION CODE
FEDERAL METEROLOGICAL HANDBOOK NO.12 – UNITED STATES METEOROLOGICAL CODES AND CODING PRACTICES	FCM-H12-1998
NATIONAL AVIATION WEATHER PROGRAM: STRATEGIC PLAN	FCM-P32-1997
THE NATIONAL SPACE WEATHER PROGRAM: IMPLEMENTATION PLAN	FCM-P31-2000
NATIONAL PLAN FOR TROPICAL CYCLONE RESEARCH	FCM-P25-1997
NATIONAL WINTER STORMS OPERATION PLAN	FCM-P13-2004
NATIONAL SEVERE LOCAL STORMS OPERATION PLAN	FCM-P11-2001
WSR-88D TROPICAL CYCLONE OPERATIONS PLAN	FCM-P12-2004
MARINE CORPS HEAT INJURY PREVENTION PROGRAM	MCO 6200.1
DEPARTMENT OF NAVY PERSONNEL SECURITY PROGRAM (PSP) REGULATION	SECNAVINST 5510.30
DEPARTMENT OF THE NAVY INFORMATION SECURITY PROGRAM (ISP) REGULATION	SECNAVINST 5510.36
USMC INFORMATION ASSURANCE PROGRAM (MCIAP)	MCO 5239.2
USMC INFORMATION AND PERSONNEL SECURITY PROGRAM MANUAL	MCO P5510.18
MARINE CORP PHYSICAL SECURITY PROGRAM MANUAL	MCO 5530.14
NAVY AND MARINE CORPS AWARDS MANUAL	SECNAVINST 1650.1
DON FILE MAINTENANCE PROCEDURES AND STANDARD SUBJECT IDENTIFICATION CODES (SSIC)	SECNAVINST 5210.11
NAVY AND MARINE CORPS RECORDS DISPOSITION MANUAL	SECNAVINST 5212.5
DON CORRESPONDENCE MANUAL	SECNAVINST 5216.5
DON POLICY FOR CONTENT OF PUBLICLY ACCESSIBLE WORLD WIDE WEB SITES	SECNAVINST 5720.47
MARINE CORPS PUBLICATIONS LIBRARY MANAGEMENT SYSTEM FIELD USER'S GUIDE	UM-PLMS
MARINE CORPS UNIFORM REGULATIONS	MCO P1020.34
MARINE CORPS INDIVIDUAL RECORDS ADMINISTRATION MANUAL (IRAM)	MCO P1070.12
MILITARY OCCUPATIONAL SPECIALTIES (MOS) MANUAL	MCO P1200.7
MARINE CORPS PROMOTION MANUAL, VOLUME 2 ENLISTED PROMOTIONS	MCO P1400.32
PERFORMANCE EVALUATION SYSTEM (PES)	MCO P1610.7
ADMINISTRATIVE AND ISSUE PROCEDURES FOR DECORATIONS, MEDALS, AND AWARDS	MCO 1650.19
FAMILY CARE PLANS	MCO 1740.13
OPERATIONAL RISK MANAGEMENT (ORM)	MCO 3500.27
MARINE CORPS COMBAT READINESS AND EVALUATION SYSTEM (MCCRES)	MCO 3501.1
MCCRES VOL XII, MWSG UNITS	MCO 3501.17
MARINE CORPS EXPEDITIONARY FORCE DEVELOPMENT SYSTEM	MCO P3900.15
CONSUMER LEVEL SUPPLY POLICY MANUAL	MCO P4400.150
DOD SUPPLY MANAGEMENT REFERENCE BOOK	MCO 4400.163
STORAGE AND HANDLING OF HAZARDOUS MATERIALS	MCO 4450.12
MARINE CORPS INSPECTIONS	MCO 5040.6
MARINE CORPS SAFETY PROGRAM	MCO 5100.29
MARINE CORPS OCCUPATIONAL SAFETY AND HEALTH PROGRAM MANUAL	MCO P5100.8

(References – Continued.)

TITLE	IDENTIFICATION CODE
USMC INTERNAL MANAGEMENT CONTROL PROGRAM	MCO 5200.24
RECORDS MANAGEMENT PROGRAM FOR THE MARINE CORPS	MCO 5210.11
MARINE AIRCRAFT GROUP (MAG) FISCAL HANDBOOK	MCO P7300.19
STORAGE AND HANDLING OF COMPRESSED GASES AND LIQUIDS IN CYLINDERS, AND OF CYLINDERS	MCO 10330.2
USER'S GUIDE TO COUNSELING	NAVMC 2795
ENLISTED CAREER COUNSELOR'S HANDOUT	MME HANDOUT
AUTOMATED SURFACE OBSERVING SYSTEM (ASOS) USER'S GUIDE	ASOS
MIDDS USER'S GUIDE	MIDDS
USER'S LOGISTICS SUPPORT SUMMARY (ULSS) FOR THE METMF(R)	EM-400-AL-LSS-A10/AN/TMQ44A(V)1
METMF(R) SYSTEM'S MANUAL SECTION	EM000-AX-OMI-A10
SHIP'S MAINTENANCE AND MATERIAL MANAGEMENT (3M) MANUAL	OPNAVINST 4790.4
TECHNICAL MANUAL - WSR88D	NAV EM400-AA-MMM-010/WSR88D
THE USE OF THE SKEW-T LOG P DIAGRAM IN ANALYSIS AND FORECASTING	AWS/TR-79/006
ATMOSPHERIC REFRACTION	METOC 50-1T-0202
WMO 306 VOLUMES 1 & 2 ; INTERNATIONAL METEOROLOGICAL CODES	
CLOUD TYPES FOR OBSERVERS	MET 0.716
METEOROLOGICAL TECHNIQUES	AFWA TN 98/002
FORECASTER'S GUIDE TO TROPICAL METEOROLOGY	AWS TR-240
METOC CODES MANUAL	CNMOC 3140
FLEET OCEANOGRAPHIC AND ACOUSTIC REFERENCE MANUAL	RP33
CATALOG OF NAVAL OCEANOGRAPHIC OFFICE UNCLASSIFIED PUBLICATIONS	RP51
MARINE BATTLE SKILLS TRAINING (MBST) PROGRAM	MCO 1500.51
COMPETENCIES FOR THE MARINE CORPS OFFICER, VOL 2, CAPTAIN	MCO 1510.99
MARINE CORPS COMMON SKILLS (MCCS) PROGRAM	MCO 1510.121
MARINE CORPS UNIT TRAINING MANAGEMENT	MCO 1553.3
AVIATION PROGRAM MANUAL	MCO P3500.14H
MARINE CORPS TRAINING, EXERCISE, AND EMPLOYMENT PLAN (MCTEEP)	MCO 3500.25
NBC FIELD HANDBOOK	FM 3-7
INTELLIGENCE PREPARATION OF THE BATTLEFIELD	FM 34-130
GROUND COMBAT OPERATIONS	FMFM 6
INTELLIGENCE OPERATIONS	MCWP 2-1
AVIATION OPERATIONS	MCWP 3-2
AVIATION GROUND SUPPORT	MCWP 3-21.1
DOCTRINE FOR NAVY AND MARINE CORPS JOINT RIVERINE OPERATIONS	MCWP 3-35.4
MAGTF METOC SUPPORT	MCWP 3-35.7
MARINE CORPS PLANNING PROCESS	MCWP 5-1
MARINE CORPS SUPPLEMENT TO THE DOD DICTIONARY AND ASSOCIATED TERMS	MCRP 5-12

APPENDIX C

APPRENTICE METOC ANALYST DESIGNATION CHECKLIST

Name:	Rank:	SSN:

Note: The following METOC qualifications are required to be completed prior to being designated as an Apprentice METOC Analyst (AMA). This checklist serves as a tracking mechanism for completion of the AMA designation. All events listed on the following tables are required to be completed prior to an official designation.

1. Meteorological Surface Observation (MSO) Qualification

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
MSO-200	Demonstrate knowledge of surface observation fundamentals.		
MSO-201	Perform ceiling balloon operations.		
MSO-202	Compute meteorological values.		
MSO-203	Take, record and disseminate a surface meteorological observation.		
MDN-623	To certify knowledge of local area policies and procedures.		
GME-632	Certify proficiency at operating garrison handheld meteorological devices.		
GME-633	Certify proficiency at Automated Surface Observing System (ASOS) system commands.		

MSO Qualification		MAI INITIALS	OFFICER INITIALS
DATE QUALIFICATION COMPLETE:			
DATE QUALIFICATION AWARDED:			

2. Upper Air Observer (UAS) Qualification

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
UAS-210	Introduction to upper air observational equipment and procedures.		
UAS-211	Decode upper air messages.		
UAS-212	Conduct an upper-atmospheric sounding.		
UAS-213	Plot and analyze a Skew-T Log-P diagram.		
MDN-623	To certify knowledge of local area policies and procedures.		

UAS Qualification		MAI INITIALS	OFFICER INITIALS
DATE QUALIFICATION COMPLETE:			
DATE QUALIFICATION AWARDED:			

3. Oceanographic Observer (OHS) Qualification

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
OHS-220	Certify proficiency at calculating tidal data.		
OHS-221	Introduce oceanographic/littoral warfare products.		
OHS-222	Assess river stages.		
MDN-623	To certify knowledge of local area policies and procedures.		

OHS Qualification		MAI INITIALS	OFFICER INITIALS
DATE QUALIFICATION COMPLETE:			
DATE QUALIFICATION AWARDED:			

4. Core skill Basic events required for AMA designation.

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
AMS-225	Demonstrate core knowledge of atmospheric physics.		
AMS-226	Demonstrate the core knowledge of atmospheric dynamics.		
AMS-227	Demonstrate proficiency in the knowledge of atmospheric fundamentals.		
AMS-228	Global and regional METOC model data.		
AMS-229	Initialize and verify meteorological model output.		
AMS-230	Introduce graphical METOC products.		
AMS-231	Forecast synoptic scale systems.		
AMS-232	Forecast severe weather.		
AMS-233	Forecast local area (mesoscale/microscale) meteorological elements and phenomenon.		
AMS-234	Forecast tropical cyclone development and movement.		
AMS-235	Produce a limited data forecast.		
MDR-240	Perform basic meteorological radar system(s) operations.		
MDR-241	Perform basic radar imagery interpretation.		
MDR-242	Perform advanced radar imagery interpretation.		
MSAT-245	Analyze meteorological features on satellite imagery.		
MSAT-246	Perform advanced operations on available satellite system.		
MSAT-247	Analyze and interpret satellite imagery.		

(Core skill Basic events required for AMA designation – Continued.)

APPENDIX C

APPRENTICE METOC ANALYST DESIGNATION CHECKLIST

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
MCS-250	Calculate astronomical data.		
MCS-251	Generate astronomical and climatological data.		
WWA-255	State weather warning and advisory criterion.		
WWA-256	Be proficient in procedures for displaying, and disseminating weather warnings and advisories.		
WWA-257	Produce weather warnings/advisories.		
MDA-260	Analyze and interpret a thickness chart.		
MDA-261	Analyze and interpret a vorticity chart.		
MDA-262	Analyze and interpret upper atmospheric weather charts.		
MDA-263	Analyze and interpret a surface pressure chart.		
MDA-264	Develop synoptic scale forecast using prognosis techniques.		
MDA-265	Introduce elements forecasted from a plotted Skew-T Log P.		
MDA-266	Analyze atmospheric conditions from the SKEW T LOG P Diagram.		
MDA-267	Conduct a streamline analysis.		
MPB-270	Brief synoptic chart set.		
MFS-275	Encode and disseminate pilot reports (PIREPs).		
MFS-276	Produce Terminal Aerodrome Forecast (TAF).		
MFS-277	Generate Optimum Path Aircraft Routing System (OPARS) products.		
MFS-278	Introduce flight weather products.		

Completion of Core Skill Basic Training	MAI INITIALS	OFFICER INITIALS
DATE COMPLETE:		
DATE DESIGNATION AWARDED:		

JOURNEYMAN METOC ANALYST DESIGNATION CHECKLIST

Name:	Rank:	SSN:

NOTE: The following METOC qualifications/designations and events are required to be completed prior to being designated as a Journeyman METOC Analyst (JMA). This checklist serves as a tracking mechanism for completion of the JMA designation. All events listed on the following tables are required to be completed prior to an official designation.

1. Apprentice METOC Analyst (AMA) Designation

Apprentice METOC Analyst Designation		MAI INITIALS	OFFICER INITIALS
DATE DESIGNATION COMPLETE:			
DATE DESIGNATION AWARDED:			

2. Meteorological Radar (MDR) Qualification

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
MDR-240	Perform basic meteorological radar system(s) operations.		
MDR-241	Perform basic radar imagery interpretation.		
MDR-242	Perform advanced radar imagery interpretation.		
MDR-310	Perform advanced operations on meteorological radar.		
MDR-311	Conduct management operations for the meteorological radar system.		

MDR Qualification		MAI INITIALS	OFFICER INITIALS
DATE QUALIFICATION COMPLETE:			
DATE QUALIFICATION AWARDED:			

3. Oceanographic Forecast Support (OFS) Qualification

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
OHS-220	Certify proficiency at calculating tidal data.		
OHS-221	Introduce oceanographic/littoral warfare products.		
OHS-222	Assess river stages.		
OHS-300	Conduct surf observations.		

(Oceanographic Forecast Support (OFS) Qualification – Continued.)

JOURNEYMAN METOC ANALYST DESIGNATION CHECKLIST

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
OHS-301	Demonstrate knowledge of surf forecasting.		
OHS-302	Compute Modified Surf Index (MSI).		
OHS-303	Create surf forecast.		
OHS-304	Forecast (flash) floods.		

OFS Qualification		MAI INITIALS	OFFICER INITIALS
DATE QUALIFICATION COMPLETE:			
DATE QUALIFICATION AWARDED:			

4. METOC Impact Assessment (MIA) Qualification

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
MIA-360	Familiarization with products and sources for assessment of METOC impacts on MAGTF Operations.		
MIA-361	Assess METOC impacts on amphibious operations.		
MIA-362	Demonstrate proficiency on METOC software applications.		
MIA-363	Assess METOC impacts on aviation operations.		
MIA-364	Assess METOC impacts on ground operations.		
MIA-365	Assess METOC impacts on intelligence operations.		
MIA-366	Assess METOC impacts on logistical operations.		
MIA-367	Produce mission specific products.		
MPB-340	Conduct METOC training briefs.		
MPB-341	Conduct an MAGTF Mission Brief.		
MPB-342	Conduct a Search And Rescue (SAR) brief.		

JOURNEYMAN METOC ANALYST DESIGNATION CHECKLIST

(METOC Impact Assessment (MIA) Qualification – Continued.)

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
MPB-343	Conduct a climatology brief.		
MPB-344	Demonstrate knowledge of environmental reports covering procedures.		
MPB-345	Conduct an amphibious warfare brief.		
MPB-346	Conduct a pre-deployment brief.		

MIA Qualification		MAI INITIALS	OFFICER INITIALS
DATE QUALIFICATION COMPLETE:			
DATE QUALIFICATION AWARDED:			

5. Core Skill Advanced events required for JMA designation.

EVENT	GOAL	SNM INIT. DATE	MAI INIT. DATE
MSAT-320	Perform basic operations on the tactical satellite system(s).		
MSC-330	Generate a climatology brief.		
MFS-347	Demonstrate proficiency in flight weather briefings.		
MFS-348	Produce flight weather packets.		
MFS-349	Produce mission specific meteorological products that support MAGTF operations.		
MPC-350	Embarkation of the MetMF(R).		
MPC-351	Demonstrate proficiency with deployment requirements and procedures.		
MPC-352	Be familiar with METOC logistics and external support requirements.		

JOURNEYMAN METOC ANALYST DESIGNATION CHECKLIST

MPC-353	Introduce Defense Messaging System (DMS).		

(Core Skill Advanced events required for JMA designation - Continued.)

Completion of Core Skill Advanced Training		MAI INITIALS	OFFICER INITIALS
DATE COMPLETE:			
DATE DESIGNATION AWARDED:			

MASTER METOC ANALYST DESIGNATION CHECKLIST

Name:	Rank:	SSN:

Note: The following METOC qualifications/designations and events are required to be completed prior to being designated as a Master METOC Analyst (MMA). This checklist serves as a tracking mechanism for completion of the MMA designation. All events listed on the following tables are required to be completed prior to an official designation.

1. Apprentice METOC Analyst (AMA) Designation

Apprentice METOC Analyst Designation		MAI INITIALS	OFFICER INITIALS
DATE DESIGNATION COMPLETE:			
DATE DESIGNATION AWARDED:			

2. Journeyman METOC Analyst (JMA) Designation

Journeyman METOC Analyst Designation		MAI INITIALS	OFFICER INITIALS
DATE DESIGNATION COMPLETE:			
DATE DESIGNATION AWARDED:			

3. METOC Analyst Instructor (MAI) Designation

METOC Analyst Instructor Designation		MAI INITIALS	OFFICER INITIALS
DATE DESIGNATION COMPLETE:			
DATE DESIGNATION AWARDED:			

UNITED STATES MARINE CORPS
HEADQUARTERS AND HEADQUARTERS SQUADRON
PO BOX 32200
MCAS NEW RIVER
JACKSONVILLE NC 28545

3500
3MET
2 NOV 2008

From: Commanding Officer, MCAS New River, Jacksonville, NC
To: Master Gunnery Sergeant Terry L. Saude 6842/2849/ USMC

Subj: METEOROLOGICAL AND OCEANOGRAPHIC (METOC) MASTER METOC ANALYST (MMA) DESIGNATION LETTER ICO TERRY L. SAUDE 6842/2849

Ref: (a) NAVMC 3500.66, T&R Manual, METOC

1. Through the certification processes in the functions and roles set forth by the reference, you are hereby designated as a MMA.

2. This designation certifies that you have successfully demonstrated combat leadership effectiveness in the following functions.

a. Provided MAGTF support to the FMF.

b. Supervised qualification and designation boards.

c. Completed pre-requisites designations for AMA, JMA and MAI.

3. You shall maintain this designation while at your parent command or unless removed for cause.

4. Upon receipt of this designation letter, you are directed to commence the next stage of training outlined in the reference.

D. K. JOHNSON

UNITED STATES MARINE CORPS
HEADQUARTERS AND HEADQUARTERS SQUADRON
PO BOX 32200
MCAS NEW RIVER
JACKSONVILLE NC 28545

3500
3MET
2 Nov 08

From: Commanding Officer, MCAS New River, Jacksonville, NC
To: Master Gunnery Sergeant Terry L. Saude / 6842/ 2849/ USMC

Subj: METEOROLOGICAL AND OCEANOGRAPHIC (METOC) MAGTF FORECAST SUPPORT (MFS) QUALIFICATION LETTER ICO TERRY L. SAUDE 6842/2849

Ref: (a) NAVMC 3500.66, T&R Manual, METOC

1. Through the certification processes in the functions and roles set forth by the reference, you are hereby qualified as a MFS.

2. This qualification certifies you to conduct the following functions:

a. Provide proficiency in observations, recording and disseminating METOC data support to the FMF.

b. Utilize upper air meteorological data in support of model input and output analysis.

c. Disseminate warnings and advisories set forth by the METOC unit.

d. Conduct PIBAL, ASTRO, TIDAL AND CLIMO data.

3. You shall maintain proficiency and currency in the qualification per the reference unless removed for cause. Upon receipt of this qualification letter, you are directed to commence the next stage of training per in the reference.

D. K. JOHNSON

UNITED STATES MARINE CORPS
HEADQUARTERS AND HEADQUARTERS SQUADRON
PO BOX 32200
MCAS NEW RIVER
JACKSONVILLE NC 28545

3500
3MET
2 Nov 08

From: METOC officer, MCAS New River, Jacksonville, NC
To: Commanding Officer, MCAS New River, Jacksonville, NC
Via: Operations Officer, MCAS New River, Jacksonville, NC

Subj: WAIVER REQUEST METEOROLOGICAL AND OCEANOGRAPHIC (METOC) MAGTF FORECAST SUPPORT (MFS) QUALIFICATION ICO TERRY L. SAUDE 6842/2849

Ref: (a) NAVMC 3500.66, T&R Manual, METOC

1. The reference requires that the MAGTF Forecast Support (MFS) qualification be updated every 180 days.

2. As such, request a waiver be granted to allow MGySgt Terry L. Saude to perform the duties of MAGTF Forecast Support ISO deployment per the reference. This waiver will allow MGySgt Saude to support operations ISO MWSS operations in theatre. MGySgt Saude meets all other requirements to perform the duties of MAGTF Forecast Support (MFS) set forth by the reference.

3. Point of contact is CWO3 David F. Stephens, MCAS New River METOC Officer, (910) 451-6179/DSN 752-6179.

D. F. STEPHENS

UNITED STATES MARINE CORPS
HEADQUARTERS AND HEADQUARTERS SQUADRON
PO BOX 32200
MCAS NEW RIVER
JACKSONVILLE NC 28545

3500
3MET
2 Nov 08

From: METOC officer, MCAS New River, Jacksonville, NC
To: Commanding Officer, MCAS New River, Jacksonville, NC
Via: Operations Officer, MCAS New River, Jacksonville, NC

Subj: DEFERRAL REQUEST METEOROLOGICAL AND OCEANOGRAPHIC (METOC) MAGTF FORECAST SUPPORT (MFS) QUALIFICATION ICO TERRY L. SAUDE 6842/2849

Ref: (a) NAVMC 3500.66, T&R Manual, METOC

1. The reference requires that the MAGTF Forecast Support (MFS) qualification be updated every 180 days.

2. As such, request a deferral be granted until 16 April, 2009 to MGySgt Terry L. Saude to perform the duties of MAGTF Forecast Support ISO deployment per the reference. This deferral will allow MGySgt Saude to support operations ISO MWSS operations in theatre. MGySgt Saude meets all other requirements to perform the duties of MAGTF Forecast Support (MFS) set forth by the reference.

3. Point of contact is CWO3 David F. Stephens, MCAS New River METOC Officer, (910) 451-6179/DSN 752-6179.

D. F. STEPHENS

METOC EVAULATION FORM FOR EVENTS

PLANNING/ PREPARATION:
BRIEF(S):
EXECUTION: **Location:** **METOC Products/conditions**: **Proficiency**:
STRENGTHS:
WEAKNESSES:
RECOMMENDATIONS:

TIME ALLOTED FOR EVENT TRAINING PER T&R		**SYLLABUS POI**	
TIME REQUIRED FOR EVENT TRAINING		**EVENT CODE**	
DATE OF EVALUATION		**EVENT DATE**	
SIGNATURE		**SIGNATURE**	
INSTRUCTOR		**STUDENT**	